



City of Lucas

Planning and Zoning Agenda Request

November 10, 2022

Item No. 03

Requester: Development Services Director Joe Hilbourn

Agenda Item Request

Consider a request by Preston Walhood, on behalf of Young Dean Homestead, Ltd., for a preliminary plat for Dean Estates on a parcel of land consisting of 44.185 acres, located in the John McKinney Survey, Abstract Number 596, creating 27 single-family lots and two common spaces on the east side of Stinson Road, approximately 55 feet south of the roundabout.

Background Information

This parcel of land is zoned R-1 and complies with the City's Comprehensive Plan. It is 44.185 acres, and the applicant is proposing 27 single-family lots and two common spaces. The civil construction plans were approved by the engineering department on November 1, 2022. Dean Estates is proposing a dead-end street that exceeds 600' and has greater than ten lots. Dean Estates is proposing a split entrance to allow for a second means of ingress/egress that is separated, a looped water main into Enchanted Creek Estates Phase 2, and an enlarged cul-de-sac turnaround in accordance with the requirements in 10.03.123 Streets and Drainage under section (a) Streets:

- (5) Where streets within the proposed subdivision are dictated by lot design to be cul-de-sacs, such cul-de-sac streets shall be provided with a permanent cul-de-sac having a minimum right-of-way radius of sixty feet (60') and shall not exceed six hundred feet (600') in length except in circumstances dictated by topography and existing development. Future streets that may offer a second point of access shall not be considered when measuring the length of cul-de-sac until the street is actually constructed. In situations where cul-de-sacs exceed the prescribed length by more than five percent (5%), a combination of the following based on the number of lots and dwelling units will be considered as a mitigating measure:
- (A) A secondary emergency entrance/exit;
 - (B) Widening of the street and enlarging the cul-de-sac turnaround;
 - (C) Addition of fire hydrants; and
 - (D) Looped water system.

Attachments/Supporting Documentation

1. Preliminary plat
2. Location Map
3. Application
4. Construction plans
5. Tree Survey

Budget/Financial Impact

NA



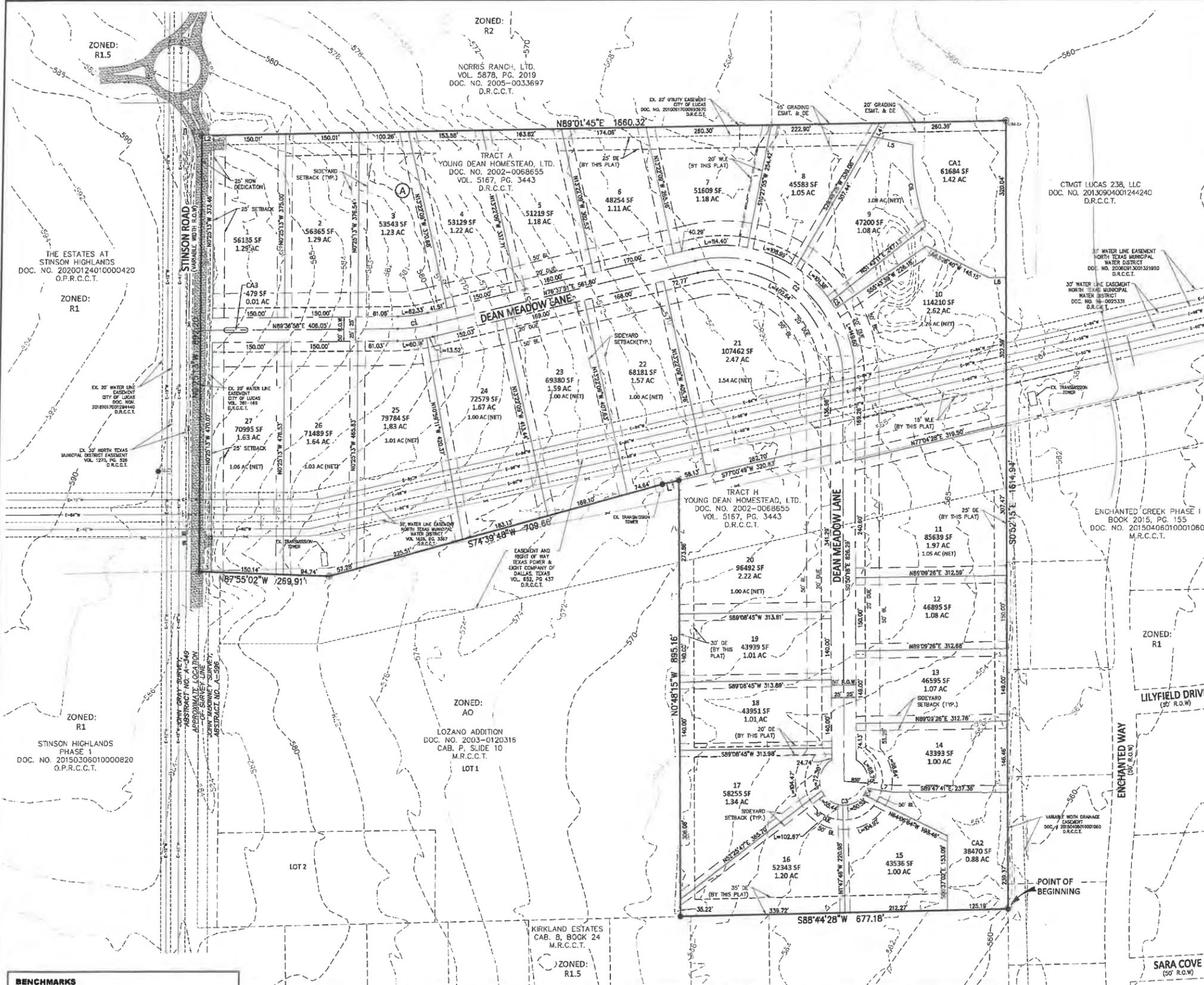
City of Lucas
Planning and Zoning Agenda Request
November 10, 2022

Recommendation

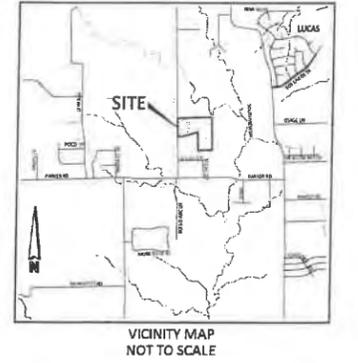
Staff recommends approval of the preliminary plat as presented.

Motion

I make a motion to recommend to the City Council to approve/deny a request by Preston Walhood, on behalf of Young Dean Homestead, Ltd., for a preliminary plat for Dean Estates on a parcel of land consisting of 44.185 acres, located in the John McKinney Survey, Abstract Number 596, creating 27 single-family lots and two common spaces on the east side of Stinson Road, approximately 55 feet south of the roundabout.

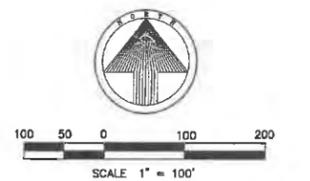


North Texas Municipal Water District (NTMWD) Note:
 The NTMWD easement restricts construction of permanent structures such as foundations, walls, pool and permanent storage buildings. Items such as driveways, fences, sprinkler systems and normal landscaping plans that encroach on the NTMWD easements are allowed. However, the NTMWD assumes no responsibility for damage resulting from the need to repair or maintain the NTMWD pipelines. Further, any cost for repair for damage to the pipelines resulting from construction by the developer, contractor or owner will be the responsibility of the developer, contractor or owner.



- NOTES:**
- ALL LOTS MUST USE ALTERNATIVE TYPE ON-SITE SEWAGE FACILITIES.
 - LOT TO LOT DRAINAGE IS NOT PERMITTED WITHOUT ENGINEERING SECTION APPROVAL.
 - ALL LOTS MUST MAINTAIN STATE-MANDATED SETBACK OF ALL ON-SITE SEWAGE FACILITY COMPONENTS FROM ANY/ALL EASEMENTS AND DRAINAGE AREAS, WATER DISTRIBUTION LINES, SHARP BREAKS AND/OR CREEKS/RIVERS/PONDS, ETC.
 - A PORTION OF LOTS 10, 11, 20-27, BLOCK A, ARE WITHIN A 250' ELECTRICAL LINE EASEMENT. THESE LOTS DO NOT CONFIRM TO COLLIN COUNTY OSSF REGULATIONS. THE EASEMENT MAY NOT BE USED FOR OSSF CONVEYANCE, STORAGE OR DISPOSAL AND REQUIRED SETBACKS MUST BE FOLLOWED. DUE TO SETBACK RESTRICTIONS, NO SURFACE IMPROVEMENTS, IMPERVIOUS COVER, OUTBUILDINGS, SWIMMING POOLS, ETC. ARE ALLOWED ON SAID LOTS WITHOUT A PRE-CONSTRUCTION PLANNING MEETING WITH A REGISTERED SANITARIAN/PROFESSIONAL ENGINEER AND COLLIN COUNTY DEVELOPMENT SERVICES. NOTE: LACK OF USEABLE LOT MAY PRECLUDE SAID LOTS FROM HAVING SWIMMING POOLS AND/OR OUTBUILDINGS. ADDITIONALLY, DWELLING SIZE ON SAID LOTS MAY BE LIMITED TO A MAXIMUM OF 5,500 SQUARE FEET AND/OR 5 BEDROOMS.
 - A LARGE PORTION OF LOTS 11 & 20 ARE WITHIN A 250' ELECTRICAL LINE EASEMENT. THE EASEMENT MANY NOT BE USED FOR OSSF CONVEYANCE, STORAGE OR DISPOSAL AND REQUIRED SETBACKS MUST BE FOLLOWED. DUE TO SETBACK RESTRICTIONS, NO SURFACE IMPROVEMENTS, IMPERVIOUS COVER, OUTBUILDINGS, SWIMMING POOLS, ETC. ARE ALLOWED ON LOTS 11 & 20 WITHOUT A PRE-CONSTRUCTION PLANNING MEETING WITH A REGISTERED SANITARIAN/PROFESSIONAL ENGINEER AND COLLIN COUNTY DEVELOPMENT SERVICES.
 - TREE REMOVAL AND/OR GRADING FOR OSSF MAY BE REQUIRED ON INDIVIDUAL LOTS.
 - INDIVIDUAL SITE EVALUATIONS AND OSSF DESIGN PLANS (MEETING ALL STATE AND COUNTY REQUIREMENTS) MUST BE SUBMITTED TO AND APPROVED BY COLLIN COUNTY FOR EACH LOT PRIOR TO CONSTRUCTION OF ANY OSSF SYSTEM.
 - BY GRAPHICAL PLOTTING, THE PARCEL DESCRIBED HEREON DOES NOT LIE WITHIN A SPECIAL FLOOD HAZARD AREAS, AS DELINEATED ON THE COLLIN COUNTY, TEXAS AND INCORPORATED AREAS, FLOOD INSURANCE RATE MAP, MAP NUMBER 480500045 J, DATED JUNE 02, 2008, AS PUBLISHED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY. THE ABOVE FLOOD STATEMENT DOES NOT IMPLY THAT THE PROPERTY AND/OR STRUCTURES WILL BE FREE FROM FLOODING OR FLOOD DAMAGE. ON OCCASION, THE GREATER FLOODS CAN AND WILL OCCUR AND FLOOD HEIGHTS MAY BE INCREASED BY MAN MADE OR NATURAL CAUSES. THE ABOVE FLOOD STATEMENT SHALL NOT CREATE LIABILITY ON THE PART OF THE SURVEYOR.
 - SOURCE BEARING IS BASED ON TEXAS STATE PLANE COORDINATE SYSTEM. PROJECTION: STATE PLANE NAD83 TEXAS NORTH CENTRAL ZONE 4204, LAMBERT CONFORMAL CONIC (TX63-NGP).
 - PROPERTY OWNERS TO MAINTAIN PROPERTY INCLUDING DRAINAGE AND UTILITY EASEMENTS TO THE EDGE OF PAVEMENT.
 - SELLING A PORTION OF ANY LOT WITHIN THIS ADDITION BY METES AND BOUNDS IS A VIOLATION OF STATE LAW AND CITY ORDINANCE AND IS SUBJECT TO FINES AND WITHHOLDING OF UTILITIES AND BUILDING PERMITS.
 - NO PERMANENT STRUCTURES, WALLS, TREES, UTILITIES, EXCEPT CROSSING AT APPROXIMATELY 90 DEGREES SHALL BE PERMITTED WITHIN THE NTMWD EASEMENTS IN LOTS 10, 21-27, BLOCK A.
 - ALL OPEN SPACE LOTS (CA1, CA2 & CA3) SHALL BE ACCESS, UTILITY AND DRAINAGE EASEMENTS.
 - ALL OPEN SPACE LOTS (CA1, CA2 & CA3) SHALL BE MAINTAINED BY THE HOMEOWNERS ASSOCIATION.
 - ALL STREET LIGHTS SHALL BE MAINTAINED BY THE HOMEOWNERS ASSOCIATION.

- LEGEND**
- Point of Curvature or Tangency on Center Line
 - 1/2" iron rod w/ yellow plastic cap stamped "JVC" set (unless otherwise noted)
 - 1/2" iron rod found w/ yellow plastic cap stamped "JVC" (unless otherwise noted)
 - AC Acre
 - BL Building Line
 - C1 Curve No.
 - C Center Line
 - <CM> Control Monument
 - DE Easement
 - ESMT Easement
 - L1 Line No.
 - C1 Curve No.
 - SF Square Feet
 - UE Utility Easement
 - WLE Water Line Easement
 - U.T.E. Utility & Telecommunications Easement
 - P.O.E. Positive Overflow Easement
 - W.M.E. Wall Maintenance Easement
 - O.P.R.C.C.T. = Official Public Records of Collin County, Texas
 - D.R.C.C.T. = Deed Records of Collin County, Texas



HEALTH DEPARTMENT CERTIFICATION
 I HEREBY CERTIFY THAT THE ON-SITE SEWAGE FACILITIES DESCRIBED ON THIS PLAT CONFORM TO THE APPLICABLE OSSF LAWS OF THE STATE OF TEXAS, THAT SITE EVALUATIONS HAVE BEEN SUBMITTED REPRESENTING THE SITE CONDITIONS IN THE AREA IN WHICH ON-SITE SEWAGE FACILITIES ARE PLANNED TO BE USED.

REGISTERED SANITARIAN OR DESIGNATED REPRESENTATIVE
 COLLIN COUNTY DEVELOPMENT SERVICES

PURPOSE OF PLAT
 THE PURPOSE OF THIS PLAT IS TO CREATE
 27 RESIDENTIAL LOTS FROM A 44.084 ACRE
 TRACT OF LAND

**PRELIMINARY PLAT
 DEAN FARMS AT
 STINSON HIGHLAND**
 LOTS 1-27, CA1 & CA2, BLOCK A
 27 SINGLE FAMILY LOTS &
 2 COMMON SPACES
 44.084 ACRES
 OUT OF THE
 JOHN MCKINNEY SURVEY, ABSTRACT NO. 596
 CITY OF LUCAS
 COLLIN COUNTY, TEXAS
 EXIST. ZONING: R1

September 27, 2022
 SHEET 1 OF 2

BENCHMARKS
 X FOUND IN THE CONCRETE PAVING OF STINSON ROAD APPROXIMATELY 1,160' NORTH OF THE CENTERLINE INTERSECTION OF STINSON ROAD AND SHILOH DRIVE. THE MONUMENT IS LOCATED APPROXIMATELY 73' NORTHEAST OF A POWER POLE AND 115' SOUTHEAST OF A WATER MANHOLE STRUCTURE. ELEVATION = 587.11'
 SQUARE CUT ON NORTHWEST CORNER OF WYE INLET LOCATED AT THE SOUTHWEST CORNER OF STINSON ROAD AND HIGHLAND DRIVE. ELEVATION = 589.40'

Line	Length	Direction
L1	35.28	S77° 07' 06" W
L2	25.00	N89° 01' 45" E
L3	25.02	S87° 55' 02" E
L4	31.64	N28° 48' 28" E
L5	86.84	S78° 32' 39" E
L6	34.32	N89° 03' 28" E
L7	53.88	S81° 38' 50" E

Curve	Length	Radius	Delta	Chord Length	Chord Bearing
C1	67.89	300.00	012° 29' 08"	67.85	N83° 07' 25" E
C2	447.36	250.00	102° 31' 52"	390.03	N52° 06' 13" W
C3	50.52	50.00	58° 53' 28"	565.77	N63° 50' 47" E
C4	14.80	50.00	016° 57' 43"	563.89	N26° 25' 13" E
C5	17.74	275.00	003° 41' 43"	17.73	N33° 51' 21" W
C6	189.52	465.64	020° 40' 50"	168.80	S09° 52' 10" W

Lot #	Block	S.F.	AC.
1	A	56135	1.29
2	A	56365	1.29
3	A	53543	1.23
4	A	53129	1.22
5	A	51219	1.18
6	A	48254	1.11
7	A	51809	1.18
8	A	45583	1.05

Lot #	Block	S.F.	AC.
9	A	47200	1.08
10	A	114210	2.62
11	A	58539	1.34
12	A	46895	1.08
13	A	46595	1.07
14	A	43393	1.00
15	A	43536	1.00
16	A	52343	1.20

Lot #	Block	S.F.	AC.
17	A	58255	1.34
18	A	43851	1.01
19	A	43839	1.01
20	A	96492	2.22
21	A	107462	2.47
22	A	68881	1.57
23	A	69380	1.59
24	A	72579	1.67

Lot #	Block	S.F.	AC.
25	A	79784	1.83
26	A	71489	1.64
27	A	70985	1.63
28	A	38410	0.88
28	A	61888	1.42

Owner/Applicant:
 Warner Land Advisors, LP
 4040 N. Central Expressway, Suite 850
 Dallas, Texas 75024
 Phone: 214-368-0238
 Contact: Preston Walhoad

Engineer/Surveyor:
 Johnson Volk Consulting, Inc.
 704 Central Parkway East, Suite 1200
 Plano, Texas 75074
 Phone: 972-201-3102
 Ryan.Renolds@johnsonvolk.com
 TBPELS FIRM NO. 10194033



TBPELS PROJECT # 210101 - WARRNER LAND ADVISORS, LP - HOMESTEAD AT STINSON HIGHLAND - PRELIMINARY PLAT # 210101 - SHEET 1 OF 2

OWNER'S CERTIFICATION & DEDICATION:

STATE OF TEXAS §
COUNTY OF COLLIN §

BEING a tract of land situated in the JOHN MCKINNEY SURVEY, ABSTRACT NO. 596, City of Lucas, Collin County, Texas and being all of those tracts of land described as Tract A and Tract H in Deed to Young Dean Homestead, Ltd., as recorded in Document No. 2002-068655 (Volume 5167, Page 3443), Deed Records, Collin County, Texas and being more particularly described as follows:

BEGINNING at a 1/2 inch iron rod found in the west line of ENCHANTED CREEK PHASE 1, an Addition to the City of Lucas, Collin County, Texas according to the Plat thereof recorded in Book 2015, Page 155 (Document No. 20150406010001068), Map Records, Collin County, Texas for the common southeast corner of said Tract H and northeast corner of KIRKLAND ESTATES, an Addition to the City of Lucas, Collin County, Texas according to the Plat thereof recorded in Cabinet 8, Book 24, Map Records, Collin County, Texas;

THENCE South 88 degrees 44 minutes 28 seconds West, leaving said west line and with the common south line of said Tract H and north line of said KIRKLAND ESTATES Addition, a distance of 677.18 feet to a 1/2 inch iron rod found for the common southwest corner of said Tract H and southeast corner of Lot 2 of LOZANO ADDITION, an Addition to the City of Lucas, Collin County, Texas according to the Plat thereof recorded in Cabinet P, Slide 10 (Document No. 2003-0120316), Map Records, Collin County, Texas;

THENCE North 00 degrees 48 minutes 15 seconds West, leaving said common line and with the common west line of said Tract A and east line of said Lot 2, a distance of 895.15 feet to a 1/2 inch iron rod found in the south line of said Tract A for the common northwest corner of said Tract H and northeast corner of said Lot 2;

THENCE South 77 degrees 07 minutes 06 seconds West, leaving said common line and with the common south line of said Tract A and north line of said Lot 2, a distance of 35.28 feet to a 1/2 inch iron rod found for corner;

THENCE South 74 degrees 39 minutes 48 seconds West, continuing with said common line, a distance of 709.66 feet to a 1/2 inch iron rod with a yellow plastic cap stamped "JVC" set for corner;

THENCE North 87 degrees 55 minutes 02 seconds West, continuing with said common line, a distance of 269.91 feet to an "X" set in concrete for the southwest corner of said Tract A;

THENCE North 00 degrees 25 minutes 13 seconds West, leaving said common line, a distance of 892.20 feet to a 1/2 inch iron rod with a yellow plastic cap stamped "JVC" set for the common northwest corner of said Tract A and southwest corner of that tract of land described in deed to Norris Ranch, Ltd., as recorded in Volume 5878, page 2019 (Document No. 2005-0033697), Deed Records, Collin County, Texas;

THENCE North 89 degrees 01 minutes 45 seconds East, a distance of 1,660.32 feet to a 1/2 inch iron rod with a red plastic cap stamped "KHA" found for the northeast corner of said Tract A;

THENCE South 00 degrees 52 minutes 15 seconds East, a distance of 1,614.94 feet to the POINT OF BEGINNING and containing 44.084 acres of land, more or less.

NOW THEREFORE, KNOW ALL MEN BY THESE PRESENTS:

That WARNER LAND ADVISORS, LP., does hereby bind themselves and their heirs, assignees and successors of title this plat designating the hereinabove described property as DEAN FARMS AT STINSON HIGHLAND, an addition to the City of Lucas, and does hereby dedicate to the use of the public forever any streets, alleys, right-of-way or easements shown thereon, and does hereby reserve the easement strips shown on this plat for the purposes stated and for the mutual use and accommodation of garbage collection agencies and all 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 growths or improvements that in any way endanger or interfere with 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 or egress to and from and upon the said easement strips for purpose of constructing, reconstructing, inspecting, patrolling, without the necessity at any time of procuring the permission of anyone. Additionally, WARNER LAND ADVISORS, LP., certifies that it is the sole owner of the dedicated property and that no other's interest is attached to this property unless otherwise indicated on the required Mortgage Holder Certification that is included on this plat. Furthermore, as the owner of the property described herein, and in consideration of establishing the subdivision described herein, it agrees to the following:

- Every owner of fee simple title to every individual lot within the subdivision shall be a member of the homeowners' association;
• The homeowners' association shall have the authority to collect membership fees;
• As applicable as it pertains to conditions shown herein, the homeowners' association shall be responsible for the maintenance of all common areas, screening walls, landscaped areas, private streets and alleys.
• The homeowners' association shall grant the City the right of access to any areas to abate any nuisances on such areas and attach a lien upon each individual lot for the prorated cost of abatement.
• The homeowners' association shall indemnify and hold the City harmless from any and all costs, expenses, suits, demand, liabilities, damages, or otherwise, including attorney fees and costs of suit, in connection with the City's maintenance of common areas.
• The homeowners' association shall, where additional rights-of-way has been dedicated for the purpose of providing landscaping, additional areas for sidewalks, walls or other amenities, enter into a license agreement with the City and shall be responsible for the installation and maintenance of all landscape areas in the public rights-of way.

This plat approved subject to all platting ordinances, rules, regulations and resolutions of the City of Lucas, Texas.

WARNER LAND ADVISORS, LP.

By: Warner Capital, LLC
By: Stephen L. Sallman, Manager

STATE OF TEXAS §
COUNTY OF COLLIN §

Before me, the undersigned authority, a Notary Public in and of the State of Texas, on this day personally appeared WARNER LAND ADVISORS, LP., known to me to be the person whose name is subscribed to the foregoing instrument and acknowledged to me that he executed the same for the purpose and consideration therein stated.

Given under my hand and seal of office, this ___ day of _____, 20__

Notary public in and for the State of Texas My Commission Expires

SURVEYOR'S CERTIFICATE:

NOW, THEREFORE KNOW ALL MEN BY THESE PRESENTS:

THAT I, Ryan S. Reynolds, 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.

PRELIMINARY, THIS DOCUMENT SHALL NOT BE RECORDED FOR ANY PURPOSE AND SHALL NOT BE USED OR VIEWED OR RELIED UPON AS A FINAL SURVEY DOCUMENT.

RYAN S. REYNOLDS, R.P.L.S.
Texas Registered Professional Land Surveyor No. 6385.

STATE OF TEXAS §
COUNTY OF COLLIN §

Before me, the undersigned authority, a Notary Public in and for the said County and State, on this day personally appeared _____, 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 ___ day of _____, 20__

Notary public for and in the State of Texas

My commission expires: _____

CERTIFICATE OF APPROVAL:

This plat is hereby approved by the Planning and Zoning Commission of the City of Lucas, Texas. This plat approved subject to all platting ordinances, rules, regulations and resolutions of the City of Lucas, Texas.

Dusty Kuykendall Date
Chair, Planning and Zoning Commission

ATTEST:
Signature Date

Name & Title Date

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 Code of Ordinances and with engineering construction standards and processes adopted by the City of Lucas, Texas as to which his/her approval is required.

Scott Holden, PE Date
Director of Public Works

The Development Services Director 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 Code of Ordinances or as many have been amended or modified, as allowed, by the Planning and Zoning Commission as to which his/her approval is required.

Joseph Hilbourn Date
Director of Development Services

NOTES:

- 1. ALL LOTS MUST USE ALTERNATIVE TYPE ON-SITE SEWAGE FACILITIES.
2. LOT TO LOT DRAINAGE IS NOT PERMITTED WITHOUT ENGINEERING SECTION APPROVAL.
3. ALL LOTS MUST MAINTAIN STATE-MANDATED SETBACK OF ALL ON-SITE SEWAGE FACILITY COMPONENTS FROM ANY/FALL EASEMENTS AND DRAINAGE AREAS, WATER DISTRIBUTION LINES, SHARP BREAKS AND/OR CREEKS/RIVERS/POND, ETC.
4. A PORTION OF LOTS 10, 11, 20-27, BLOCK A, ARE WITHIN A 250' ELECTRICAL LINE EASEMENT. THESE LOTS DO NOT CONFORM TO COLLIN COUNTY OSSF REGULATIONS. THE EASEMENT MAY NOT BE USED FOR OSSF CONVEYANCE, STORAGE OR DISPOSAL AND REQUIRED SETBACKS MUST BE FOLLOWED. DUE TO SETBACK RESTRICTIONS, NO SURFACE IMPROVEMENTS, IMPERVIOUS COVER, OUTBUILDINGS, SWIMMING POOLS, ETC. ARE ALLOWED ON SAID LOTS WITHOUT A PRE-CONSTRUCTION PLANNING MEETING WITH A REGISTERED SANITARIAN/PROFESSIONAL ENGINEER AND COLLIN COUNTY DEVELOPMENTS SERVICES. NOTE: LACK OF USEABLE LOT MAY PRECLUDE SAID LOTS FROM HAVING SWIMMING POOLS AND/OR OUTBUILDINGS. ADDITIONALLY, DWELLING SIZE ON SAID LOTS MAY BE LIMITED TO A MAXIMUM OF 5,500 SQUARE FEET AND/OR 5 BEDROOMS.
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REGISTERED SANITARIAN OR DESIGNATED REPRESENTATIVE
COLLIN COUNTY DEVELOPMENT SERVICES

PURPOSE OF PLAT
THE PURPOSE OF THIS PLAT IS TO CREATE
27 RESIDENTIAL LOTS FROM A 44.084 ACRE
TRACT OF LAND

PRELIMINARY PLAT
DEAN FARMS AT
STINSON HIGHLAND

LOTS 1-27, CA1 & CA2, BLOCK A
27 SINGLE FAMILY LOTS &
2 COMMON SPACES
44.084 ACRES
OUT OF THE
JOHN MCKINNEY SURVEY, ABSTRACT NO. 596
CITY OF LUCAS
COLLIN COUNTY, TEXAS
EXIST. ZONING: R1

September 27, 2022
SHEET 2 OF 2

Owner/Applicant:
Warner Land Advisors, LP
4040 N. Central Expressway, Suite 850
Dallas, Texas 75024
Phone: 214-368-0238
Contact: Preston Walwood

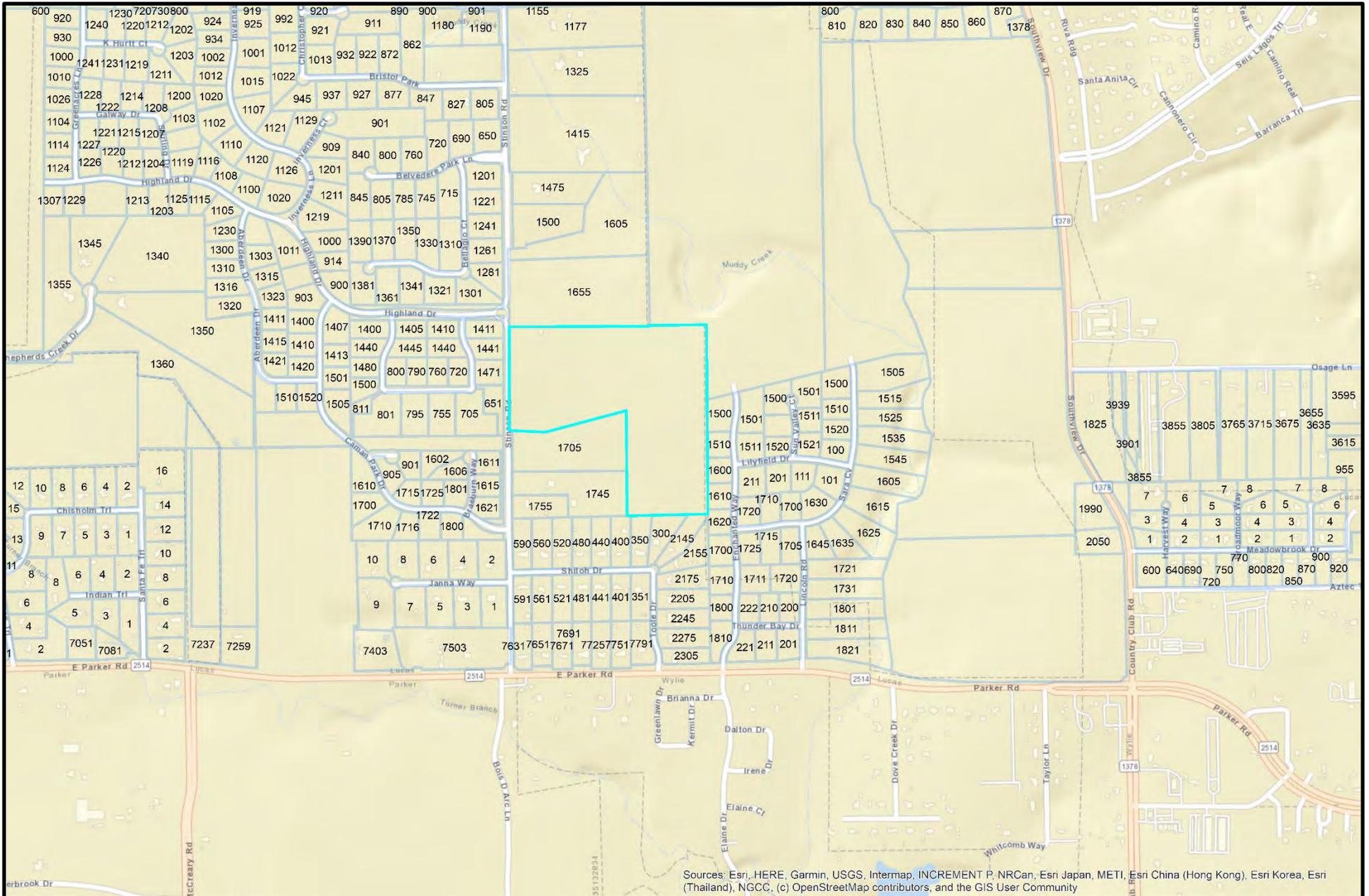
Engineer/Surveyor:
Johnson Volk Consulting, Inc.
704 Central Parkway East, Suite 1200
Plano, Texas 75074
Phone: 972-201-3102
Ryan.Renolds@johnsonvolk.com
TBPELS FIRM NO. 10194033



21091130 PROJECT:WALVA - WARNER LAND ADVISORS/PLATING - HOMESTEAD AT STINSON HIGHLAND/JVC PLANS/DWG/SUBSETS/PRELIMINARY PLAT/WALSO - PRELIMINARY PLAT/DWG



LOCATION MAP: THE HOMESTEAD ZONING CHANGE



Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community



PLATTING APPLICATION

Name of Subdivision and/or Project: Dean Farms at Stinson Highlands

Items Submitted	Filing Fee
<input type="checkbox"/> Preliminary Plat	
▪ Single Family Residential Subdivision Development	
○ \$750 + \$5 per acre with 20 acres or less (i.e. \$850 for 20 acres) excluding minor plats of five (5) acres or less.	_____
○ \$750 + \$5 per acre with 21 - 30 acres (i.e. \$900 for 30 acres)	_____
<input checked="" type="checkbox"/> \$800 + \$5 per acre with 31 - 45 acres (i.e. \$1,025 for 45 acres) 44 acres	\$1,020
○ \$900 + \$5 per acre with 46+ acres (i.e. \$1,130 for 46 acres)	_____
▪ Estate Residential Subdivision Development	
○ \$1,000 + \$7 per acre for all size parcels (i.e. \$1,140 for 20 acres)	_____
▪ Minor Plats	
○ \$500 + \$5 per acre with 5 acres or less (i.e. \$525 for 5 acres)	_____
▪ Non-residential District Plats	
○ \$800 + \$10 per acre with 30 acres or less	_____
○ \$850 + \$10 per acre with 31 - 45 acres	_____
○ \$950 + \$10 per acre with 46+ acres	_____
<input type="checkbox"/> Final Plat	
▪ Single Family Residential Subdivision Development	
○ \$800 + \$5 per acre with 30 acres or less	_____
○ \$850 + \$5 per acre with 31 - 45 acres	_____
○ \$950 + \$5 per acre with 46+ acres	_____
<i>Any additional development fees will be charged at final plat rates.</i>	
▪ Estate residential Subdivision Development	
○ \$950 + \$7 per lot for all size parcels	_____
▪ Minor Plat	
○ \$350 + \$5 per acre with 5 acres or less	_____
▪ Non-residential District Plats	
○ \$850 + \$10 per acre for up to 30 acres	_____
○ \$900 + \$10 per acre with 31 - 45 acres	_____
○ \$1,000 + \$10 per acre with 46+ acres	_____
▪ Replat	
○ Minor Plat (5 acres or less) \$450 + \$5 per acre (\$475 for 5 acres)	_____
○ All others - \$600 + \$10 per acre	_____
▪ Amended Plat	
○ Minor Plats (5 acres or less) - \$300 + \$7 per acre (i.e. \$300 for an amended plat for 5 acres)	_____
○ All others - \$500 + \$10 per acre (i.e. \$700 for an amended plat for 20 acres)	_____
<input type="checkbox"/> Storm Water Run-Off Permit	
○ Developments 0 - 3 acres \$75	_____
○ Developments 4 - 10 acres \$150	_____
○ Developments 10+ acres \$500	_____
<input type="checkbox"/> Vacation of Plat	
○ \$500 + \$10 per acre	_____
<input type="checkbox"/> Concept Plan (Optional Land Study)	
○ \$150 per session with Planning & Zoning and/or City Council	_____
<input type="checkbox"/> Tree Survey/Conservation Plan	No Fee
<input type="checkbox"/> Tree Removal & Site Clearing Permit	_____
○ \$250	_____
<input type="checkbox"/> Park Site Dedication	_____
○ \$1,000 per lot or land dedication	_____
TOTAL	\$1,020



PLATTING APPLICATION

Physical Location of Property: East of Stinson Road, 100' south of Highland Drive
(Address and general location - approximate distance to nearest existing street intersection)

Legal Description of Property: JOHN MCKINNEY SURVEY, ABSTRACT NO. 596
(Survey' Abstract Number and Tracts Platted Subdivision Name with Lots Block - Must attach metes and bounds description)

Comprehensive Zoning Designation(s): R1

Existing Zoning Designation(s): R1

Description of Project Use: Single Family Residential Lots

Acreage: 44.084 acres

Existing # of Lots/Tracts: 1

OWNERS NAME: Young Dean Homestead, Ltd

Contact Number:

Applicant/Contact Person Preston Walhood

Title: Vice President

Company Name Warner Land Advisors, LP

Street Address 4040 N Central Expressway, Suite 850 Dallas Texas 75204

Mailing Address

Phone: 214-368-0238

Fax:

Email: pwalhood@warnergrou.com

OWNERS NAME:

Contact Number:

Applicant/Contact Person

Title:

Company Name

Street Address

Mailing Address

Phone:

Fax:

Email:

ENGINEER REPRESENTATIVE: Johnson Volk Consulting Contact Number:

Applicant/Contact Person Tom Dayton, PE

Title:

Company Name JohnsonVolk Consulting

Street Address 704 Central Parkway East, Suite 1200 Plano, Texas 75074

Mailing Address

Phone: 972-201-3102

Fax:

Email: tom.dayton@johnsonvolk.com

Read before signing below: If there is more than one property owner complete a separate sheet with the same wording as below. The City requires all original signatures. If applicant is other than the property owner a "Power of Attorney" with original, notarized signatures are required. (notaries are available)

ITEMS REQUIRED PRIOR TO FINAL PLAT APPROVAL:

ALL APPLICATIONS MUST BE COMPLETE, ACCOMPANIED BY THE APPLICABLE CHECKLIST AND TAX CERTIFICATE SHOWING TAXES PAID BEFORE BEING SCHEDULED ON THE P&Z AGENDA. It is the applicant's responsibility to be familiar with, and to comply with, all City submittal requirements (in the Zoning & Subdivision Ordinances, and any separate submittal policies, requirements and/or checklists that may be required from City staff), including the number of plans to be submitted, application fees, etc. Please contact City staff in advance for submittal requirements. Drawings will not be returned to applicant.

ALL PARCELS/PROPERTIES MUST MATCH IN ACREAGE ALL OTHER DOCUMENTS SUBMITTED WITH NO AMBIGUITY.

SUBMISSIONS: Failure to submit all materials to the City with this application will result in delays scheduling the agenda date.

NOTICE OF PUBLIC RECORDS: The submission of plans/drawings with this application makes such items public record, and the applicant understands that these items may be viewed by the public unless they are copyrighted.



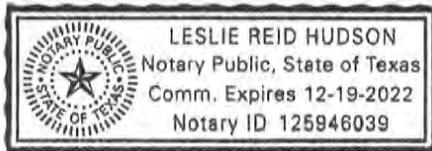
PLATTING APPLICATION

- Applicant agrees to pay any and all monies due to the City including but not limited to Park Site fee, Tree Removal Permit fee, 3% of Construction cost (developer to provide contracts for verification) and including but not limited to other fees that may be required prior to final plat approval.
- Maintenance Bond for City Improvements, 2 year – 10% Bond to be verified by submitting contract
- Construction as-built record drawings (mylar)
- Engineering construction test reports.
- Walk-through with Public Works personnel completed with satisfactory outcome.
- HOA (covenants, conditions & restrictions) documentation approved by City Attorney before submittal to Planning & Zoning.

By signing this application, staff is granted access to your property to perform work related to your case. I waive the statutory time limits in accordance with Texas Local Government Code, Section 212.

STATE OF TEXAS)
 COUNTY OF COLLIN)

BEFORE ME, a Notary Public, on this day personally appeared Preston Wainood the undersigned applicant, who, under oath, stated the following: "I hereby certify that I am the owner, or duly authorized agent of the owner, (**proof must be attached, e.g. "Power of Attorney"**) for the purposes of this application; that all information submitted herein is true and correct. I understand that submitting this application does not constitute approval, and incomplete applications will result in delays and possible denial."



[Signature]
 Owner / Agent (circle one)

SUBSCRIBED AND SWORN TO before me, this the 8th day of August, 2022.
 Notary Public in and for the State of Texas: [Signature]

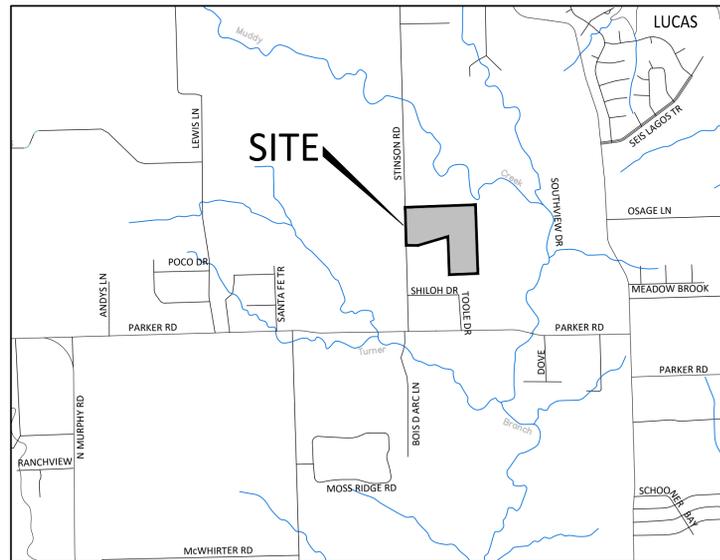
Official Use Only:	
Planning & Zoning: _____	Date: _____
City Council: _____	Date: _____
Applicant Withdrew: Yes or No	Date: _____
Applicant Made a Written Withdrawal: Yes or No	Date: _____

CONSTRUCTION PLANS FOR DEAN FARMS AT STINSON HIGHLAND

27 RESIDENTIAL LOT SUBDIVISION
AN ADDITION TO THE CITY OF LUCAS
COLLIN COUNTY, TEXAS
44.084 ACRES

SHEET INDEX

	<u>SHEET TITLE</u>
1	COVER
2	PRELIMINARY PLAT - SHEET 1 OF 2
3	PRELIMINARY PLAT - SHEET 2 OF 2
4	GENERAL NOTES
5	PAVING PLAN & PROFILE - DEAN MEADOW LN - BEGIN TO STA 10+50
6	PAVING PLAN & PROFILE - DEAN MEADOW LN - STA 10+50 TO 21+50
7	PAVING PLAN & PROFILE - DEAN MEADOW LN - STA 21+50 TO CUL-DE-SAC
8	PAVING CROSS SECTIONS
9	GRADING PLAN - SHEET 1 OF 2
10	GRADING PLAN - SHEET 2 OF 2
11A	SWALE SECTIONS
11B	SWALE SECTIONS
12	EXISTING DRAINAGE AREA MAP
13	STORM PLAN & PROFILE - SHEET 1 OF 2
14	STORM PLAN & PROFILE - SHEET 2 OF 2
15	STORM PLAN & PROFILE
16	DETENTION POND A
17	WATER PLAN - SHEET 1 OF 2
18	WATER PLAN - SHEET 2 OF 2
19	WATER PLAN
20	WATER PROFILES
21	EROSION CONTROL PLAN
22	EROSION CONTROL DETAILS
23	WATER DETAILS - SHEET 1 OF 2
24	WATER DETAILS - SHEET 2 OF 2
25	WATER DETAILS



VICINITY MAP
N.T.S.

September 2022

OWNER/DEVELOPER:

WARNER LAND ADVISORS, LP.
4040 N. CENTRAL EXPRESSWAY, SUITE 850
DALLAS, TEXAS 75024
PHONE (214) 368-0238
CONTACT: PRESTON WALHOOD

ENGINEER/SURVEYOR/LANDSCAPE ARCHITECT:

JOHNSON VOLK CONSULTING, INC.
704 CENTRAL PARKWAY EAST, SUITE 1200
PLANO, TEXAS 75074
PHONE: (972) 201-3100
CONTACT: TOM DAYTON



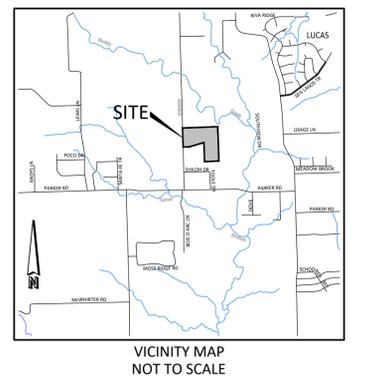
Thomas K. Dayton
09/26/2022

**JOHNSON VOLK
CONSULTING**
TBPELS: Engineering Firm No. 11962 / Land Surveying Firm No. 10194033
704 Central Parkway East | Suite 1200 | Plano, TX 75074 | 972.201.3100

REFERENCE NORTH TEXAS MUNICIPAL WATER DISTRICT
NOTES ON SHEET 20.



North Texas Municipal Water District (NTMWD) Note:
 The NTMWD easement restricts construction of permanent structures such as foundations, walls, pool and permanent storage buildings. Items such as driveways, fences, sprinkler systems and normal landscaping plans that encroach on the NTMWD easements are allowed. However, the NTMWD assumes no responsibility for damage resulting from the need to repair or maintain the NTMWD pipelines. Further, any cost for repair for damage to the pipelines resulting from construction by the developer, contractor or owner will be the responsibility of the developer, contractor or owner.

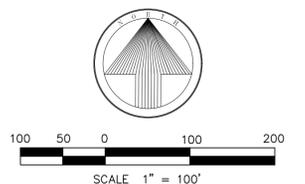


- NOTES:**
- ALL LOTS MUST USE ALTERNATIVE TYPE ON-SITE SEWAGE FACILITIES.
 - LOT TO LOT DRAINAGE IS NOT PERMITTED WITHOUT ENGINEERING SECTION APPROVAL.
 - ALL LOTS MUST MAINTAIN STATE-MANDATED SETBACK OF ALL ON-SITE SEWAGE FACILITY COMPONENTS FROM ANY/ALL EASEMENTS AND DRAINAGE AREAS, WATER DISTRIBUTION LINES, SHARP BREAKS AND/OR CREEKS/RIVERS/PONDS, ETC.
 - A PORTION OF LOTS 10, 11, 20-27, BLOCK A, ARE WITHIN A 250' ELECTRICAL LINE EASEMENT. THESE LOTS DO NOT CONFIRM TO COLLIN COUNTY OSSF REGULATIONS. THE EASEMENT MAY NOT BE USED FOR OSSF CONVEYANCE, STORAGE OR DISPOSAL AND REQUIRED SETBACKS MUST BE FOLLOWED. DUE TO SETBACK RESTRICTIONS, NO SURFACE IMPROVEMENTS, IMPERVIOUS COVER, OUTBUILDINGS, SWIMMING POOLS, ETC. ARE ALLOWED ON SAID LOTS WITHOUT A PRE-CONSTRUCTION PLANNING MEETING WITH A REGISTERED SANITARIAN/PROFESSIONAL ENGINEER AND COLLIN COUNTY DEVELOPMENT SERVICES. NOTE: LACK OF USABLE LOT MAY PRECLUDE SAID LOTS FROM HAVING SWIMMING POOLS AND/OR OUTBUILDINGS. ADDITIONALLY, DWELLING SIZE ON SAID LOTS MAY BE LIMITED TO A MAXIMUM OF 5,500 SQUARE FEET AND/OR 5 BEDROOMS.
 - A LARGE PORTION OF LOTS 11 & 20 ARE WITHIN A 250' ELECTRICAL LINE EASEMENT. THE EASEMENT MANY NOT BE USED FOR OSSF CONVEYANCE, STORAGE OR DISPOSAL AND REQUIRED SETBACKS MUST BE FOLLOWED. DUE TO SETBACK RESTRICTIONS, NO SURFACE IMPROVEMENTS, IMPERVIOUS COVER, OUTBUILDINGS, SWIMMING POOLS, ETC. ARE ALLOWED ON LOTS 11 & 20 WITHOUT A PRE-CONSTRUCTION PLANNING MEETING WITH A REGISTERED SANITARIAN/PROFESSIONAL ENGINEER AND COLLIN COUNTY DEVELOPMENT SERVICES.
 - TREE REMOVAL AND/OR GRADING FOR OSSF MAY BE REQUIRED ON INDIVIDUAL LOTS.
 - INDIVIDUAL SITE EVALUATIONS AND OSSF DESIGN PLANS (MEETING ALL STATE AND COUNTY REQUIREMENTS) MUST BE SUBMITTED TO AND APPROVED BY COLLIN COUNTY FOR EACH LOT PRIOR TO CONSTRUCTION OF ANY OSSF SYSTEM.
 - BY GRAPHICAL PLOTTING, THE PARCEL DESCRIBED HEREON DOES NOT LIE WITHIN A SPECIAL FLOOD HAZARD AREAS, AS DELINEATED ON THE COLLIN COUNTY, TEXAS AND INCORPORATED AREAS, FLOOD INSURANCE RATE MAP, MAP NUMBER 48085045 J, DATED JUNE 02, 2009, AS PUBLISHED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY. THE ABOVE FLOOD STATEMENT DOES NOT IMPLY THAT THE PROPERTY AND/OR STRUCTURES WILL BE FREE FROM FLOODING OR FLOOD DAMAGE. ON OCCASION, THE GREATER FLOODS CAN AND WILL OCCUR AND FLOOD HEIGHTS MAY BE INCREASED BY MAN MADE OR NATURAL CAUSES. THE ABOVE FLOOD STATEMENT SHALL NOT CREATE LIABILITY ON THE PART OF THE SURVEYOR.
 - SOURCE BEARING IS BASED ON TEXAS STATE PLANE COORDINATE SYSTEM. PROJECTION: STATE PLANE NAD83 TEXAS NORTH CENTRAL ZONE 4204, LAMBERT CONFORMAL CONIC (TX83-NCF).
 - PROPERTY OWNERS TO MAINTAIN PROPERTY INCLUDING DRAINAGE AND UTILITY EASEMENTS TO THE EDGE OF PAVEMENT.
 - SELLING A PORTION OF ANY LOT WITHIN THIS ADDITION BY METES AND BOUNDS IS A VIOLATION OF STATE LAW AND CITY ORDINANCE AND IS SUBJECT TO FINES AND WITHHOLDING OF UTILITIES AND BUILDING PERMITS.
 - NO PERMANENT STRUCTURES, WALLS, TRESS, UTILITIES, EXCEPT CROSSING AT APPROXIMATELY 90 DEGREES SHALL BE PERMITTED WITHIN THE NTMWD EASEMENTS IN LOTS 10, 21-27, BLOCK A.
 - ALL OPEN SPACE LOTS (CA1, CA2 & CA3) SHALL BE ACCESS, UTILITY AND DRAINAGE EASEMENTS.
 - ALL OPEN SPACE LOTS (CA1, CA2 & CA3) SHALL BE MAINTAINED BY THE HOMEOWNERS ASSOCIATION.
 - ALL STREET LIGHTS SHALL BE MAINTAINED BY THE HOMEOWNERS ASSOCIATION.

LEGEND

- Point of Curvature or Tangency on Center Line
- 1/2" iron rod w/ yellow plastic cap stamped "JVC" set (unless otherwise noted)
- 1/2" iron rod found w/ yellow plastic cap stamped "JVC" (unless otherwise noted)

AC Acre
 BL Building Line
 C1 Curve No.
 CL Center Line
 <CM> Control Monument
 DE Drainage Easement
 Esmt Easement
 L1 Line No.
 C1 Curve No.
 SF Square Feet
 UE Utility Easement
 WLE Water Line Easement
 U.T.E. Utility & Telecommunications Easement
 P.O.E. Positive Overflow Easement
 W.M.E. Wall Maintenance Easement
 O.P.R.C.C.T. = Official Public Records of Collin County, Texas
 D.R.C.C.T. = Deed Records of Collin County, Texas



HEALTH DEPARTMENT CERTIFICATION
 I HEREBY CERTIFY THAT THE ON-SITE SEWAGE FACILITIES DESCRIBED ON THIS PLAT CONFORM TO THE APPLICABLE OSSF LAWS OF THE STATE OF TEXAS, THAT SITE EVALUATIONS HAVE BEEN SUBMITTED REPRESENTING THE SITE CONDITIONS IN THE AREA IN WHICH ON-SITE SEWAGE FACILITIES ARE PLANNED TO BE USED.

REGISTERED SANITARIAN OR DESIGNATED REPRESENTATIVE
 COLLIN COUNTY DEVELOPMENT SERVICES

PURPOSE OF PLAT
 THE PURPOSE OF THIS PLAT IS TO CREATE
 27 RESIDENTIAL LOTS FROM A 44.084 ACRE
 TRACT OF LAND

PRELIMINARY PLAT
DEAN FARMS AT
STINSON HIGHLAND
 LOTS 1-27, CA1 & CA2, BLOCK A
 27 SINGLE FAMILY LOTS &
 2 COMMON SPACES
 44.084 ACRES
 OUT OF THE
 JOHN MCKINNEY SURVEY, ABSTRACT NO. 596
 CITY OF LUCAS
 COLLIN COUNTY, TEXAS
 EXIST. ZONING: R1

September 27, 2022
 SHEET 1 OF 2

BENCHMARKS
 "X" FOUND IN THE CONCRETE PAVING OF STINSON ROAD APPROXIMATELY 1,160' NORTH OF THE CENTERLINE INTERSECTION OF STINSON ROAD AND SHILOH DRIVE. THE MONUMENT IS LOCATED APPROXIMATELY 73' NORTHEAST OF A POWER POLE AND 115' SOUTHWEST OF A WATER MANHOLE STRUCTURE. ELEVATION = 587.11'
 SQUARE CUT ON NORTHWEST CORNER OF WYE INLET LOCATED AT THE SOUTHWEST CORNER OF STINSON ROAD AND HIGHLAND DRIVE. ELEVATION = 589.40'

Line Table

Line #	Length	Direction
L1	35.28	S77° 07' 06"W
L2	25.00	N89° 01' 45"E
L3	25.02	S87° 55' 02"E
L4	31.64	N29° 48' 28"E
L5	86.84	S78° 32' 39"E
L6	34.32	N89° 03' 28"E
L7	53.88	S81° 39' 50"E

Curve Table

Curve #	Length	Radius	Delta	Chord Length	Chord Bearing
C1	67.99	300.00	01°25'08"	67.85	N83° 07' 25"E
C2	447.38	250.00	102°31'52"	390.03	N52° 06' 13"W
C3	50.52	50.00	057°53'28"	565.77	N63° 50' 47"E
C4	14.80	50.00	016°57'43"	563.89	N26° 25' 15"E
C5	17.74	275.00	003°41'43"	17.73	N33° 51' 21"W
C6	169.52	469.64	020°40'50"	168.60	N09° 52' 10"W

Lot Area

Lot #	Block	S.F.	AC.
1	A	56135	1.29
2	A	56365	1.29
3	A	53543	1.23
4	A	53129	1.22
5	A	51219	1.18
6	A	48254	1.11
7	A	51609	1.18
8	A	45583	1.05

Lot Area

Lot #	Block	S.F.	AC.
9	A	47200	1.08
10	A	114210	2.62
11	A	85639	1.97
12	A	46895	1.08
13	A	46595	1.07
14	A	43951	1.01
15	A	43536	1.00
16	A	52343	1.20

Lot Area

Lot #	Block	S.F.	AC.
17	A	58255	1.34
18	A	43951	1.01
19	A	43939	1.01
20	A	96492	2.22
21	A	107462	2.47
22	A	68181	1.57
23	A	69380	1.59
24	A	72579	1.67

Lot Area

Lot #	Block	S.F.	AC.
25	A	79784	1.83
26	A	71489	1.64
27	A	70995	1.63
28	A	38470	0.88
29	A	61684	1.42

Owner/Applicant:
 Warner Land Advisors, LP
 4040 N. Central Expressway, Suite 850
 Dallas, Texas 75024
 Phone: 214-368-0238
 Contact: Preston Walhoo

Engineer/Surveyor:
 Johnson Volk Consulting, Inc.
 704 Central Parkway East, Suite 1200
 Plano, Texas 75074
 Phone: 972-201-3102
 Ryan.Renolds@johnsonvolk.com
 TBPELS FIRM NO. 10194033



PAVING NOTES

1. CONCRETE FOR ALL STREETS AND PRIVATE DEVELOPMENTS SHALL BE IN ACCORDANCE WITH NCTCOG, FOURTH EDITION OR AS AMENDED CLASS "C" CONCRETE (SIX SACK 3,600 P.S.I.) ITEM 303.3.4.2(a) AND ITEM 303.5.6.2 HAND.
2. REINFORCING STEEL SHALL BE DEFORMED BARS NO. NO. 4 BARS ON 18 INCH CENTERS. REINFORCING SHALL BE IN BOTH DIRECTIONS ON CENTER. REINFORCING STEEL SHALL BE IN ACCORDANCE WITH ASTM 615, 616 AND 617.
3. ALL REINFORCING STEEL SHALL BE TIED (100%). REINFORCING STEEL SHALL BE SET ON PLASTIC CHAIRS. BAR LAPS SHALL BE MINIMUM 30 DIAMETERS. NO STEEL SHALL BE PLACED UNTIL THE SUBGRADE HAS BEEN TESTED AND PASSED.
4. EXPANSION JOINTS SHALL BE SPACED EVERY 600 FEET, AT ALL INTERSECTIONS AND CHANGES IN DIRECTION OF PAVING. ALLEYS SHALL HAVE A MINIMUM OF TWO EXPANSION JOINTS.
5. SAWED TRANSVERSE DUMMY JOINTS SHALL BE SPACED EVERY 15 FEET OR 1.25 TIMES LONGITUDINAL JOINT SPACING WHICHEVER IS LESS. SAWING SHALL OCCUR WITHIN 5 TO 12 HOURS AFTER THE POUR INCLUDING SEALING.
6. SUBGRADE UNDER PAVEMENTS SHALL BE IN ACCORDANCE WITH GEOTECH REPORT NO. G220942 FURNISHED BY ALPHA TESTING ON JULY 19, 2022.
7. LIME TRIMMINGS ARE NOT ACCEPTABLE FOR ANY USE.
8. ALL FILL SHALL BE COMPACTED BY MECHANICAL METHODS. MAXIMUM LOOSE LIFT FOR COMPACTION SHALL BE 8 INCHES. ALL LIFTS SHALL BE TESTED FOR DENSITY BY AN INDEPENDENT LABORATORY APPROVED BY THE CITY. DENSITY REQUIREMENT SHALL BE AS SHOWN ON THE PLANS FOR THE TYPE OF MATERIAL CALLED FOR IN THE PLANS.
9. ALL DISTURBED AREAS OF ROADWAY WORK SHALL HAVE GRASS ESTABLISHED IMMEDIATELY. GRASS SHALL MEET THE REQUIREMENTS OF ITEM 202, LANDSCAPING, OF NCTCOG SPECIFICATIONS, FOURTH EDITION OR AS AMENDED.
10. ALL AREAS TO BE EXCAVATED OR FILLED SHALL HAVE EROSION CONTROL PLACED PRIOR TO COMMENCING EARTHWORK. EROSION CONTROL DEVICES SHALL BE MAINTAINED THROUGHOUT THE PROJECT IN ACCORDANCE WITH NCTCOG ITEM 201, FOURTH EDITION OR AS AMENDED.
11. NO VEHICLES SHALL BE PERMITTED ON CONCRETE PAVEMENT WITHOUT APPROVAL FROM THE CITY. THE CITY WILL MAKE DETERMINATION BASED ON CONCRETE BREAK REPORT.
12. CONCRETE MIX DESIGN SHALL BE SUBMITTED FOR REVIEW PRIOR TO PRE-CONSTRUCTION MEETING. REVISE THE FIRST PARAGRAPH OF NCTCOG SPEC. 303.2.1.3 COARSE AGGREGATE TO READ "CRUSHED LIMESTONE SHALL CONSTITUTE 100% OF THE COARSE AGGREGATE.
13. ALL AREAS NOT UNDER PAVING, INCLUDING ALL FRANCHISE UTILITY EASEMENTS, SHALL BE COMPACTED TO A DENSITY OF NOT LESS THAN 92 PERCENT OF THE MAXIMUM DENSITY.
14. ANY CURB AND/OR STREET SECTION REMOVED FOR THE CONSTRUCTION OF A PRIVATE DRIVEWAY SHALL NOT BE REMOVED PRIOR TO 7 DAYS OF CONSTRUCTION OF THE DRIVEWAY. IF THE DRIVEWAY IS NOT CONSTRUCTED WITHIN THIS TIME FRAME AND EXCAVATION HAS BEEN MADE, EXCAVATION SHALL BE REPLACED UNTIL SUCH TIME CONSTRUCTION COMMENCES.
15. MAXIMUM TEMPERATURE OF THE CONCRETE FOR PLACEMENT SHALL BE IN ACCORDANCE WITH ITEM 303.5.5.2. OF THE NCTCOG STANDARD SPECIFICATIONS.
16. PAVING EQUIPMENT REQUIRED SHALL BE AS SPECIFIED IN NCTCOG 2017 EDITION UNDER ITEM 303.4..
17. WATER INJECTION OF SUBGRADE BY CITY ENGINEER APPROVAL ONLY.

STORM SEWER

1. THE FLOOR OF THE EXCAVATION FOR INLET BOX MUST PROVIDE A FIRM, LEVEL BED FOR THE BASE SECTION TO REST UPON.
2. A MINIMUM OF 6 INCHES OF 1"DIAMETER (MAXIMUM) ROCK OR GRAVEL SHALL BE USED TO PREPARE THE BEDDING TO FINAL GRADE OR IN LIEU OF THIS, AT LEAST 6 INCHES OF 2--SACK CEMENT STABILIZED SAND SHALL BE USED TO PREPARE THE BEDDING TO GRADE. CEMENT STABILIZED SAND SHALL BE ALLOWED TO SET BY KEEPING HOLE PUMPED DRY.
3. AFTER PIPE HAS BEEN LAID ON PROPER BEDDING, BACKFILLING TO COMMENCE WITH 8"MAXIMUM LOOSE LIFTS MECHANICALLY COMPACTED TO 95% STANDARD PROCTOR UNDER ROADWAY OR 12"MAXIMUM LOOSE LIFT BEHIND CURB. MAXIMUM SIZE ROCK IN BACKFILL SHALL NOT EXCEED 4 INCHES IN DIAMETER.
4. PRECAST INLETS MUST BE APPROVED BY THE CITY.
5. CONCRETE TO BE MINIMUM 4200 P.S.I.
6. LOCKING DEVICE IS REQUIRED ON ALL STORM SEWER LIDS.
7. "NO DUMPING" WARNING PLAQUE TO BE INSTALLED ON ALL STANDARD AND RECESSED INLETS.
8. CONCRETE CAST-IN-PLACE INLETS SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4,200 P.S.I. @ 28 DAYS.
9. EXISTING STORM SEWER PIPE AND/OR LATERALS SHALL BE LOCATED PRIOR TO SETTING OR CONSTRUCTING INLET BOXES. IF ADJUSTMENT IN GRADE OF LATERAL IS REQUIRED, A REVISED DESIGN BY THE ENGINEER OF RECORD SHALL BE SUBMITTED TO THE CITY FOR APPROVAL.
10. REINFORCED CONCRETE PIPE CLASS III IS APPROVED WITHIN THE CITY.
11. COLOR TV INSPECTION SHALL BE COMPLETED ON THE STORM SEWER IN THE PRESENCE OF CITY REPRESENTATIVE AND THE ORIGINAL MEDIA SHALL BE GIVEN TO THE CITY AT THE COMPLETION OF THE INSPECTION.

STREET SIGN SPECIFICATIONS

STREET NAME SIGNS FOR ALL INTERSECTIONS BY THE CONSTRUCTION OF A SUBDIVISION SHALL BE FURNISHED AND INSTALLED BY THE DEVELOPER. THE INSTALLATION OF THE STREET SIGNS MUST BE PRIOR TO THE FINAL ACCEPTANCE OF THE SUBDIVISION. THE LEGEND SHALL CONTAIN THE NAME OF THE STREET, ANY SUFFIX AS DESIGNATED ON THE PLAT, AND THE BLOCK NUMBER AS ASSIGNED BY THE CITY. THE SIGN FACE SHALL BE HIP PRISMATIC WHITE W/BLUE EC FILM WITH CITY LOGO. THE SIGN PLATE SHALL BE 9 INCHES TALL AND 0.080 INCHES THICK FLAT BLADE ALUMINUM DRILLED. THE STREET NAME SHALL BE 6 INCH UPPER CASE LETTERS. THE SUFFIX AND BLOCK LETTERS SHALL BE 3 INCHES. ALL LETTERS SHALL BE WHITE. THE SIGNS SHALL BE MOUNTED ON A 2 INCH BY 12 FOOT SQUARE POST WITH A 2.25 INCH BY 36 INCH SQUARE GROUND ANCHOR AND 2.5 INCH BY 18 INCH SLEEVE. THE ANCHOR POST SHALL BE DRIVEN INTO THE GROUND AT A DEPTH OF 30 INCHES. THE STREET NAME SHALL BE MOUNTED 10 FEET FROM THE TOP OF THE CURB MEASURED TO THE BOTTOM OF THE LOWEST SIGN. SIGNS SHALL BE MOUNTED ON SQUARE POSTS USING DRIVE RIVETS, WASHER, SPACE AND CHERRY MATE RIVETS TO ATTACH ENDS OF SIGN TOGETHER.

ALL STREET LIGHTS SHALL BE MAINTAINED BY THE HOMEOWNERS ASSOCIATION.

WATER

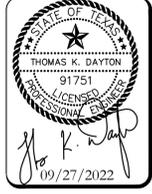
1. ALL WATER LINE CROSSINGS OF SANITARY SEWER LINES SHALL BE AS SHOWN IN THE PLANS AND MEET TCEQ REQUIREMENTS.
2. PIPES 12 INCHES IN DIAMETER AND SMALLER SHALL BE POLYVINYL CHLORIDE (P.V.C.) MEETING THE REQUIREMENTS OF AWWA C900 DR 18 OR DUCTILE IRON PIPE (D.I.P.) MEETING THE REQUIREMENTS OF AWWA C 151 CLASS 50 PIPE. ALL D.I.P. SHALL BE WRAPPED WITH A POLYETHYLENE LINER.
3. FOR PIPES LARGER THAN 12 INCHES IN DIAMETER, THE PIPE SHALL BE REINFORCED CONCRETE CYLINDER PIPE (AWWA C301 OR AWWA C303), DUCTILE IRON PIPE (AWWA C151 CLASS 50) OR POLYVINYL CHLORIDE PIPE UP TO 18 INCHES MEETING THE REQUIREMENTS OF AWWA C905 - 235 P.S.I. RATED PIPE.
4. ALL VALVES ON PIPES 12 INCHES AND SMALLER SHALL BE RESILIENT SEALED WEDGE VALVES (AWWA C509).
5. ALL VALVES ON PIPES LARGER THAN 12 INCHES BUT SMALLER THAN 30 INCHES SHALL BE BUTTERFLY VALVES (AWWA C504) OR WEDGE VALVES (AWWA C509).
6. ALL VALVES ON PIPES 30 INCHES AND LARGER SHALL BE BUTTERFLY VALVES (AWWA C504).
7. EMBEDMENT SHALL BE AS SHOWN IN THE PLANS. BACKFILL WITHIN THE LIMITS OF EXISTING AND PROPOSED PAVEMENT SHALL BE COMPACTED TO 95% STANDARD PROCTOR. OUTSIDE PAVEMENT (EXISTING OR PROPOSED) SHALL BE COMPACTED TO MINIMUM OF 92% STANDARD PROCTOR. ALL COMPACTION SHALL BE BY MECHANICAL METHODS.
8. WATER LINES SHALL BE PRESSURE TESTED IN ACCORDANCE WITH NCTCOG ITEM 506. ALL WATER LINES SHALL BE SWABBED IN THE PRESENCE OF THE INSPECTOR PRIOR TO BACKFILLING.
9. ALL HORIZONTAL AND VERTICAL BENDS SHALL BE BLOCKED.
10. ALL FITTINGS SHALL INCLUDE MEGALUG CONNECTORS
11. ALL FIRE HYDRANTS SHALL BE INSTALLED WITH A 24"x 24" SQUARE REINFORCED CONCRETE PAD.
12. ALL WATER LINES SHALL BE SWABBED IN THE PRESENCE OF THE INSPECTOR PRIOR TO BACKFILL.

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JOHNSON VOLK CONSULTING
 TBP&E Engineering Firm No. 11982 / Land Surveying Firm No. 10194033
 704 Central Parkway East | Suite 1200 | Plano, TX 75074 | 972.201.5100

DEAN FARMS
 AT STINSON HIGHLAND
 CITY OF LUCAS
 COLLIN COUNTY, TEXAS

GENERAL NOTES



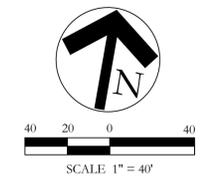
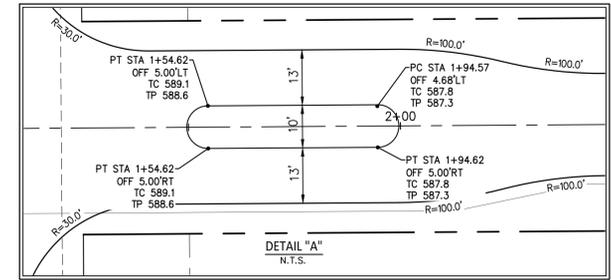
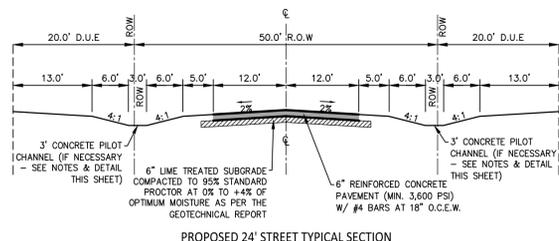
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BENCHMARKS

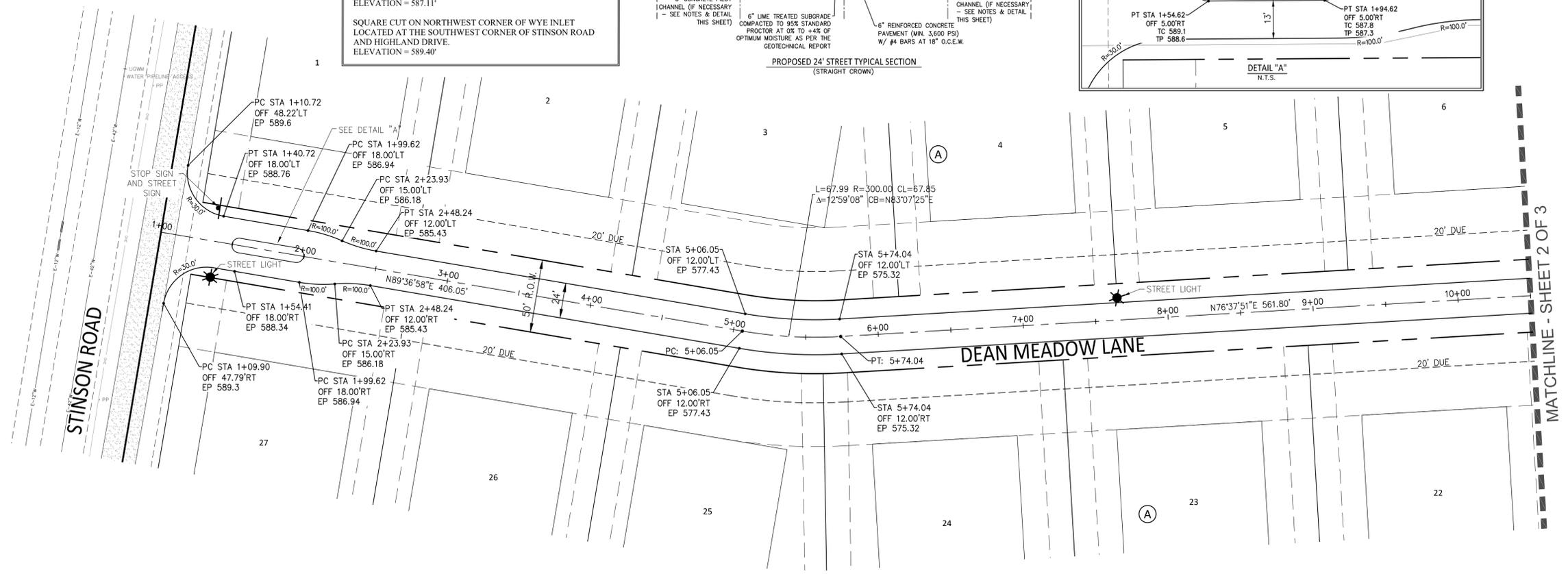
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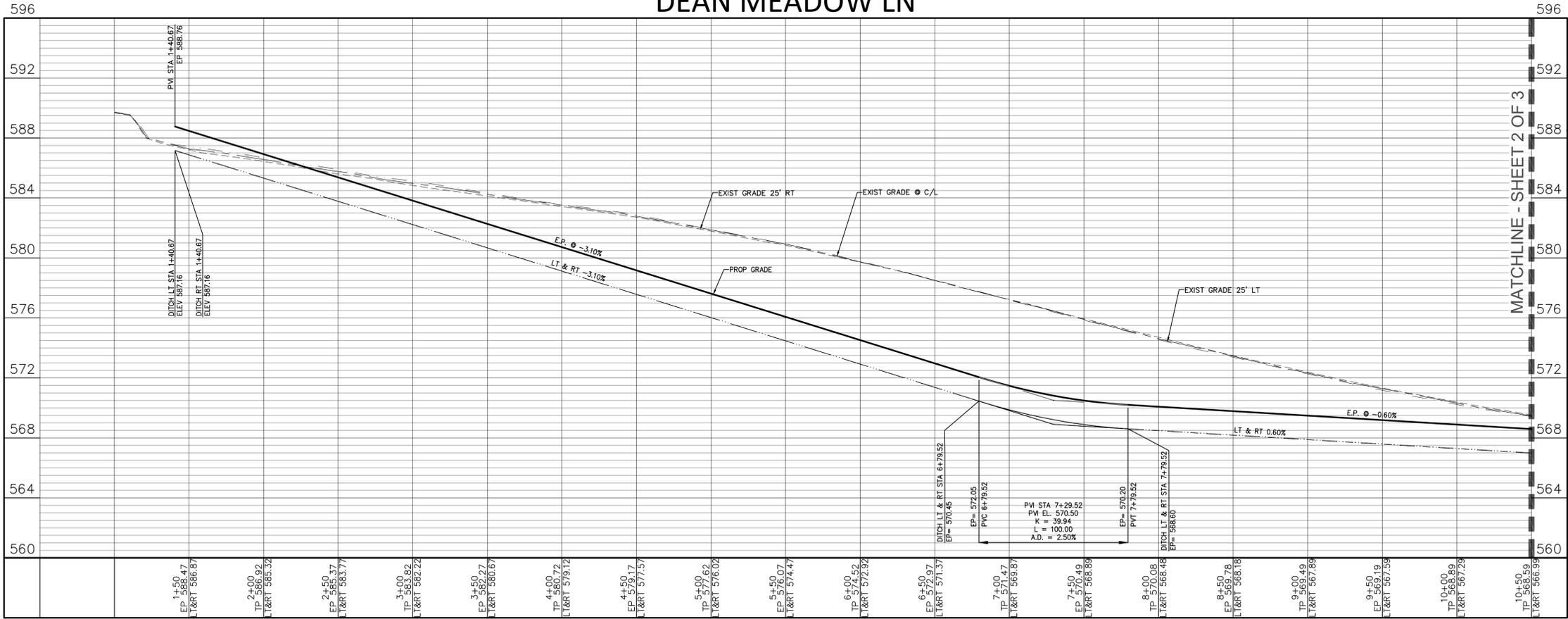


- PLAN LEGEND**
- PROP FIRE HYDRANT
- PROFILE LEGEND**
- TOP OF CURB PROFILE
 - N.G. AT CENTERLINE
 - N.G. AT RIGHT R.O.W.
 - N.G. AT LEFT R.O.W.
 - LEFT DITCH FLOW LINE
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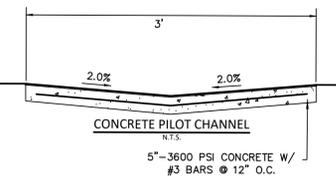
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DEAN MEADOW LN

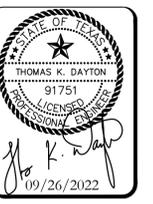


REFERENCE NORTH TEXAS MUNICIPAL WATER DISTRICT NOTES ON SHEET 20.



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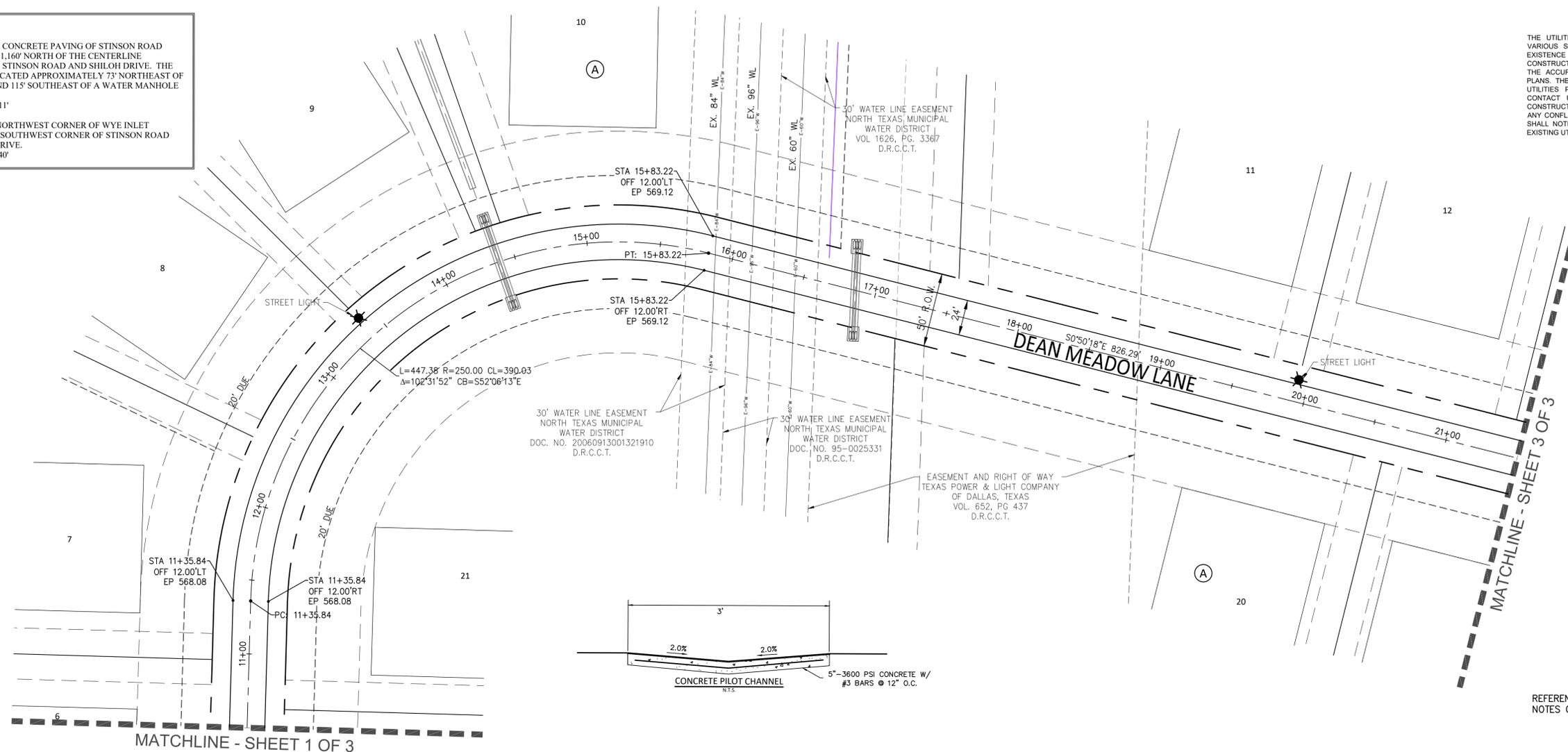
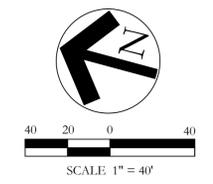
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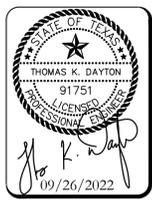
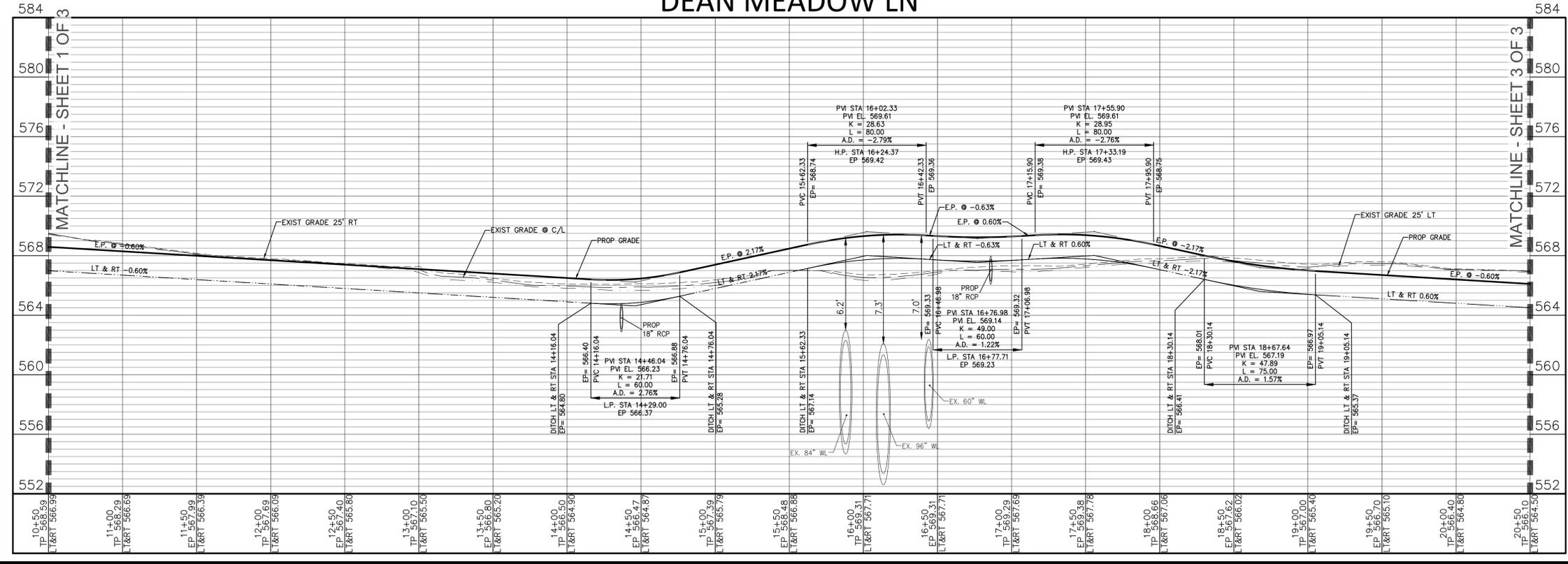
PLAN LEGEND

- PROP FIRE HYDRANT

PROFILE LEGEND

- TOP OF CURB PROFILE
- N.G. AT CENTERLINE
- N.G. AT RIGHT R.O.W.
- N.G. AT LEFT R.O.W.
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DEAN MEADOW LN



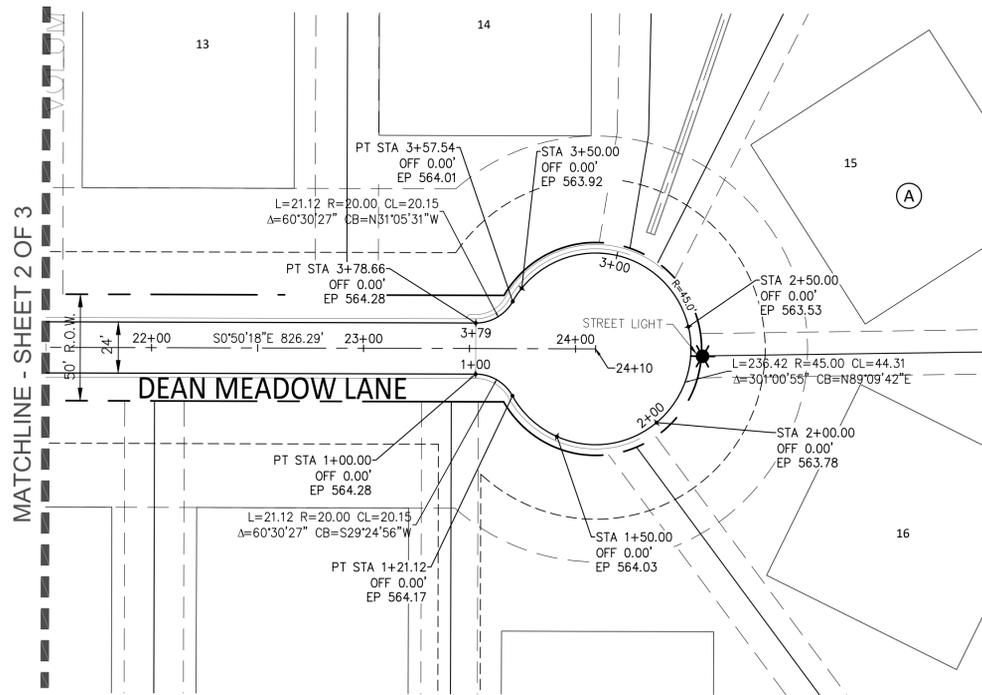
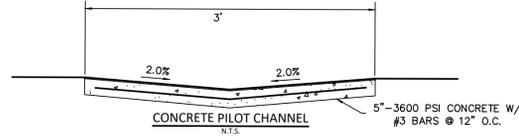
SCALE:
1" = 40' (H)
1" = 4' (V)
One Inch
JVC No WLA501

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BENCHMARKS

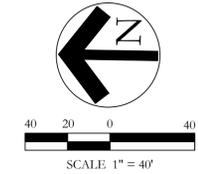
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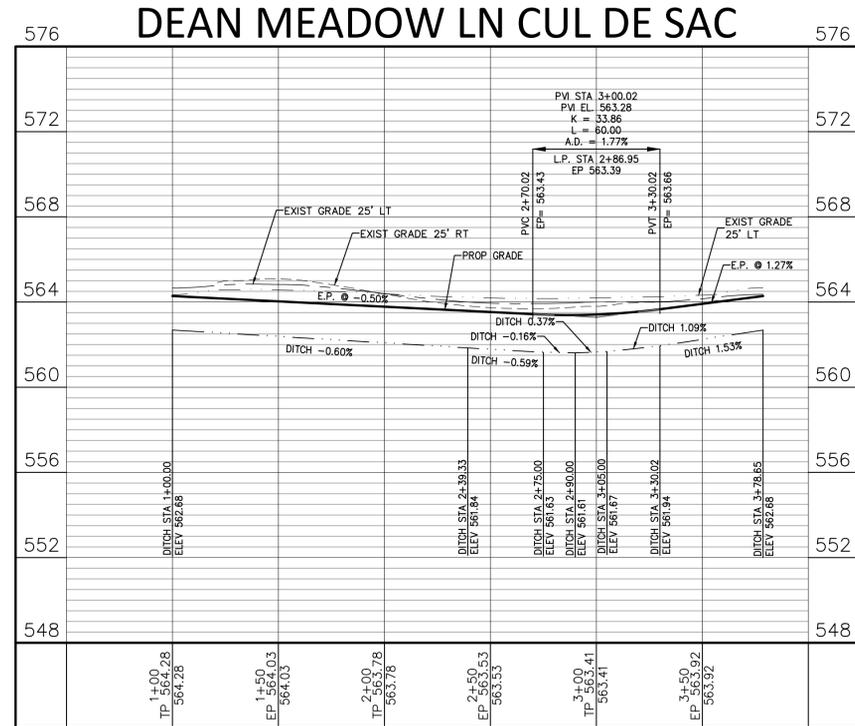
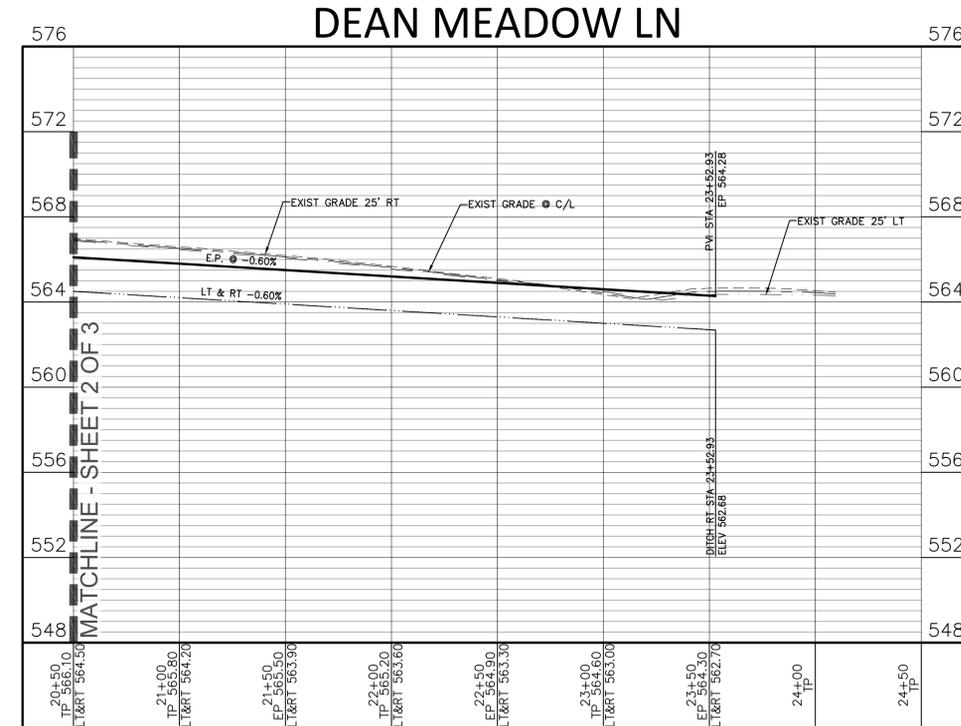
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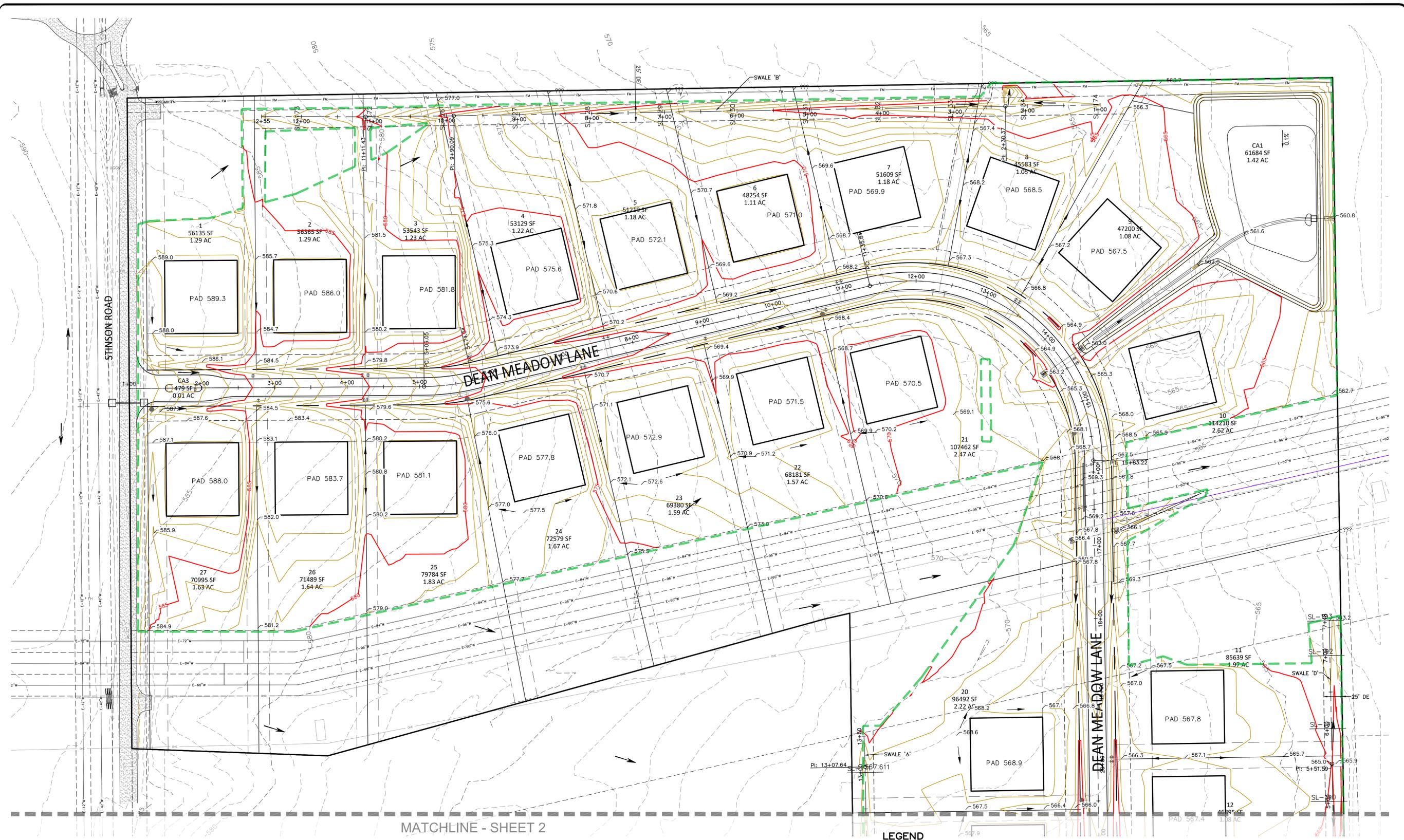
PLAN LEGEND	
	PROP FIRE HYDRANT

PROFILE LEGEND	
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SCALE:
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1" = 4' (V)
One Inch
JVC No WLA501



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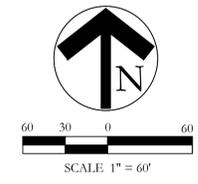
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- NOTES:
- MINIMUM SLOPE OF GRASSED AREAS IS 1%. MAXIMUM SLOPE OF GRASSED OR OTHERWISE VEGETATED AREAS IS 4:1.
 - WATER INJECTION OF PADS MUST OCCUR PRIOR TO THE BEGINNING OF UTILITY WORK.
 - FRONT YARD RETAINING WALLS AND FRONT YARD RAMPS SHALL BE CONSTRUCTED AFTER FRANCHISE UTILITY INSTALLATION.
 - ANY PROPOSED RETAINING WALLS HIGHER THAN 4 FEET FROM THE BOTTOM OF THE FOOTING ARE SUBJECT TO BE DESIGNED BY A PROFESSIONAL ENGINEER AND MUST BE CONSTRUCTED BASED ON THE APPROVED STRUCTURAL DETAILS PROVIDED BY THE ENGINEER OF THE RECORD.

LEGEND

-----	PROPOSED RETAINING WALL
-----	LIMITS OF GRADING
-----	PROP RIGHT-OF-WAY
528.0	PROP SPOT ELEVATION
(NG 528.0)	EX SPOT ELEVATION
548.1 T	TOP OF WALL
540.7 B	BOTTOM OF WALL
527	EXISTING CONTOURS
527	PROPOSED CONTOURS
→	PROP FLOW ARROW
---<	NON-TYPICAL SWALE

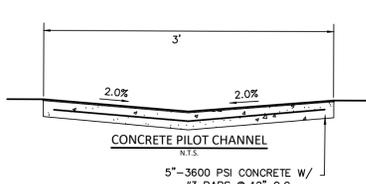
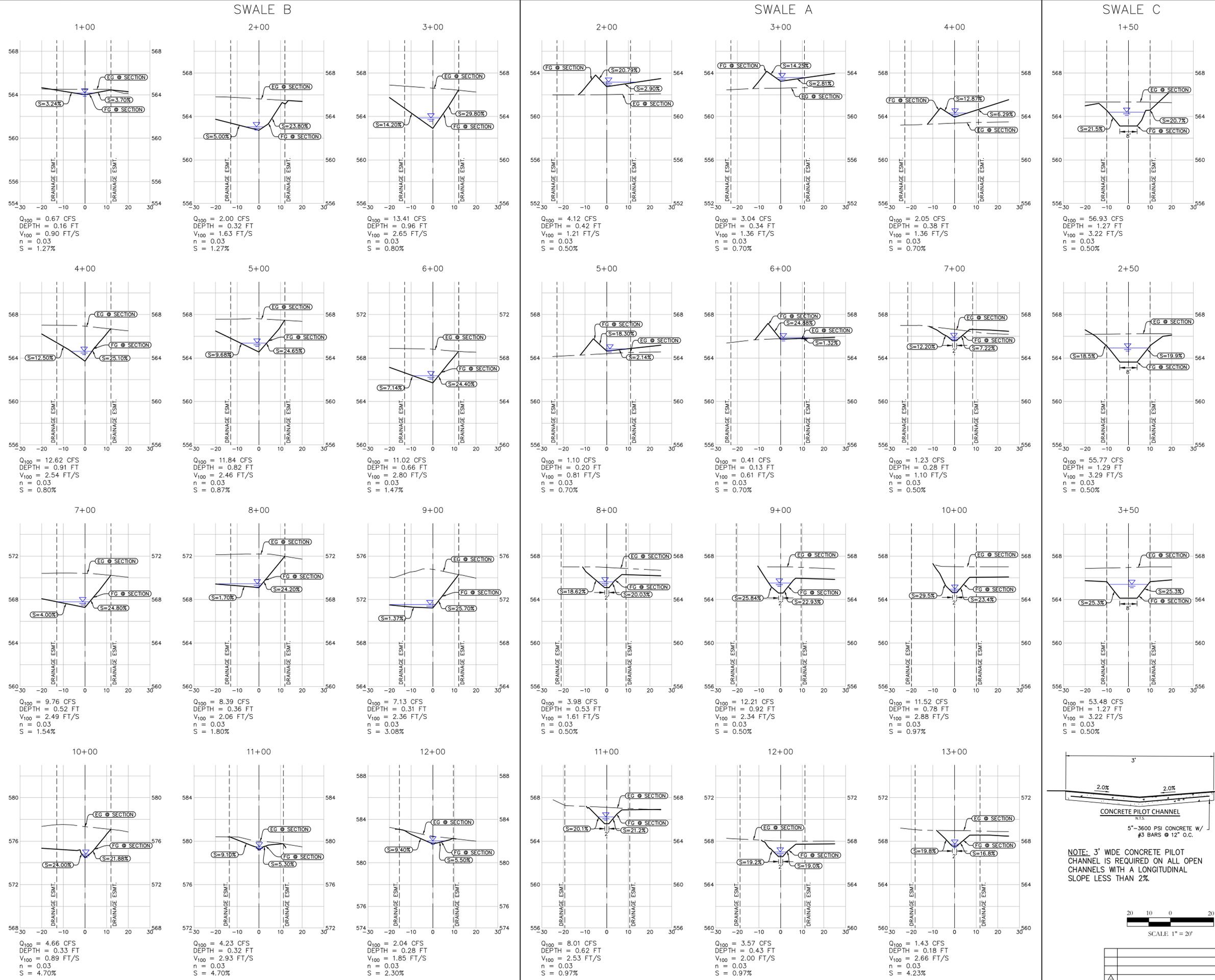


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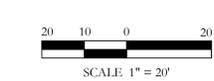


SCALE:
 One Inch
 JVC No WLA501

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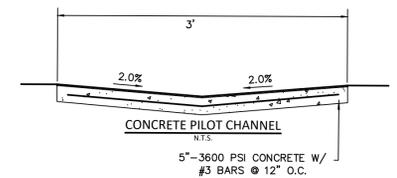
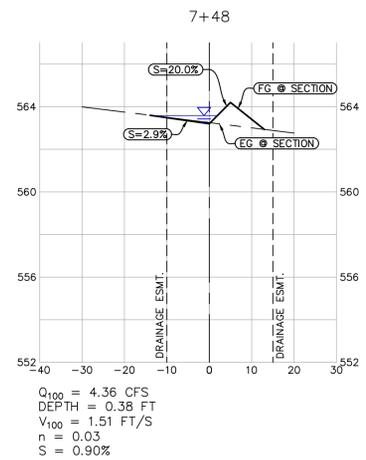
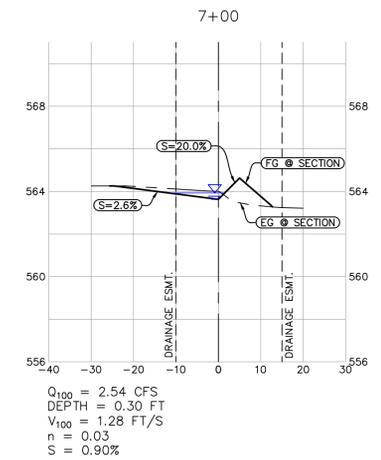
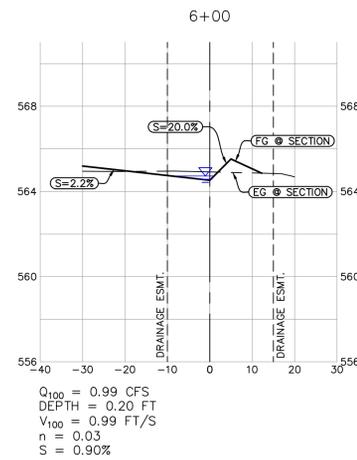
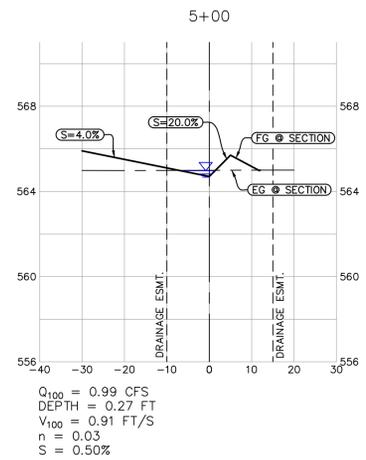
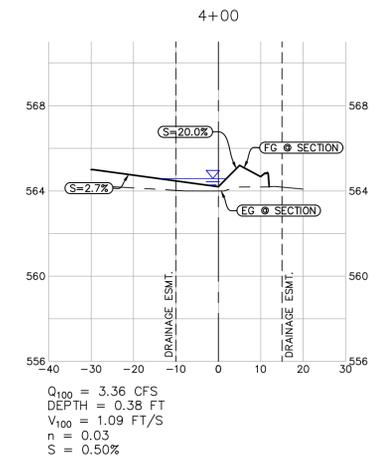
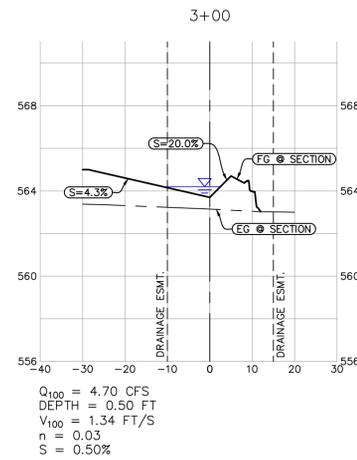
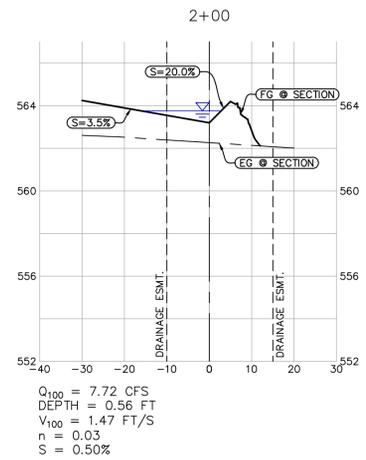


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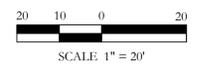


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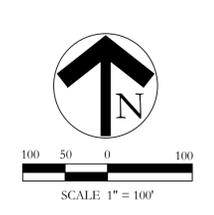
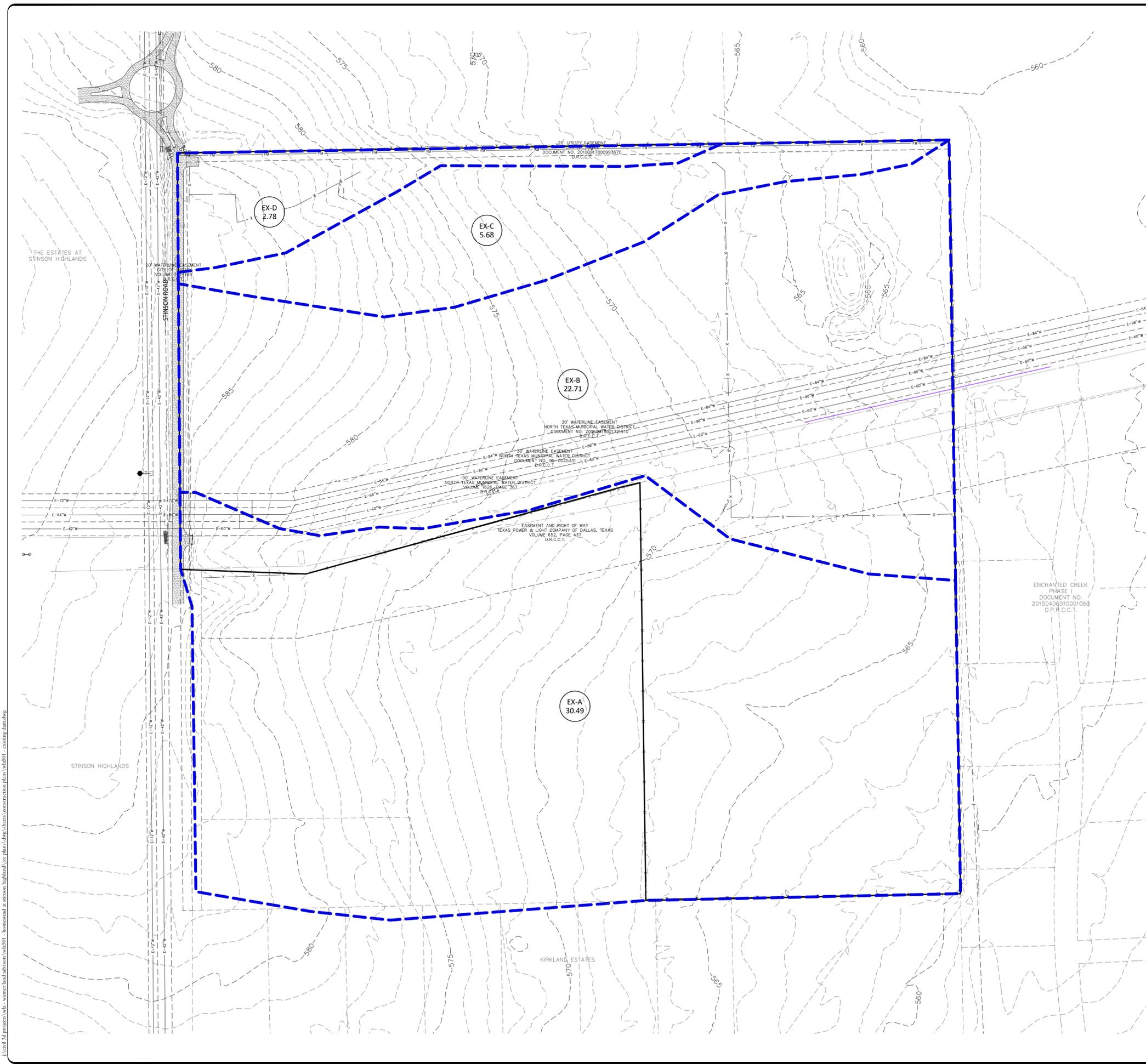
SWALE D



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LEGEND

- C
2.30 DRAINAGE AREA DESIGNATION
DRAINAGE AREA SIZE (AC.)
- DRAINAGE AREA DIVIDE
- FLOW ARROW
- 718-- EXISTING MAJOR CONTOUR
- 718-- EXISTING MINOR CONTOUR

EXISTING RUNOFF CALCULATIONS

DRAINAGE AREA I.D.	SIZE (ac)	RUNOFF COEFFICIENT	CxA	TIME OF CONCENTRATION (min)	100-YEAR	
					RAINFALL INTENSITY	RUNOFF (cfs)
EX-A	30.49	0.35	10.67	15	7.84	83.7
EX-B	22.71	0.35	7.95	15	7.84	62.3
EX-C	5.68	0.35	1.99	15	7.84	15.6
EX-D	2.78	0.35	0.97	15	7.84	7.6

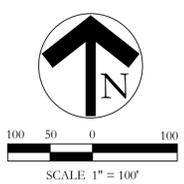
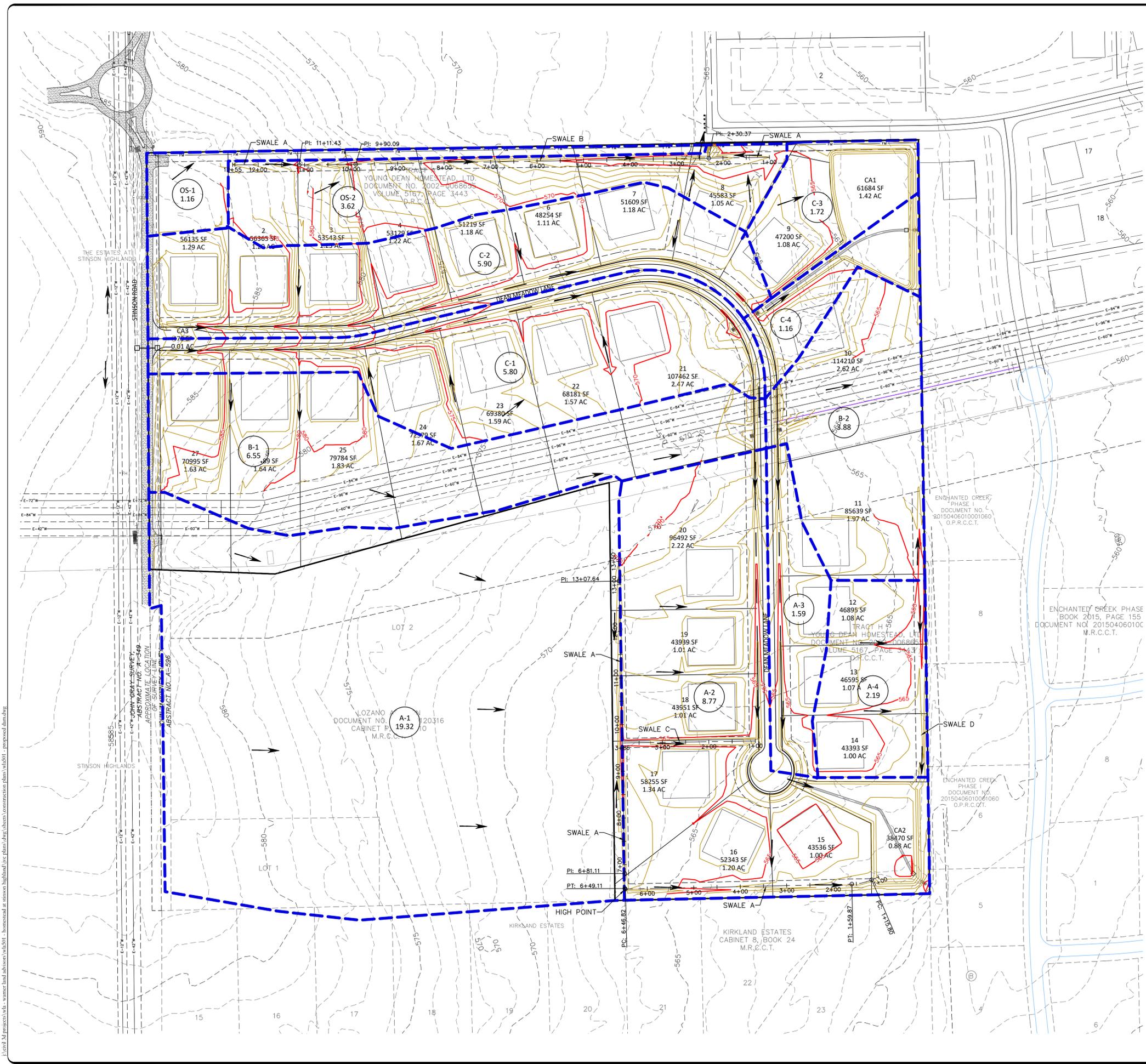
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LEGEND

- C-1
1.00
4.50 DRAINAGE AREA DESIGNATION
- DRAINAGE AREA SIZE (AC.)
- 100-YR RUNOFF (CFS)
- FLOW ARROW
- - -718- - - EXISTING MAJOR CONTOUR
- - -718- - - EXISTING MINOR CONTOUR
- - -718- - - PROPOSED MAJOR CONTOUR
- - -718- - - PROPOSED MINOR CONTOUR
- PROPOSED STORM CULVERT

DRAINAGE AREA I.D.	SIZE (ac)	RUNOFF COEFFICIENT	Cxk	TIME OF CONCENTRATION (min)	RAINFALL INTENSITY	RUNOFF (cfs)
A-1	19.32	0.35	6.76	15	7.84	53.0
A-2	8.77	0.55	4.82	15	7.84	37.8
A-3	1.59	0.55	0.87	15	7.84	6.9
A-4	2.19	0.55	1.20	15	7.84	9.4
B-1	6.55	0.44	2.91	15	7.84	22.8
B-2	3.88	0.45	1.73	15	7.84	13.5
C-1	5.80	0.55	3.19	15	7.84	25.0
C-2	5.90	0.55	3.25	15	7.84	25.4
C-3	1.72	0.55	0.95	15	7.84	7.4
C-4	1.16	0.55	0.64	15	7.84	5.0
OS-1	1.16	0.55	0.64	15	7.84	5.0
OS-2	3.62	0.55	1.99	15	7.84	15.6

COMPOSITE RUNOFF CALCULATIONS

DRAINAGE AREA I.D.	TOTAL AREA (ac)	AREA @ C=0.55	AREA @ C=0.35	COMPOSITE C
B-1	6.55	3.10	3.45	0.44
B-2	3.88	1.85	2.03	0.45

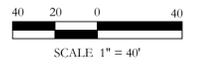
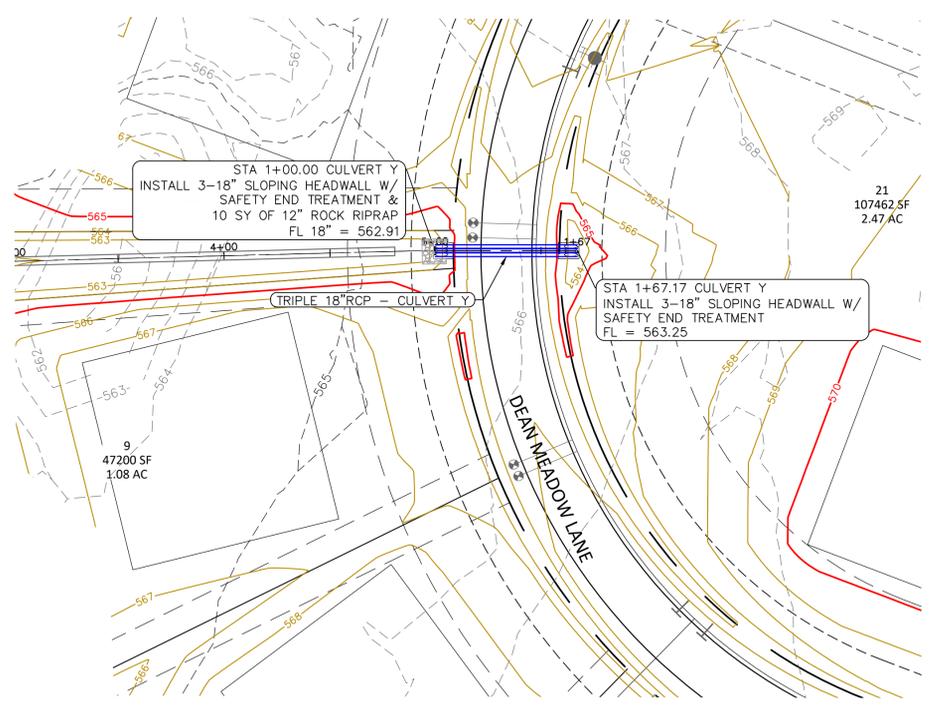
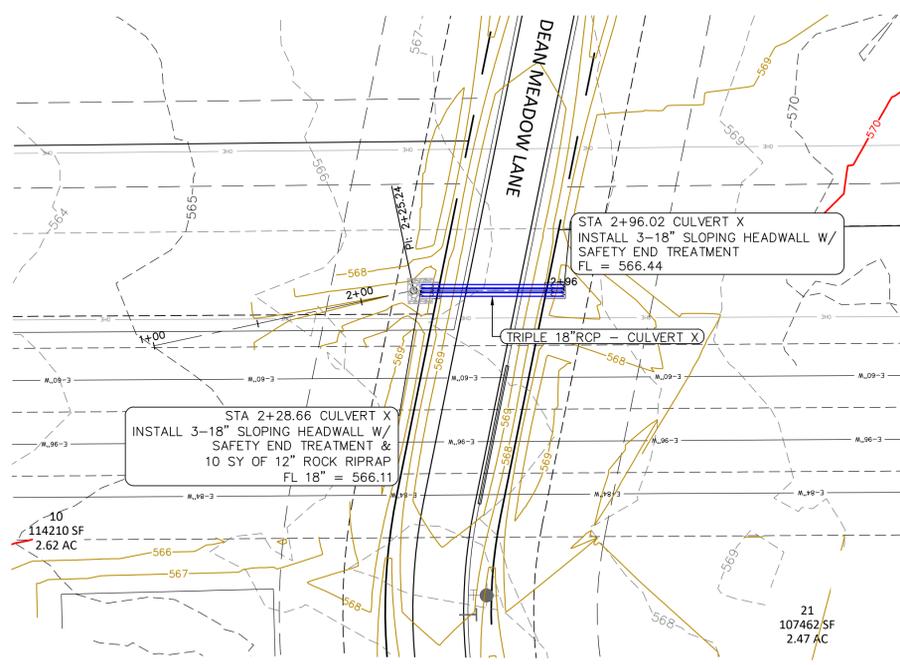
CULVERT SCHEDULE

BLOCK	LOT NUMBER	CULVERT SIZE
A	1	18"
A	2	18"
A	3	21"
A	4	24"
A	5	24"
A	6	2-21"
A	7	2-21"
A	8	2-24"
A	9	2-24"
A	10	18"
A	11	18"
A	12	18"
A	13	18"
A	14	18"
A	15	2-24"
A	16	2-24"
A	17	2-24"
A	18	2-21"
A	19	2-21"
A	20	24"
A	21	2-21"
A	22	21"
A	23	21"
A	24	18"
A	25	18"
A	26	18"
A	27	18"

REFERENCE NORTH TEXAS MUNICIPAL WATER DISTRICT NOTES ON SHEET 20.

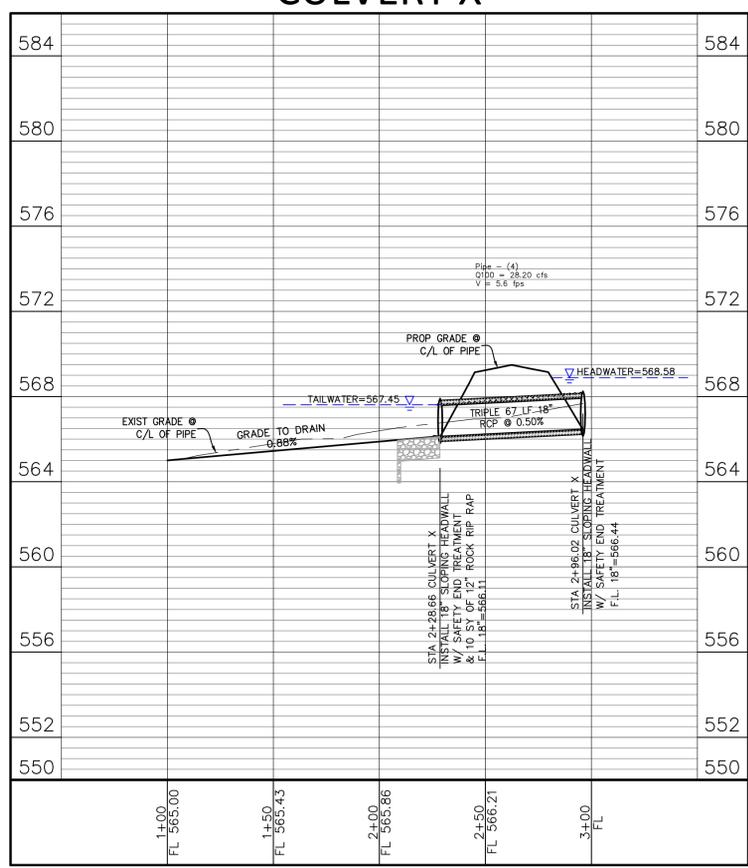
BENCHMARKS
 "X" FOUND IN THE CONCRETE PAVING OF STINSON ROAD APPROXIMATELY 1.160' NORTH OF THE CENTERLINE INTERSECTION OF STINSON ROAD AND SHILOH DRIVE. THE MONUMENT IS LOCATED APPROXIMATELY 73' NORTHEAST OF A POWER POLE AND 115' SOUTHEAST OF A WATER MANHOLE STRUCTURE. ELEVATION = 587.11'
 SQUARE CUT ON NORTHWEST CORNER OF WYE INLET LOCATED AT THE SOUTHWEST CORNER OF STINSON ROAD AND HIGHLAND DRIVE. ELEVATION = 589.40'



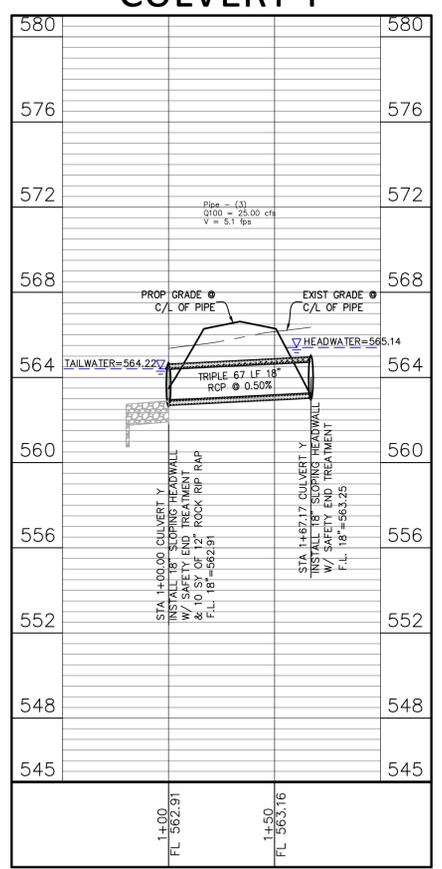


PROFILE LEGEND	
PIPE - (30)	LINE ID
---	EXISTING GRADE
---	FINISHED GRADE
---	HYDRAULIC GRADE LINE
.....	100-YR/FLOW DEPTH

CULVERT X



CULVERT Y



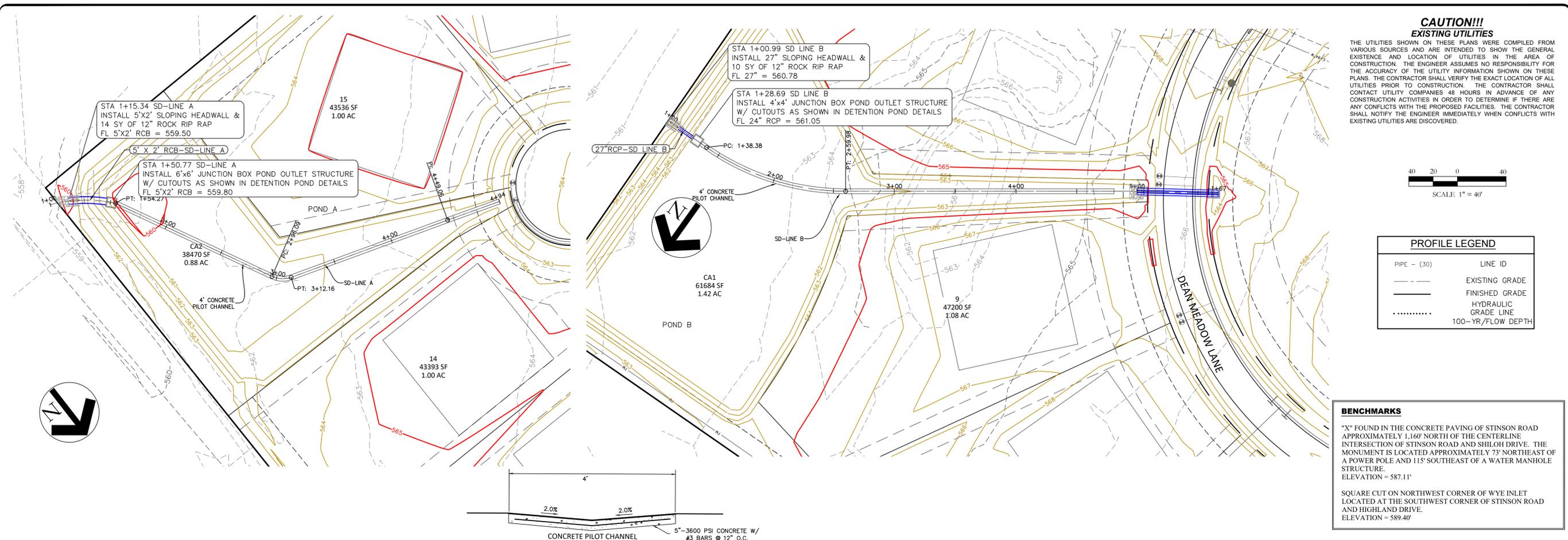
BENCHMARKS

"X" FOUND IN THE CONCRETE PAVING OF STINSON ROAD APPROXIMATELY 1,160' NORTH OF THE CENTERLINE INTERSECTION OF STINSON ROAD AND SHILOH DRIVE. THE MONUMENT IS LOCATED APPROXIMATELY 73' NORTHEAST OF A POWER POLE AND 115' SOUTHEAST OF A WATER MANHOLE STRUCTURE. ELEVATION = 587.11'

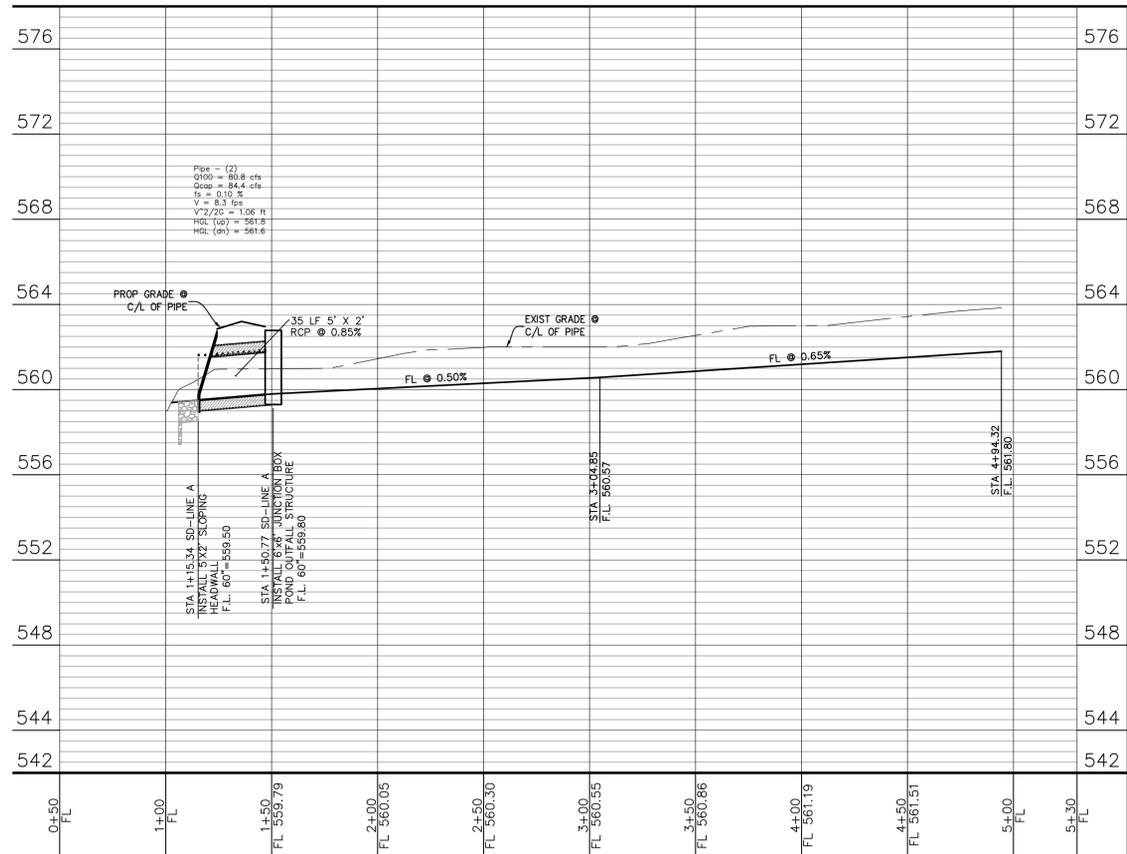
SQUARE CUT ON NORTHWEST CORNER OF WYE INLET LOCATED AT THE SOUTHWEST CORNER OF STINSON ROAD AND HIGHLAND DRIVE. ELEVATION = 589.40'

REFERENCE NORTH TEXAS MUNICIPAL WATER DISTRICT NOTES ON SHEET 20.

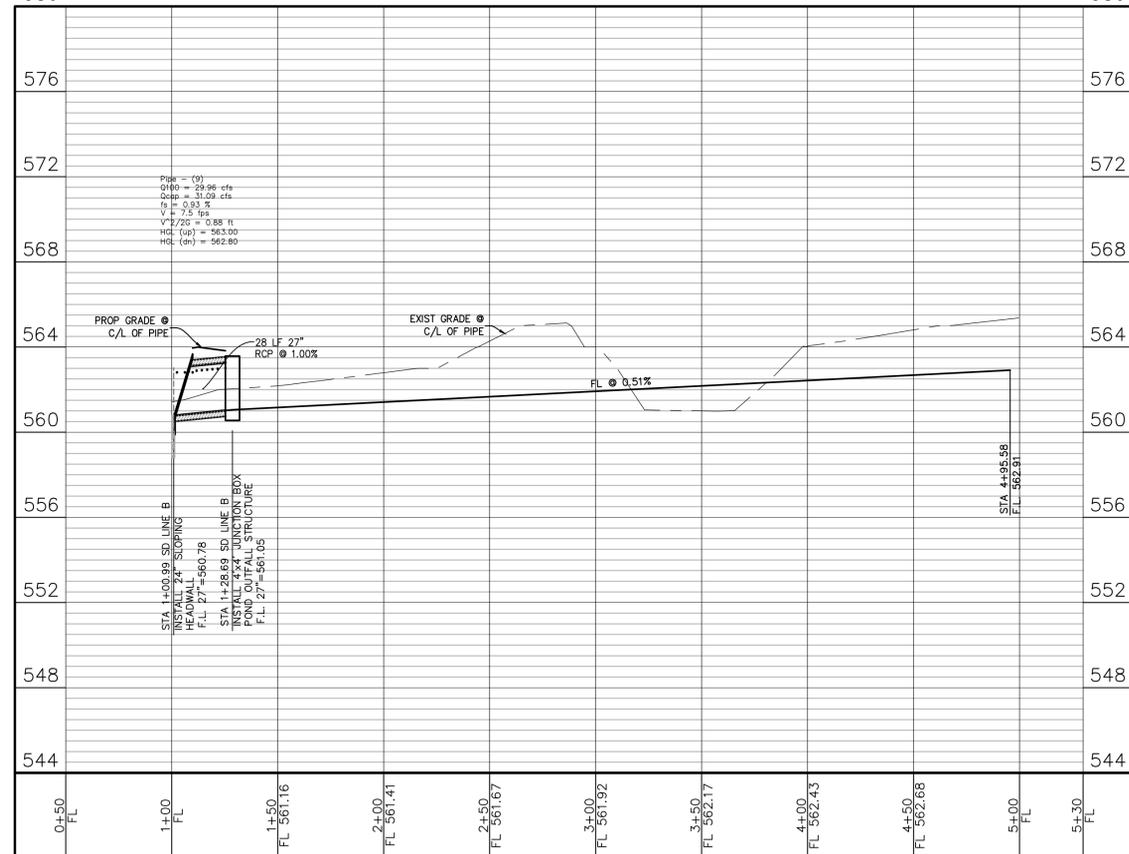




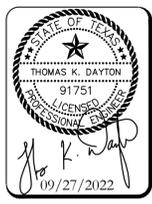
SD-LINE A

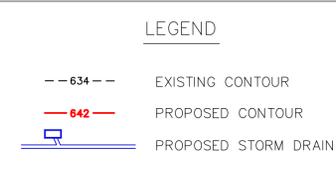
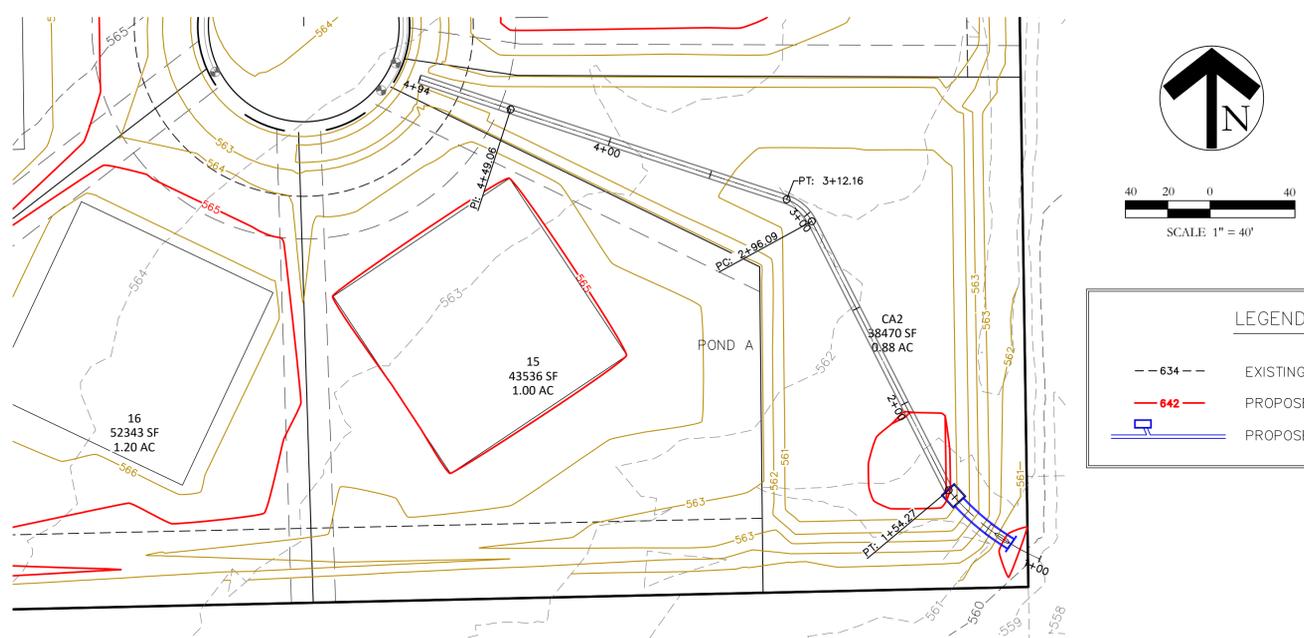


SD LINE B



REFERENCE NORTH TEXAS MUNICIPAL WATER DISTRICT NOTES ON SHEET 20.





2-YEAR STORM EVENT		10-YEAR STORM EVENT	
The required storage for 2-year(CF)	= 12,093.84	The required storage for 10-year(CF)	= 16,318.28
2 year water surface elevation (ft)	= 561.18	10 year water surface elevation (ft)	= 561.35
Max Flow rate allowable, Q _{all} =	42.2 cfs	Max Flow rate allowable, Q _{all} =	58.69 cfs
Inlet A 24" Diameter Circle		Inlet A 24" Diameter Circle	
Sizing discharge regulator, orifice	Q=CA(2gh) ^{1/2}	Sizing discharge regulator, orifice	Q=CA(2gh) ^{1/2}
Orifice C=	0.67	Orifice C=	0.67
Elev. (ft)=	559.80	Elev. (ft)=	559.80
Pipe Dia(ft)=	2.00	Pipe Dia(ft)=	2.00
Area(sf)=	3.141592654	Area(sf)=	3.141592654
g(ft/s)=	32.2	g(ft/s)=	32.2
D(ft)=	1.38	D(ft)=	1.55
Q=	10.47 cfs	Q=	12.56 cfs
Inlet B 10"x2" Rectangle		Inlet B 10"x2" Rectangle	
Sizing discharge regulator, weir	Q=C _L H ^{3/2}	Sizing discharge regulator, orifice	Q=CA(2gh) ^{1/2}
Elev. (ft)=	560.20	Elev. (ft)=	560.20
H (ft)=	0.38	H (ft)=	1.15
C=	3.00	Area (sf)=	20.00
L (ft)=	10.00	L (ft)=	10.00
Q=	29.10 cfs	Q=	42.07 cfs
Actual Outfall Discharge Q _a =	39.57 cfs	Actual Outfall Discharge Q _a =	54.64 cfs
25-YEAR STORM EVENT		100-YEAR STORM EVENT	
The required storage for 25-year(CF)	= 18,802.55	The required storage for 100-year(CF)	= 22,389.32
25 year water surface elevation (ft)	= 561.45	100 year water surface elevation (ft)	= 561.60
Max Flow rate, Q(CFS) =	68.7	Max Flow rate, Q(CFS) =	83.66
Inlet A 24" Diameter Circle		Inlet A 24" Diameter Circle	
Sizing discharge regulator, orifice	Q=CA(2gh) ^{1/2}	Sizing discharge regulator, orifice	Q=CA(2gh) ^{1/2}
Orifice C=	0.67	Orifice C=	0.67
Elev. (ft)=	559.80	Elev. (ft)=	559.80
Pipe Dia(ft)=	2.00	Pipe Dia(ft)=	2.00
Area(sf)=	3.141592654	Area(sf)=	3.141592654
g(ft/s)=	32.2	g(ft/s)=	32.2
D(ft)=	1.65	D(ft)=	1.80
Q=	13.64 cfs	Q=	15.06 cfs
Inlet B 10"x2" Rectangle		Inlet B 10"x2" Rectangle	
Sizing discharge regulator, orifice	Q=CA(2gh) ^{1/2}	Sizing discharge regulator, orifice	Q=CA(2gh) ^{1/2}
Elev. (ft)=	560.20	Elev. (ft)=	560.20
H (ft)=	1.25	H (ft)=	1.40
Area (sf)=	20.00	Area (sf)=	20.00
L (ft)=	10.00	L (ft)=	10.00
Q=	54.00 cfs	Q=	67.61 cfs
Actual Outfall Discharge Q _a =	67.64 cfs	Actual Outfall Discharge Q _a =	82.67 cfs

DETENTION POND "A" 2 YEAR VOLUME COMPUTATION-MODIFIED RATIONAL METHOD										
Td (min)	Tc (min)	C	I (in/hr)	A (acre)	Q (cfs)	Vin (cf)	Vout (cf)	Vreq (cf)	Vreq (acre-ft)	Vreq (acre-ft)
10	15	0.43	4.76	31.87	65.0	39,025.81	31,614.32	7,411.49	0.17	
15	15	0.43	3.95	31.87	54.0	48,577.30	37,937.18	10,640.12	0.24	
20	15	0.43	3.44	31.87	47.0	56,353.88	44,260.05	12,093.84	0.28	
25	15	0.43	3.05	31.87	41.7	62,494.75	50,582.91	11,911.84	0.27	
30	15	0.43	2.75	31.87	37.6	67,636.42	56,905.77	10,730.65	0.25	
35	15	0.43	2.51	31.87	34.3	72,060.98	63,228.64	8,832.34	0.20	
40	15	0.43	2.32	31.87	31.6	75,947.42	69,551.50	6,395.92	0.15	
45	15	0.43	2.15	31.87	29.4	79,415.92	75,874.37	3,541.55	0.08	
50	15	0.43	2.01	31.87	27.5	82,550.82	82,197.23	353.59	0.01	
					MAX VOLUME REQUIRED:	12,093.84 CF				
					MAX VOLUME REQUIRED:	447.92 CY				
					VOLUME PROVIDED (3 FT):	1,390.62 CY				

DETENTION POND "A" 10 YEAR VOLUME COMPUTATION-MODIFIED RATIONAL METHOD										
Td (min)	Tc (min)	C	I (in/hr)	A (acre)	Q (cfs)	Vin (cf)	Vout (cf)	Vreq (cf)	Vreq (acre-ft)	Vreq (acre-ft)
10	15	0.43	6.65	31.87	90.9	54,521.36	44,019.94	10,501.42	0.24	
15	15	0.43	5.50	31.87	75.2	67,639.28	52,823.93	14,815.35	0.34	
20	15	0.43	4.75	31.87	65.0	77,946.19	61,627.91	16,318.28	0.37	
25	15	0.43	4.22	31.87	57.7	86,505.41	70,431.90	16,073.51	0.37	
30	15	0.43	3.81	31.87	52.1	93,727.12	79,235.89	14,491.23	0.33	
35	15	0.43	3.48	31.87	47.6	99,987.16	88,039.88	11,947.28	0.27	
40	15	0.43	3.22	31.87	44.0	105,523.37	96,843.86	8,679.51	0.20	
					MAX VOLUME REQUIRED:	16,318.28 CF				
					MAX VOLUME REQUIRED:	604.38 CY				
					VOLUME PROVIDED (3 FT):	1,390.62 CY				

DETENTION POND "A" 25 YEAR VOLUME COMPUTATION-MODIFIED RATIONAL METHOD										
Td (min)	Tc (min)	C	I (in/hr)	A (acre)	Q (cfs)	Vin (cf)	Vout (cf)	Vreq (cf)	Vreq (acre-ft)	Vreq (acre-ft)
10	15	0.43	7.80	31.87	106.6	63,949.86	51,543.35	12,406.52	0.28	
15	15	0.43	6.44	31.87	88.0	79,199.44	61,852.01	17,347.43	0.40	
20	15	0.43	5.55	31.87	75.8	90,963.23	72,160.68	18,802.55	0.43	
25	15	0.43	4.93	31.87	67.3	100,970.00	82,469.35	18,500.65	0.42	
30	15	0.43	4.45	31.87	60.8	109,442.61	92,778.02	16,664.59	0.38	
35	15	0.43	4.07	31.87	55.6	116,811.32	103,086.69	13,724.63	0.32	
40	15	0.43	3.76	31.87	51.4	123,248.04	113,395.36	9,952.68	0.23	
					MAX VOLUME REQUIRED:	18,802.55 CF				
					MAX VOLUME REQUIRED:	696.39 CY				
					VOLUME PROVIDED (3 FT):	1,390.62 CY				

DETENTION POND "A" 2 YEAR RUNOFF COMPUTATION						
EXISTING UNDETAINED DISCHARGE						
DRAINAGE AREA	Tc (min)	C	I _s (in/hr)	A (acre)	CA (acre)	Q ₂ (cfs)
EX-A	15	0.35	3.95	30.49	10.67	42.2
TOTAL				30.49	10.67	42.2
DEVELOPED DETAINED DISCHARGE						
DRAINAGE AREA	Tc (min)	C	I _s (in/hr)	A (acre)	CA (acre)	Q ₂ (cfs)
A-1	15	0.35	3.95	19.32	6.76	26.7
A-2	15	0.55	3.95	8.77	4.82	19.1
A-3	15	0.55	3.95	1.59	0.87	3.5
A-4	15	0.55	3.95	2.19	1.20	4.8
TOTAL DETAINED				31.87	13.66	54.0
DEVELOPED DETENTION POND BYPASS DISCHARGE						
DRAINAGE AREA	Tc (min)	C	I _s (in/hr)	A (acre)	CA (acre)	Q ₂ (cfs)
TOTAL BYPASS				0.00	0.00	0.00

DETENTION POND "A" 2 YEAR ALLOWABLE RELEASE COMPUTATION						
PEAK INFLOW						
Tc (min)	I (in/hr)	C	A (acre)	Q (cfs)	Q (cfs)	Q (cfs)
15.00	3.95	0.43	31.87	31.87	54.0	
PRE DEVELOPED CONDITIONS						
Tc (min)	I (in/hr)	C	A (acre)	Q (cfs)	Q (cfs)	Q (cfs)
15.00	3.95	0.35	30.49	30.49	42.2	
DETENTION POND BYPASS						
Tc (min)	I (in/hr)	C	A (acre)	Q (cfs)	Q (cfs)	Q (cfs)
15.00	3.95	0.00	0.00	0.00	0.0	
					42.2	
					0.0	
					42.2	
					0.0	
					42.2	

DETENTION POND "A" 25 YEAR RUNOFF COMPUTATION						
EXISTING UNDETAINED DISCHARGE						
DRAINAGE AREA	Tc (min)	C	I _s (in/hr)	A (acre)	CA (acre)	Q ₂₅ (cfs)
EX-A	15	0.35	6.44	30.49	10.67	68.7
TOTAL				30.49	10.67	68.7
DEVELOPED DETAINED DISCHARGE						
DRAINAGE AREA	Tc (min)	C	I _s (in/hr)	A (acre)	CA (acre)	Q ₂₅ (cfs)
A-1	15	0.35	6.44	19.32	6.76	43.5
A-2	15	0.55	6.44	8.77	4.82	31.1
A-3	15	0.55	6.44	1.59	0.87	5.6
A-4	15	0.55	6.44	2.19	1.20	7.8
TOTAL DETAINED				31.87	13.66	88.0
DEVELOPED DETENTION POND BYPASS DISCHARGE						
DRAINAGE AREA	Tc (min)	C	I _s (in/hr)	A (acre)	CA (acre)	Q ₂₅ (cfs)
TOTAL BYPASS				0.00	0.00	0.00

DETENTION POND "A" 25 YEAR ALLOWABLE RELEASE COMPUTATION						
PEAK INFLOW						
Tc (min)	I (in/hr)	C	A (acre)	Q (cfs)	Q (cfs)	Q (cfs)
15.00	6.44	0.43	31.87	31.87	88.0	
PRE DEVELOPED CONDITIONS						
Tc (min)	I (in/hr)	C	A (acre)	Q (cfs)	Q (cfs)	Q (cfs)
15.00	6.44	0.35	30.49	30.49	68.7	
DETENTION POND BYPASS						
Tc (min)	I (in/hr)	C	A (acre)	Q (cfs)	Q (cfs)	Q (cfs)
15.00	6.44	0.00	0.00	0.00	0.0	
					68.7	
					0.0	
					68.7	

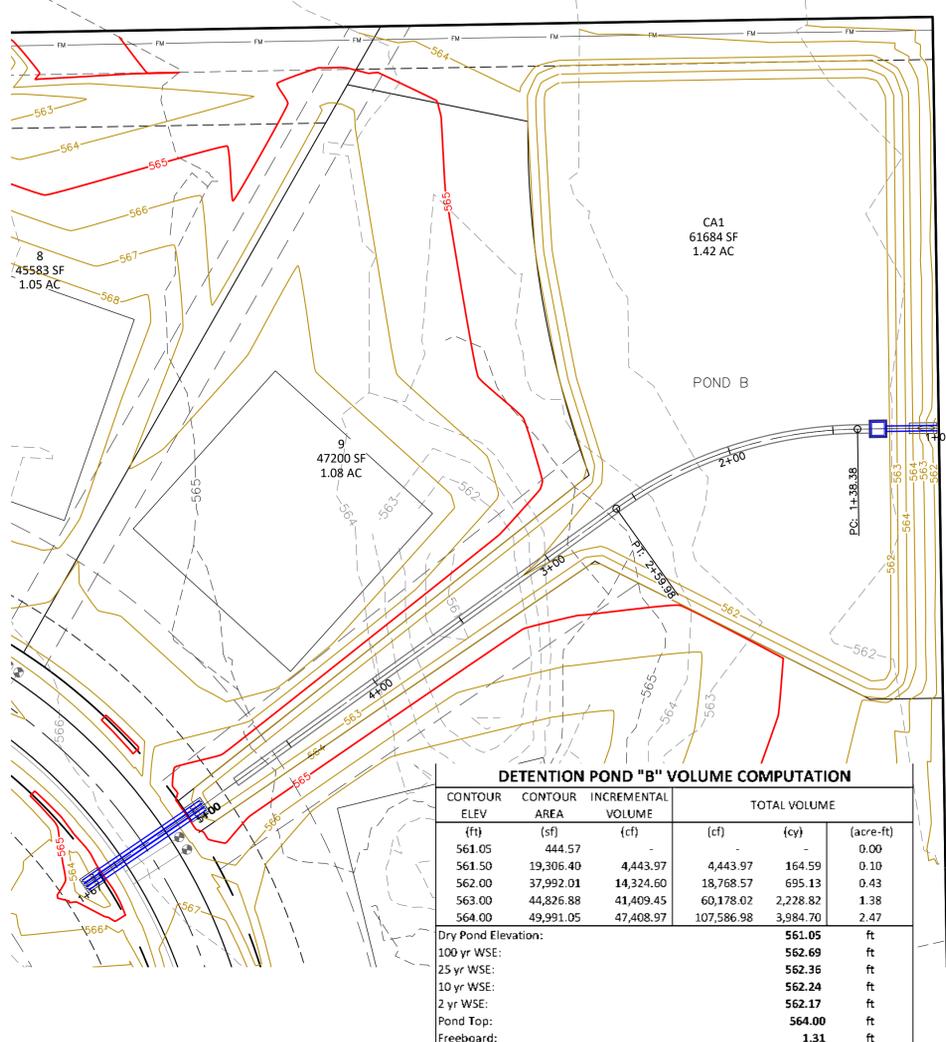
DETENTION POND "A" 10 YEAR RUNOFF COMPUTATION						
EXISTING UNDETAINED DISCHARGE						
DRAINAGE AREA	Tc (min)	C	I _s (in/hr)	A (acre)	CA (acre)	Q ₁₀ (cfs)
EX-A	15	0.35	5.50	30.49	10.67	58.7
TOTAL				30.49	10.67	58.7
DEVELOPED DETAINED DISCHARGE						
DRAINAGE AREA	Tc (min)	C	I _s (in/hr)	A (acre)	CA (acre)	Q ₁₀ (cfs)
A-1	15	0.35	5.50	19.32	6.76	37.2
A-2	15	0.55	5.50	8.77	4.82	26.5
A-3	15	0.55	5.50	1.59	0.87	4.8
A-4	15	0.55	5.50	2.19	1.20	6.6
TOTAL DETAINED				31.87	13.66	75.2
DEVELOPED DETENTION POND BYPASS DISCHARGE						
DRAINAGE AREA	Tc (min)	C	I _s (in/hr)	A (acre)	CA (acre)	Q ₁₀ (cfs)
TOTAL BYPASS				0.00	0.00	0.00

DETENTION POND "A" 10 YEAR ALLOWABLE RELEASE COMPUTATION						
PEAK INFLOW						
Tc (min)	I (in/hr)	C	A (acre)	Q (cfs)	Q (cfs)	Q (cfs)
15.00	5.50	0.43	31.87	31.87	75.2	
PRE DEVELOPED CONDITIONS						
Tc (min)	I (in/hr)	C	A (acre)	Q (cfs)	Q (cfs)	Q (cfs)
15.00	5.50	0.35	30.49	30.49	58.7	
DETENTION POND BYPASS						
Tc (min)	I (in/hr)	C	A (acre)	Q (cfs)	Q (cfs)	Q (cfs)
15.00	5.50	0.00	0.00	0.00	0.0	
					58.7	
					0.0	
					58.7	

DETENTION POND "A" 100 YEAR RUNOFF COMPUTATION						
EXISTING UNDETAINED DISCHARGE						
DRAINAGE AREA	Tc (min)	C	I _s (in/hr)	A (acre)	CA (acre)	Q ₁₀₀ (cfs)
EX-A	15	0.35	7.84	30.49	10.67	83.7
TOTAL				30.49	10.67	83.7
DEVELOPED DETAINED DISCHARGE						
DRAINAGE AREA	Tc (min)	C	I _s (in/hr)	A (acre)	CA (acre)	Q ₁₀₀ (cfs)
A-1	15	0.35	7.84	19.32	6.76	53.0
A-2	15	0.55	7.84	8.77	4.82	37.8
A-3	15	0.55	7.84	1.59	0.87	6.9
A-4	15	0.55	7.84	2.19	1.20	9.4
TOTAL DETAINED				31.87	13.66	107.1
DEVELOPED DETENTION POND BYPASS DISCHARGE						
DRAINAGE AREA	Tc (min)	C	I _s (in/hr)	A (acre)	CA (acre)	Q ₁₀₀ (cfs)
TOTAL BYPASS				0.00	0.00	0.00

DETENTION POND "A" 100 YEAR ALLOWABLE RELEASE COMPUTATION						
PEAK INFLOW						
Tc (min)	I (in/hr)	C	A (acre)	Q (cfs)	Q (cfs)	Q (cfs)
15.00	7.84	0.43	31.87	31.87	107.1	
PRE DEVELOPED CONDITIONS						
Tc (min)	I (in/hr)	C	A (acre)	Q (cfs)	Q (cfs)	Q (cfs)
15.00	7.84	0.35	30.49	30.49	83.7	
DETENTION POND BYPASS						
Tc (min)	I (in/hr)	C	A (acre)	Q (cfs)	Q (cfs)	Q (cfs)
15.00	7.84	0.00	0.00	0.00	0.0	
					83.7	
					0.0	
					83.7	

DETENTION POND "A" VOLUME COMPUTATION					
CONTOUR ELEV (ft)	CONTOUR AREA (sf)	INCREMENTAL VOLUME (cf)	TOTAL VOLUME (cf)	TOTAL VOLUME (cy)	TOTAL VOLUME (acre-ft)
560.00	1,429.07	-	-	-	0.00
560.50	10,723.30	3,038.09			



DETENTION POND "B" OUTFALL WEIR SIZING

2-YEAR STORM EVENT				10-YEAR STORM EVENT			
The required storage for 2-year(CF)	=	20,764.51		The required storage for 10-year(CF)	=	28,779.86	
2 year water surface elevation (ft)	=	562.17		10 year water surface elevation (ft)	=	562.24	
Sizing discharge regulator, weir	Q=C ₁ L ^{1.47}		cf/s	Sizing discharge regulator, weir	Q=C ₁ L ^{1.47}		cf/s
Max Flow rate allowable, Q ₀ =		14.4	cf/s	Max Flow rate allowable, Q ₀ =		20.09	cf/s
Inlet A 24" Diameter Circle				Inlet A 24" Diameter Circle			
Sizing discharge regulator, orifice	Q=C ₂ A(2gh) ^{1/2}		cf/s	Sizing discharge regulator, orifice	Q=C ₂ A(2gh) ^{1/2}		cf/s
Orifice C ₂ =0.67				Orifice C ₂ =0.67			
Elev. (ft)=561.05				Elev. (ft)=561.05			
Pipe Dia(ft)=2.00				Pipe Dia(ft)=2.00			
Area(ft ²)=3.141592654				Area(ft ²)=3.141592654			
g(H)/S=32.2				g(H)/S=32.2			
D(H)=1.12				D(H)=1.19			
Q=5.82			cf/s	Q=7.40			cf/s
Inlet B 4'x1' Rectangle				Inlet B 4'x1' Rectangle			
Sizing discharge regulator, orifice	Q=C ₃ CA(2gh) ^{1/2}		cf/s	Sizing discharge regulator, orifice	Q=C ₃ CA(2gh) ^{1/2}		cf/s
Orifice C ₃ =0.67				Orifice C ₃ =0.67			
Elev. (ft)=561.60				Elev. (ft)=561.60			
H (ft)=0.57				H (ft)=0.64			
Area (ft ²)=4.00				Area (ft ²)=4.00			
L (ft)=4.00				L (ft)=4.00			
Q=5.63			cf/s	Q=8.10			cf/s
Actual Outfall Discharge Q₀			11.45	Actual Outfall Discharge Q₀			15.49
			cf/s				cf/s
25-YEAR STORM EVENT				100-YEAR STORM EVENT			
The required storage for 25-year(CF)	=	33,575.23		The required storage for 100-year(CF)	=	38,452.72	
25 year water surface elevation (ft)	=	562.36		100 year water surface elevation (ft)	=	562.69	
Sizing discharge regulator, weir	Q=C ₁ L ^{1.47}		cf/s	Sizing discharge regulator, weir	Q=C ₁ L ^{1.47}		cf/s
Max Flow rate, Q(CFS) =		23.5	cf/s	Max Flow rate, Q(CFS) =		30.05	cf/s
Inlet A 24" Diameter Circle				Inlet A 24" Diameter Circle			
Sizing discharge regulator, orifice	Q=C ₂ A(2gh) ^{1/2}		cf/s	Sizing discharge regulator, orifice	Q=C ₂ A(2gh) ^{1/2}		cf/s
Orifice C ₂ =0.67				Orifice C ₂ =0.67			
Elev. (ft)=561.05				Elev. (ft)=561.05			
Pipe Dia(ft)=2.00				Pipe Dia(ft)=2.00			
Area(ft ²)=3.141592654				Area(ft ²)=3.141592654			
g(H)/S=32.2				g(H)/S=32.2			
D(H)=1.13				D(H)=1.14			
Q=9.97			cf/s	Q=13.48			cf/s
Inlet B 4'x1' Rectangle				Inlet B 4'x1' Rectangle			
Sizing discharge regulator, orifice	Q=C ₃ CA(2gh) ^{1/2}		cf/s	Sizing discharge regulator, orifice	Q=C ₃ CA(2gh) ^{1/2}		cf/s
Orifice C ₃ =0.67				Orifice C ₃ =0.67			
Elev. (ft)=561.60				Elev. (ft)=561.60			
H (ft)=0.76				H (ft)=0.99			
Area (ft ²)=4.00				Area (ft ²)=4.00			
L (ft)=4.00				L (ft)=4.00			
Q=10.81			cf/s	Q=16.48			cf/s
Actual Outfall Discharge Q₀			20.28	Actual Outfall Discharge Q₀			29.96
			cf/s				cf/s

DETENTION POND "B" VOLUME COMPUTATION

CONTOUR ELEV (ft)	CONTOUR AREA (sf)	INCREMENTAL VOLUME (cf)	TOTAL VOLUME (cf)	(cy)	(acre-ft)
561.05	444.57				0.00
561.50	19,306.40	4,443.97	4,443.97	164.59	0.10
562.00	37,992.01	14,324.60	18,768.57	695.13	0.43
563.00	44,826.88	41,409.45	60,178.02	2,228.82	1.38
564.00	49,991.05	47,408.97	107,586.98	3,984.70	2.47
Dry Pond Elevation:			561.05	ft	
100 yr WSE:			562.69	ft	
25 yr WSE:			562.36	ft	
10 yr WSE:			562.24	ft	
2 yr WSE:			562.17	ft	
Pond Top:			564.00	ft	
Freeboard:			1.31	ft	

DETENTION POND "B" 2 YEAR VOLUME COMPUTATION-MODIFIED RATIONAL METHOD

Td (min)	Tc (min)	C	I (in/hr)	A (acre)	Q (cfs)	Vin (cf)	Vout (cf)	Vreq (cf)	Vreq (acre-ft)
10	15	0.55	4.76	14.58	38.2	22,902.26	10,820.53	12,081.73	0.28
15	15	0.55	3.95	14.58	31.7	28,507.55	12,984.64	15,522.91	0.36
20	15	0.55	3.44	14.58	27.6	33,071.23	15,148.74	17,922.48	0.41
25	15	0.55	3.05	14.58	24.4	36,674.99	17,312.85	19,362.14	0.44
30	15	0.55	2.75	14.58	22.1	39,692.38	19,476.96	20,215.42	0.46
35	15	0.55	2.51	14.58	20.1	42,288.92	21,641.06	20,647.86	0.47
40	15	0.55	2.32	14.58	18.6	44,569.68	23,805.17	20,764.51	0.48
45	15	0.55	2.15	14.58	17.3	46,605.16	25,969.28	20,635.89	0.47
50	15	0.55	2.01	14.58	16.1	48,444.88	28,133.38	20,311.49	0.47
55	15	0.55	1.89	14.58	15.2	50,124.81	30,297.49	19,827.32	0.46
60	15	0.55	1.79	14.58	14.4	51,671.91	32,461.59	19,210.31	0.44
65	15	0.55	1.70	14.58	13.6	53,106.86	34,625.70	18,481.16	0.42
70	15	0.55	1.62	14.58	13.0	54,445.87	36,789.81	17,656.07	0.41
75	15	0.55	1.54	14.58	12.4	55,701.86	38,953.91	16,747.95	0.38
80	15	0.55	1.48	14.58	11.9	56,885.31	41,118.02	15,767.29	0.36
85	15	0.55	1.42	14.58	11.4	58,004.80	43,282.13	14,722.68	0.34
90	15	0.55	1.36	14.58	10.9	59,067.49	45,446.23	13,621.26	0.31
MAX VOLUME REQUIRED:					20,764.51	CF			
MAX VOLUME REQUIRED:					769.06	CY			
VOLUME PROVIDED (3 FT):					2,228.82	CY			

DETENTION POND "B" 10 YEAR VOLUME COMPUTATION-MODIFIED RATIONAL METHOD

Td (min)	Tc (min)	C	I (in/hr)	A (acre)	Q (cfs)	Vin (cf)	Vout (cf)	Vreq (cf)	Vreq (acre-ft)
10	15	0.55	6.65	14.58	53.3	31,995.81	15,066.56	16,929.25	0.39
15	15	0.55	5.50	14.58	44.1	39,694.05	18,079.88	21,614.18	0.50
20	15	0.55	4.75	14.58	38.1	45,742.66	21,093.19	24,649.47	0.57
25	15	0.55	4.22	14.58	33.8	50,765.62	24,106.50	26,659.12	0.61
30	15	0.55	3.81	14.58	30.9	55,003.68	27,119.81	27,883.87	0.64
35	15	0.55	3.48	14.58	27.9	58,677.38	30,133.13	28,544.25	0.66
40	15	0.55	3.22	14.58	25.8	61,926.30	33,146.44	28,779.86	0.66
45	15	0.55	2.99	14.58	24.0	64,844.12	36,159.75	28,684.37	0.66
50	15	0.55	2.81	14.58	22.5	67,496.61	39,173.06	28,323.54	0.65
55	15	0.55	2.64	14.58	21.2	69,931.67	42,186.38	27,745.30	0.64
60	15	0.55	2.50	14.58	20.1	72,185.27	45,199.69	26,985.58	0.62
65	15	0.55	2.38	14.58	19.0	74,285.05	48,213.00	26,072.05	0.60
70	15	0.55	2.26	14.58	18.2	76,252.72	51,226.31	25,024.01	0.57
75	15	0.55	2.16	14.58	17.4	78,105.66	54,239.63	23,866.04	0.55
80	15	0.55	2.07	14.58	16.6	79,857.98	57,252.94	22,605.04	0.52
85	15	0.55	1.99	14.58	16.0	81,521.29	60,266.25	21,255.04	0.49
90	15	0.55	1.92	14.58	15.4	83,105.28	63,279.56	19,825.72	0.46
95	15	0.55	1.85	14.58	14.8	84,618.10	66,292.88	18,325.22	0.42
100	15	0.55	1.79	14.58	14.3	86,066.67	69,306.19	16,760.48	0.38
MAX VOLUME REQUIRED:					28,779.86	CF			
MAX VOLUME REQUIRED:					1,065.92	CY			
VOLUME PROVIDED (3 FT):					2,228.82	CY			

DETENTION POND "B" 25 YEAR VOLUME COMPUTATION-MODIFIED RATIONAL METHOD

Td (min)	Tc (min)	C	I (in/hr)	A (acre)	Q (cfs)	Vin (cf)	Vout (cf)	Vreq (cf)	Vreq (acre-ft)
10	15	0.55	7.80	14.58	62.5	37,528.92	17,641.58	19,887.35	0.46
15	15	0.55	6.44	14.58	51.6	46,478.12	21,169.89	25,308.23	0.58
20	15	0.55	5.55	14.58	44.5	53,881.69	24,698.21	28,683.49	0.67
25	15	0.55	4.93	14.58	39.5	59,254.16	28,226.52	31,027.64	0.71
30	15	0.55	4.45	14.58	35.7	64,226.30	31,754.84	32,471.47	0.75
35	15	0.55	4.07	14.58	32.6	68,550.62	35,283.15	33,267.47	0.76
40	15	0.55	3.76	14.58	30.2	72,386.69	38,811.47	33,575.23	0.77
45	15	0.55	3.50	14.58	28.1	75,841.54	42,339.78	33,501.76	0.77
50	15	0.55	3.28	14.58	26.3	78,990.35	45,868.10	33,122.26	0.76
55	15	0.55	3.09	14.58	24.8	81,887.93	49,396.41	32,491.52	0.75
60	15	0.55	2.93	14.58	23.5	84,575.42	52,924.73	31,650.69	0.73
65	15	0.55	2.78	14.58	22.3	87,084.51	56,453.04	30,631.47	0.70
70	15	0.55	2.66	14.58	21.3	89,440.13	59,981.36	29,458.77	0.68
75	15	0.55	2.54	14.58	20.4	91,662.23	63,509.67	28,152.56	0.65
80	15	0.55	2.44	14.58	19.5	93,767.03	67,037.99	26,729.04	0.61
85	15	0.55	2.34	14.58	18.8	95,767.92	70,566.30	25,201.62	0.58
90	15	0.55	2.26	14.58	18.1	97,676.06	74,094.62	23,581.44	0.54
95	15	0.55	2.18	14.58	17.5	99,500.86	77,622.93	21,877.93	0.50
MAX VOLUME REQUIRED:					33,575.23	CF			
MAX VOLUME REQUIRED:					1,243.53	CY			
VOLUME PROVIDED (3 FT):					2,228.82	CY			

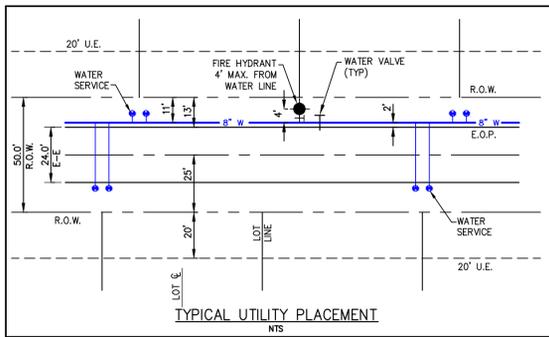
DETENTION POND "B" 100 YEAR DESIGN-MODIFIED RATIONAL METHOD

Td (min)	Tc (min)	C	I (in/hr)	A (acre)	Q (cfs)	Vin (cf)	Vout (cf)	Vreq (cf)	Vreq (acre-ft)
5	15	0.55	11.90	14.58	95.4	28,627.83	18,032.78	10,595.05	0.24
10	15	0.55	9.53	14.58	76.4	45,852.64	22,540.98	23,311.66	0.54
15	15	0.55	7.84	14.58	62.9	56,582.06	27,049.18	29,532.89	0.68
20	15	0.55	6.72	14.58	52.9	64,682.55	31,557.37	33,135.18	0.76
25	15	0.55	5.97	14.58	47.9	71,846.04	36,065.57	35,780.48	0.82
30	15	0.55	5.40	14.58	43.3	77,944.08	40		

BENCHMARKS

"X" FOUND IN THE CONCRETE PAVING OF STINSON ROAD APPROXIMATELY 1,160' NORTH OF THE CENTERLINE INTERSECTION OF STINSON ROAD AND SHILOH DRIVE. THE MONUMENT IS LOCATED APPROXIMATELY 73' NORTHEAST OF A POWER POLE AND 115' SOUTHEAST OF A WATER MANHOLE STRUCTURE.
ELEVATION = 587.11'

SQUARE CUT ON NORTHWEST CORNER OF WYE INLET LOCATED AT THE SOUTHWEST CORNER OF STINSON ROAD AND HIGHLAND DRIVE.
ELEVATION = 589.40'

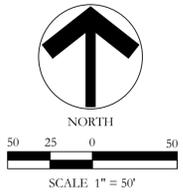


Line	Length	Direction
L1	4.24	N45° 50' 18"W
L2	22.00	S89° 09' 42"W
L3	4.24	N44° 09' 42"E
L4	31.36	S32° 57' 55"W
L5	17.27	S10° 27' 55"W

WATER CURVE DATA					
Curve #	Delta	Radius	Length	Chord Direction	Chord Length
C1	12°59'08"	314.00	71.16	N83°07'25"E	71.01
C2	102°31'52"	236.00	422.32	S52°06'13"E	368.19

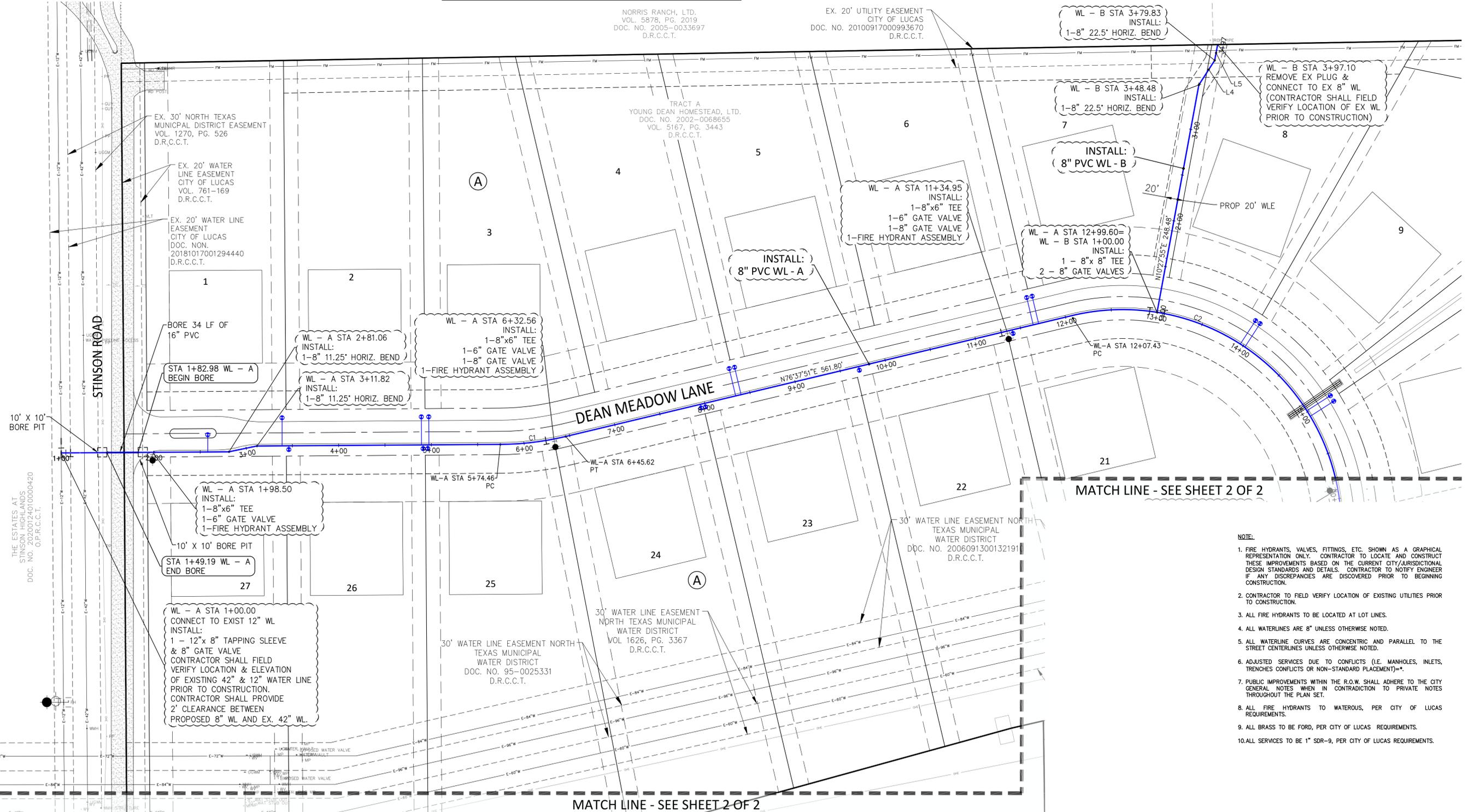
LEGEND

- PROPOSED WATER LINE
- PROPOSED FIRE HYDRANT
- PROPOSED GATE VALVE & NUMBER
- PROPOSED WATER SERVICE LINE
- EXISTING WATER LINE
- EXISTING FIRE HYDRANT
- PROPOSED STORM DRAIN
- FUTURE STORM DRAIN



CAUTION!!!
EXISTING UTILITIES

THE UTILITIES SHOWN ON THESE PLANS WERE COMPILED FROM VARIOUS SOURCES AND ARE INTENDED TO SHOW THE GENERAL EXISTENCE AND LOCATION OF UTILITIES IN THE AREA OF CONSTRUCTION. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OF THE UTILITY INFORMATION SHOWN ON THESE PLANS. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CONTACT UTILITY COMPANIES 48 HOURS IN ADVANCE OF ANY CONSTRUCTION ACTIVITIES IN ORDER TO DETERMINE IF THERE ARE ANY CONFLICTS WITH THE PROPOSED FACILITIES. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY WHEN CONFLICTS WITH EXISTING UTILITIES ARE DISCOVERED.



THE ESTATES AT STINSON HIGHLAND
 DOC. NO. 20100917010000420
 D.R.C.C.T.

JOHNSON VOLK CONSULTING
 TBP&E Engineering Firm No. 11982 / Land Surveying Firm No. 10194033
 704 Central Parkway East | Suite 1200 | Plano, TX 75074 | 972.201.5100

DEAN FARMS
 AT STINSON HIGHLAND
 CITY OF LUCAS
 COLLIN COUNTY, TEXAS

WATER PLAN
 SHEET 1 OF 2

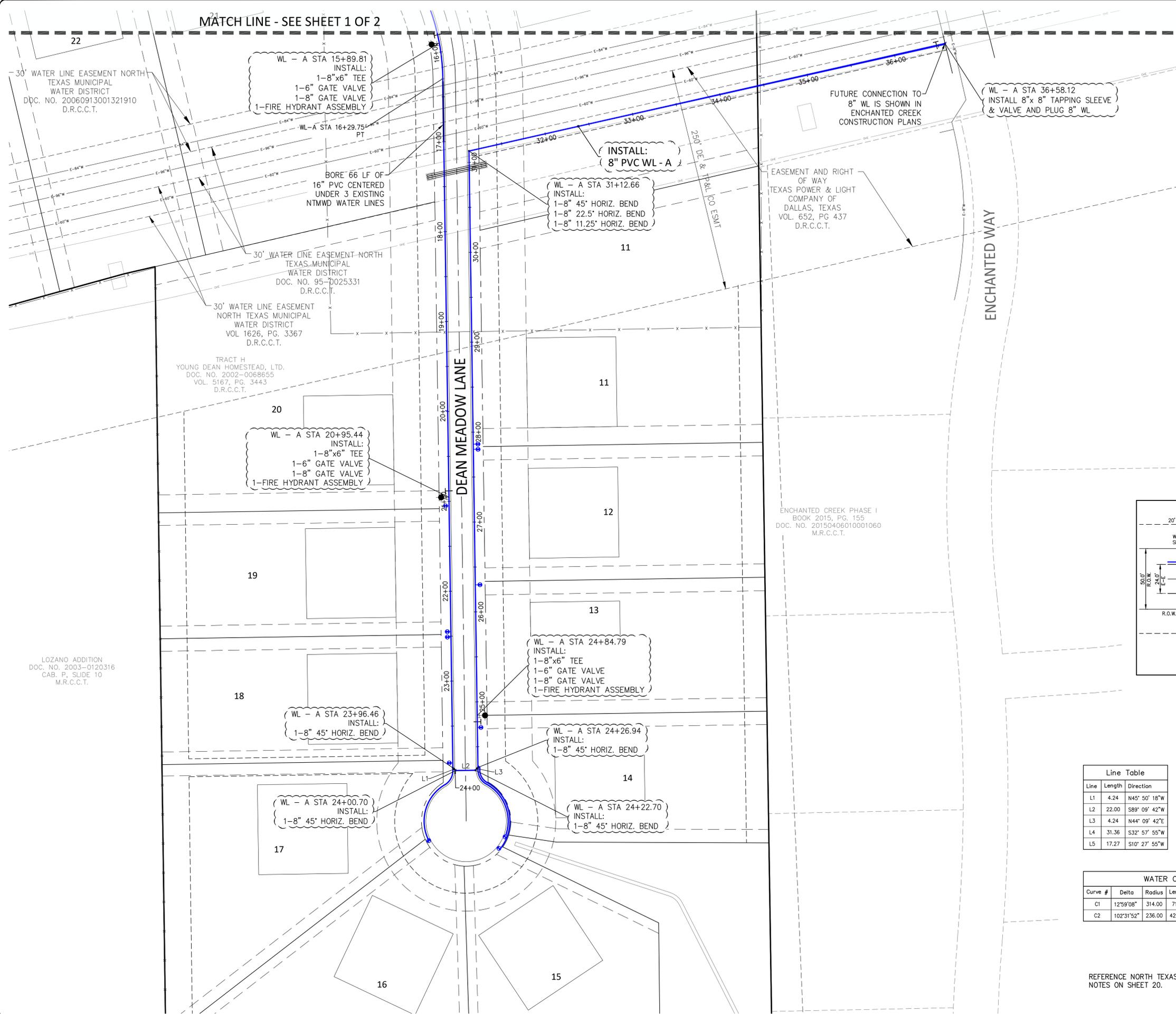


SCALE:
One Inch
JVC No WLA501

- NOTE:**
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 - CONTRACTOR TO FIELD VERIFY LOCATION OF EXISTING UTILITIES PRIOR TO CONSTRUCTION.
 - ALL FIRE HYDRANTS TO BE LOCATED AT LOT LINES.
 - ALL WATERLINES ARE 8" UNLESS OTHERWISE NOTED.
 - ALL WATERLINE CURVES ARE CONCENTRIC AND PARALLEL TO THE STREET CENTERLINES UNLESS OTHERWISE NOTED.
 - ADJUSTED SERVICES DUE TO CONFLICTS (I.E. MANHOLES, INLETS, TRENCHES CONFLICTS OR NON-STANDARD PLACEMENT)=*
 - PUBLIC IMPROVEMENTS WITHIN THE R.O.W. SHALL ADHERE TO THE CITY GENERAL NOTES WHEN IN CONTRADICTION TO PRIVATE NOTES THROUGHOUT THE PLAN SET.
 - ALL FIRE HYDRANTS TO WATEROUS, PER CITY OF LUCAS REQUIREMENTS.
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 - ALL SERVICES TO BE 1" SDR-9, PER CITY OF LUCAS REQUIREMENTS.

REFERENCE NORTH TEXAS MUNICIPAL WATER DISTRICT NOTES ON SHEET 20.

MATCH LINE - SEE SHEET 1 OF 2



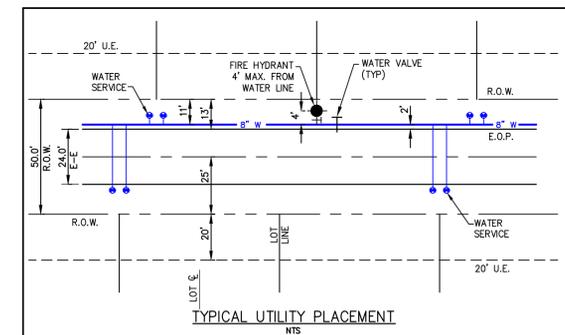
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LEGEND	
	PROPOSED WATER LINE
	PROPOSED FIRE HYDRANT
	PROPOSED GATE VALVE & NUMBER
	PROPOSED WATER SERVICE LINE
	EXISTING WATER LINE
	EXISTING FIRE HYDRANT
	PROPOSED STORM DRAIN
	FUTURE STORM DRAIN

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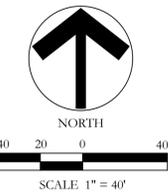
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Line Table				
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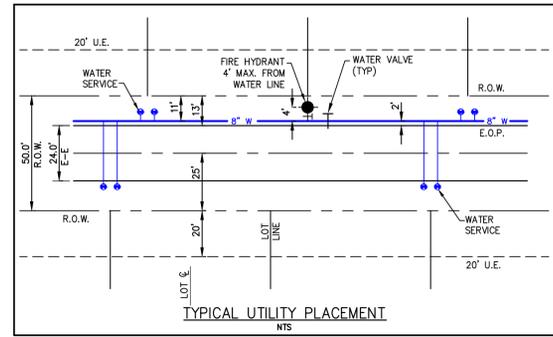


REFERENCE NORTH TEXAS MUNICIPAL WATER DISTRICT NOTES ON SHEET 20.



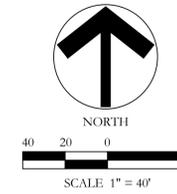
NORTH TEXAS MUNICIPAL WATER DISTRICT NOTES:

- A. North Texas Municipal Water District (NTMWD) 42, 60, 84 and 96-inch water transmission pipelines are 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 Engineering at (972) 442-5405 so your plans for use of NTMWD's easement can be reviewed.
- D. A minimum of 4.5 feet separation between bottom of pavement and top of NTMWD pipeline is required. In addition, if separation between bottom of pavement and top of pipeline is less than 4.5 feet, then a thickened pavement section is required.
- E. Crossing of the NTMWD easement with other utilities, such as TV cable, phone, gas and electric, shall be coordinated with the NTMWD to avoid damage to the NTMWD facilities.
- F. Outdoor lighting, landscaping, 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 two-foot clearance shall be provided for all utilities crossing the NTMWD pipelines. Directional bore crossings require a minimum of four-foot clearance.
- H. The contractor shall contact NTMWD Line Locates at (469) 626-4569 at least 48 hours prior to performing any work in the vicinity of the NTMWD facilities.
- I. Contractor shall bench and shore excavation to limit amount of 42" waterline exposed to 4'.



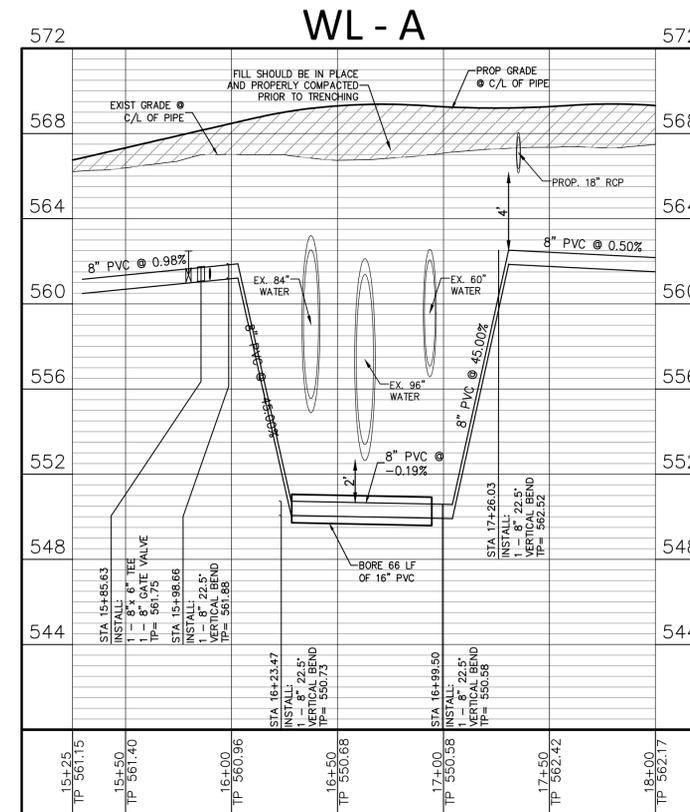
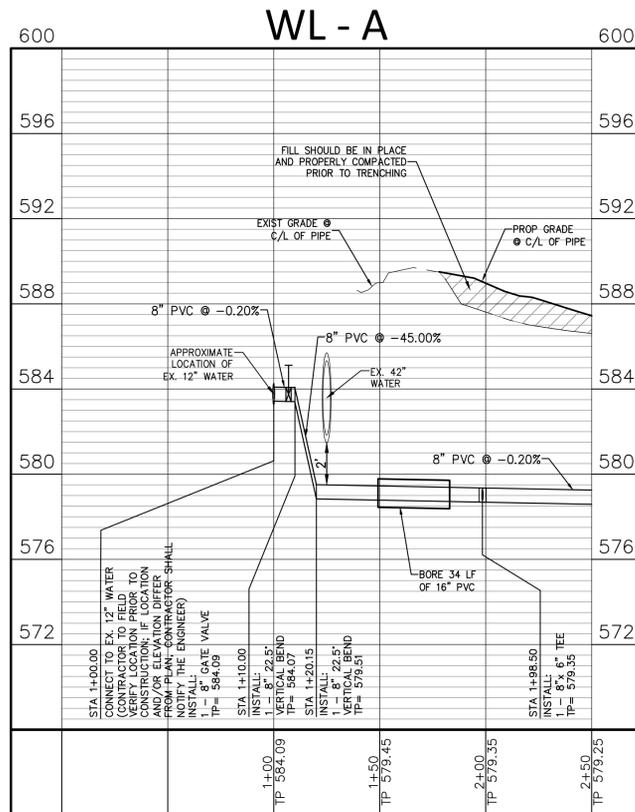
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EXISTING UTILITIES

THE UTILITIES SHOWN ON THESE PLANS WERE COMPILED FROM VARIOUS SOURCES AND ARE INTENDED TO SHOW THE GENERAL EXISTENCE AND LOCATION OF UTILITIES IN THE AREA OF CONSTRUCTION. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OF THE UTILITY INFORMATION SHOWN ON THESE PLANS. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CONTACT UTILITY COMPANIES 48 HOURS IN ADVANCE OF ANY CONSTRUCTION ACTIVITIES IN ORDER TO DETERMINE IF THERE ARE ANY CONFLICTS WITH THE PROPOSED FACILITIES. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY WHEN CONFLICTS WITH EXISTING UTILITIES ARE DISCOVERED.



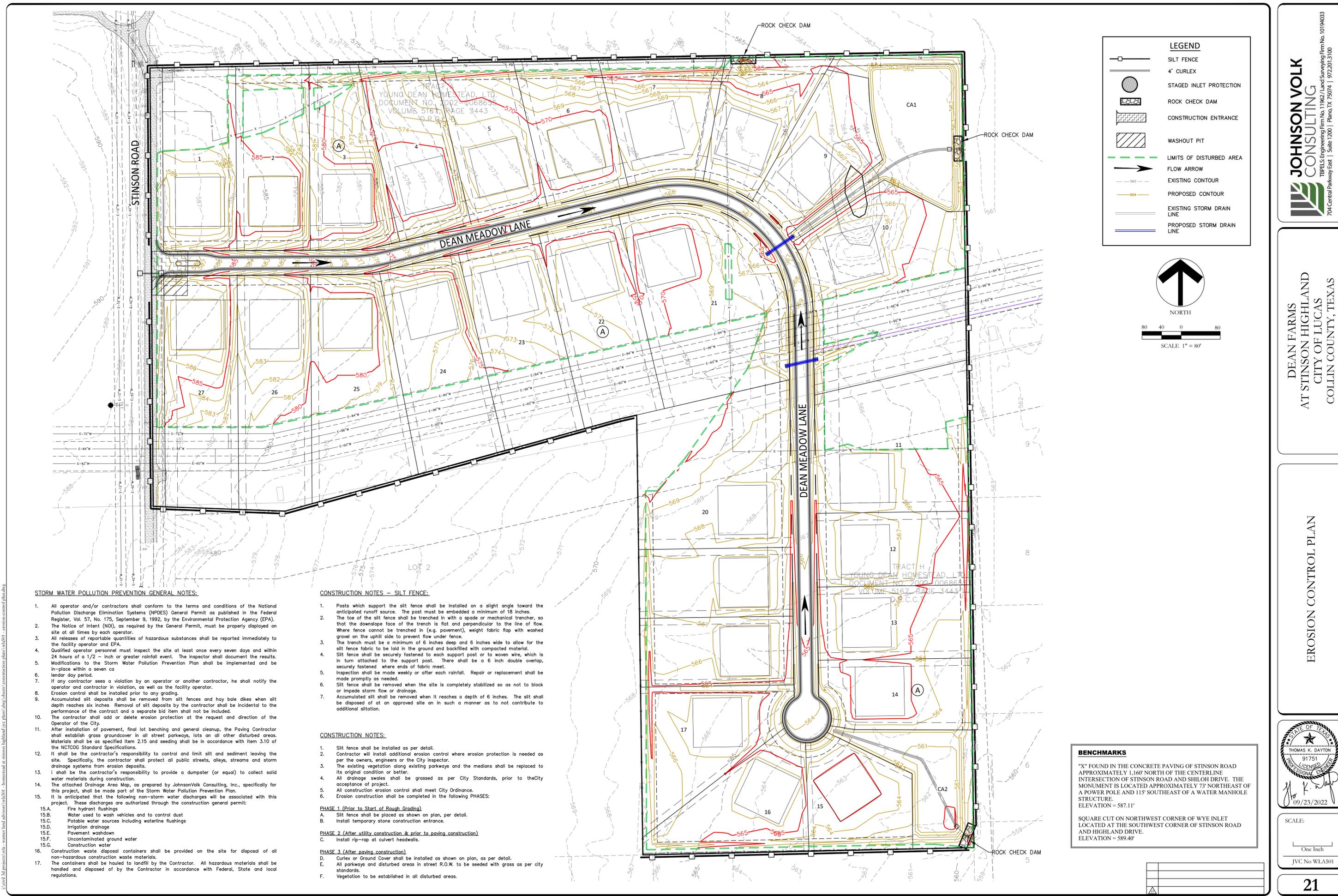
BENCHMARKS

"X" FOUND IN THE CONCRETE PAVING OF STINSON ROAD APPROXIMATELY 1,160' NORTH OF THE CENTERLINE INTERSECTION OF STINSON ROAD AND SHILOH DRIVE. THE MONUMENT IS LOCATED APPROXIMATELY 73' NORTHEAST OF A POWER POLE AND 115' SOUTHEAST OF A WATER MANHOLE STRUCTURE.
ELEVATION = 587.11'

SQUARE CUT ON NORTHWEST CORNER OF WYE INLET LOCATED AT THE SOUTHWEST CORNER OF STINSON ROAD AND HIGHLAND DRIVE.
ELEVATION = 589.40'

CONTRACTOR TO VERIFY LOCATION OF NORTH TEXAS MUNICIPAL WATER DISTRICT WATER LINES PRIOR TO CROSSING WITH PROPOSED WATER LINE

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LEGEND

- SILT FENCE
- 4' CURLEX
- STAGED INLET PROTECTION
- ROCK CHECK DAM
- CONSTRUCTION ENTRANCE
- WASHOUT PIT
- LIMITS OF DISTURBED AREA
- FLOW ARROW
- EXISTING CONTOUR
- PROPOSED CONTOUR
- EXISTING STORM DRAIN LINE
- PROPOSED STORM DRAIN LINE

NORTH

80 40 0 80

SCALE 1" = 80'

STORM WATER POLLUTION PREVENTION GENERAL NOTES:

1. All operator and/or contractors shall conform to the terms and conditions of the National Pollution Discharge Elimination Systems (NPDES) General Permit as published in the Federal Register, Vol. 57, No. 175, September 9, 1992, by the Environmental Protection Agency (EPA). The Notice of Intent (NOI), as required by the General Permit, must be properly displayed on site at all times by each operator.
2. All releases of reportable quantities of hazardous substances shall be reported immediately to the facility operator and EPA.
3. Qualified operator personnel must inspect the site at least once every seven days and within 24 hours of a 1/2 - inch or greater rainfall event. The inspector shall document the results. Modifications to the Storm Water Pollution Prevention Plan shall be implemented and be in-place within a seven calendar day period.
4. If any contractor sees a violation by an operator or another contractor, he shall notify the operator and contractor in violation, as well as the facility operator.
5. Erosion control shall be installed prior to any grading.
6. Accumulated silt deposits shall be removed from silt fences and hay bale dikes when silt depth reaches six inches. Removal of silt deposits by the contractor shall be incidental to the performance of the contract and a separate bid item shall not be included.
7. The contractor shall add or delete erosion protection at the request and direction of the Operator of the City.
8. After installation of pavement, final lot benching and general cleanup, the Paving Contractor shall establish grass groundcover in all street parkways, lots on all other disturbed areas. Materials shall be as specified Item 2.15 and seeding shall be in accordance with Item 3.10 of the NCTCOG Standard Specifications.
9. It shall be the contractor's responsibility to control and limit silt and sediment leaving the site. Specifically, the contractor shall protect all public streets, alleys, streams and storm drainage systems from erosion deposits.
10. The contractor shall be responsible to provide a dumpster (or equal) to collect solid water materials during construction.
11. The attached Drainage Area Map, as prepared by JohnsonVolk Consulting, Inc., specifically for this project, shall be made part of the Storm Water Pollution Prevention Plan.
12. It is anticipated that the following non-storm water discharges will be associated with this project. These discharges are authorized through the construction general permit:
 - 15.A. Fire hydrant flushings
 - 15.B. Water used to wash vehicles and to control dust
 - 15.C. Potable water sources including waterline flushings
 - 15.D. Irrigation drainage
 - 15.E. Pavement washdown
 - 15.F. Uncontaminated ground water
 - 15.G. Construction water
13. Construction waste disposal containers shall be provided on the site for disposal of all non-hazardous construction waste materials.
14. The containers shall be hauled to landfill by the Contractor. All hazardous materials shall be handled and disposed of by the Contractor in accordance with Federal, State and local regulations.

CONSTRUCTION NOTES - SILT FENCE:

1. Posts which support the silt fence shall be installed on a slight angle toward the anticipated runoff source. The post must be embedded a minimum of 18 inches.
2. The toe of the silt fence shall be trenched in with a spade or mechanical trencher, so that the downslope face of the trench is flat and perpendicular to the line of flow. Where fence cannot be trenched in (e.g. pavement), weight fabric flap with washed gravel on the uphill side to prevent flow under fence.
3. The trench must be a minimum of 6 inches deep and 6 inches wide to allow for the silt fence fabric to be laid in the ground and backfilled with compacted material.
4. Silt fence shall be securely fastened to each support post or to woven wire, which is in turn attached to the support post. There shall be a 6 inch double overlap, securely fastened where ends of fabric meet.
5. Inspection shall be made weekly or after each rainfall. Repair or replacement shall be made promptly as needed.
6. Silt fence shall be removed when the site is completely stabilized so as not to block or impede storm flow or drainage.
7. Accumulated silt shall be removed when it reaches a depth of 6 inches. The silt shall be disposed of at an approved site in a such a manner as to not contribute to additional siltation.

CONSTRUCTION NOTES:

1. Silt fence shall be installed as per detail.
2. Contractor will install additional erosion control where erosion protection is needed as per the owners, engineers or the City inspector.
3. The existing vegetation along existing parkways and the medians shall be replaced to its original condition or better.
4. All drainage swales shall be grassed as per City Standards, prior to the City acceptance of project.
5. All construction erosion control shall meet City Ordinance.
6. Erosion construction shall be completed in the following PHASES:

PHASE 1 (Prior to Start of Rough Grading)

 - A. Silt fence shall be placed as shown on plan, per detail.
 - B. Install temporary stone construction entrance.

PHASE 2 (After utility construction & prior to paving construction)

 - C. Install rip-rap at culvert headwalls.

PHASE 3 (After paving construction)

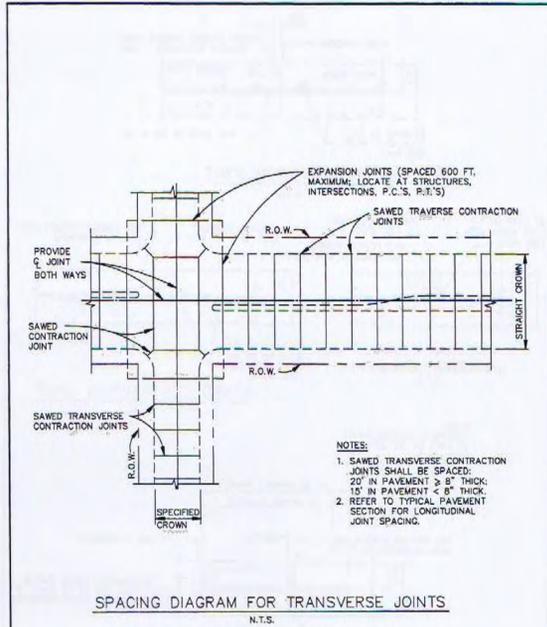
 - D. Curlex or Ground Cover shall be installed as shown on plan, as per detail.
 - E. All parkways and disturbed areas in street R.O.W. to be seeded with grass as per city standards.
 - F. Vegetation to be established in all disturbed areas.

BENCHMARKS

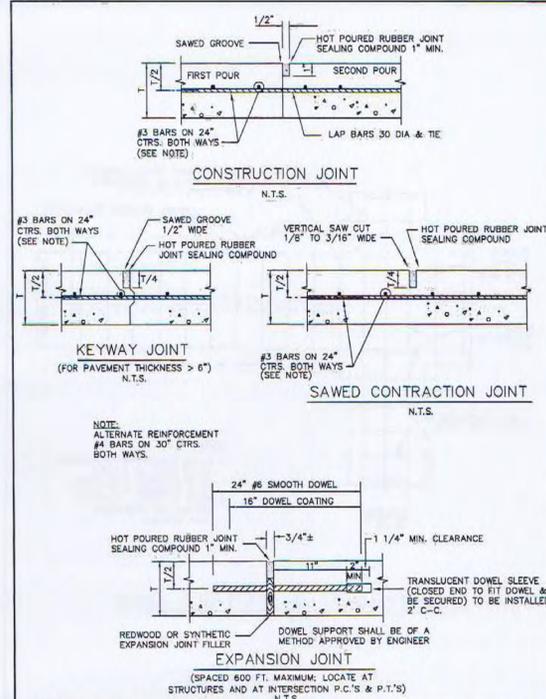
"X" FOUND IN THE CONCRETE PAVING OF STINSON ROAD APPROXIMATELY 1,160' NORTH OF THE CENTERLINE INTERSECTION OF STINSON ROAD AND SHILOH DRIVE. THE MONUMENT IS LOCATED APPROXIMATELY 73' NORTHEAST OF A POWER POLE AND 115' SOUTHEAST OF A WATER MANHOLE STRUCTURE. ELEVATION = 587.11'

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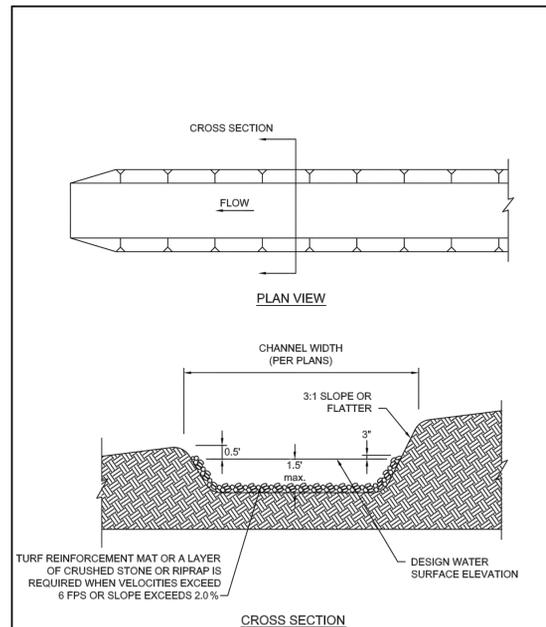




REINFORCED CONCRETE PAVEMENT TRANSVERSE JOINT SPACING	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 303.5.4.
	DATE OCT. '04	STANDARD DRAWING NO. 2060



REINFORCED CONCRETE PAVEMENT JOINTS	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 303.5.4.
	DATE OCT. '04	STANDARD DRAWING NO. 2050



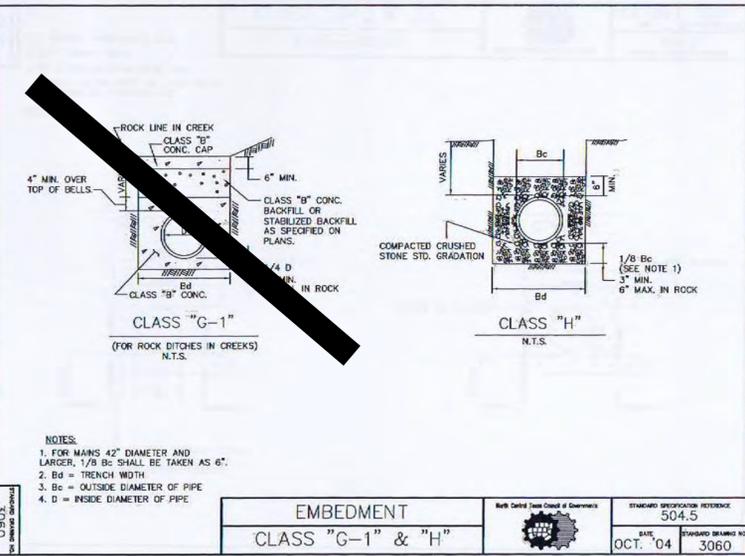
INTERCEPTOR SWALE	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 202.6*
	DATE OCT. '04	STANDARD DRAWING NO. 1030A

INTERCEPTOR SWALE GENERAL NOTES:

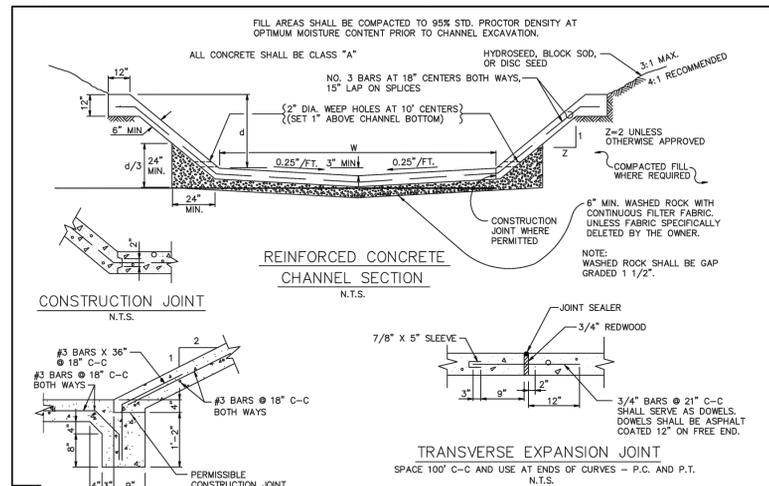
- ALL TREES, BRUSH, STUMPS, OBSTRUCTIONS AND OTHER MATERIAL SHALL BE REMOVED AND DISPOSED OF SO AS NOT TO INTERFERE WITH THE PROPER FUNCTIONING OF THE SWALE.
- THE SWALE SHALL BE EXCAVATED OR SHAPED TO LINE, GRADE AND CROSS-SECTION AS REQUIRED TO MEET CRITERIA SPECIFIED HEREIN AND BE FREE OF BANK PROJECTIONS OR OTHER IRREGULARITIES WHICH WILL IMPEDE NORMAL FLOW.
- ALL EARTH REMOVED AND NOT NEEDED IN CONSTRUCTION SHALL BE DISPOSED OF IN AN APPROVED SPOILS SITE SO THAT IT WILL NOT INTERFERE WITH THE FUNCTIONING OF THE SWALE.
- DIVERTED RUNOFF FROM A DISTURBED OR EXPOSED UPLAND AREA SHALL BE CONVEYED TO A SEDIMENT TRAPPING DEVICE.
- THE ON-SITE LOCATION MAY NEED TO BE ADJUSTED TO MEET FIELD CONDITIONS IN ORDER TO UTILIZE THE MOST SUITABLE OUTLET.
- FOR GRADES LESS THAN 2 PERCENT AND VELOCITIES LESS THAN 6 FEET PER SECOND, THE MINIMUM REQUIRED CHANNEL STABILIZATION SHALL BE GRASS, EROSION CONTROL MATS OR MULCHING. FOR GRADES IN EXCESS OF 2 PERCENT OR VELOCITIES EXCEEDING 6 FEET PER SECOND, STABILIZATION IS REQUIRED IN THE FORM OF TURF REINFORCEMENT MATS (OR A LAYER OF CRUSHED STONE OR RIP-RAP WITH APPROPRIATE SIZE, GRADATION, AND THICKNESS AS SPECIFIED IN THE SWPPP).
- MINIMUM COMPACTION FOR THE SWALE SHALL BE 90 PERCENT STANDARD PROCTOR.
- INSPECTION SHALL BE AS SPECIFIED IN THE SWPPP.

INTERCEPTOR SWALE	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 202.6*
	DATE OCT. '04	STANDARD DRAWING NO. 1030B

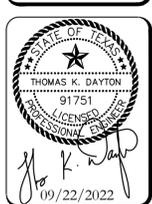
*Section II Standard Drawings as of October 2004. Reference number only has been updated for Fifth Edition Specifications. Public Works Construction Standards North Central Texas, Fifth Edition.

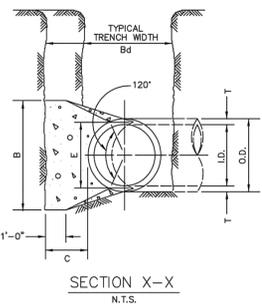
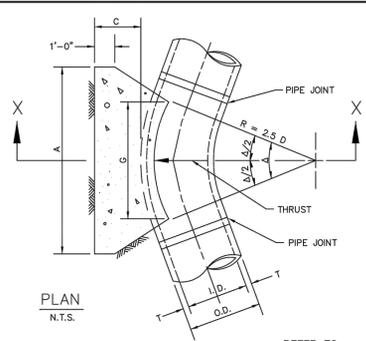


EMBEDMENT CLASS "G-1" & "H"	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 504.5
	DATE OCT. '04	STANDARD DRAWING NO. 3060



FULL CHANNEL LINING CONCRETE REINFORCED	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 803.3
	DATE OCT. '04	STANDARD DRAWING NO. 6050





HORIZONTAL THRUST BLOCK AT PIPE BEND
 STANDARD SPECIFICATION REFERENCE 502.4
 DATE OCT. '04 STANDARD DRAWING NO. 4010A

I.D. (IN.)	T (IN.)	Δ = 11.25°		Δ = 22.50°	
		C (FT.)	E (FT.)	C (FT.)	E (FT.)
4.6,8	0.4	1.5	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	

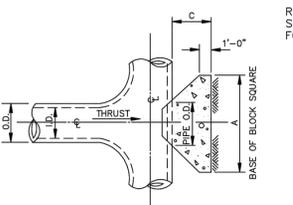
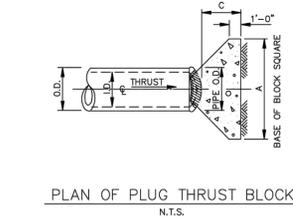
I.D. (IN.)	G (FT.)	Δ = 11.25°						Δ = 22.50°									
		EARTH			ROCK			EARTH			ROCK						
		THRUST (TONS)	A (FT.)	B (FT.)	VOL. (C.Y.)	A (FT.)	B (FT.)	VOL. (C.Y.)	THRUST (TONS)	A (FT.)	B (FT.)	VOL. (C.Y.)	A (FT.)	B (FT.)	VOL. (C.Y.)		
4.6,8	0.4	1.0	1.0	1.5	0.3	1.0	1.0	0.1	4.6,8	0.8	2.0	1.5	0.1	1.0	1.0	0.1	
10.12	0.6	2.2	1.5	1.5	0.1	1.0	1.0	0.1	10.12	1.1	2.4	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	0.8	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	0.5	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	10.6	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	6.8	119.1	11.0	11.0	17.6	7.5	8.0	8.1
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	12.2	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

HORIZONTAL THRUST BLOCK AT PIPE BEND
 STANDARD SPECIFICATION REFERENCE 502.4
 DATE OCT. '04 STANDARD DRAWING NO. 4010B

I.D. (IN.)	G (FT.)	Δ = 30°						Δ = 45°									
		EARTH			ROCK			EARTH			ROCK						
		THRUST (TONS)	A (FT.)	B (FT.)	VOL. (C.Y.)	A (FT.)	B (FT.)	VOL. (C.Y.)	THRUST (TONS)	A (FT.)	B (FT.)	VOL. (C.Y.)	A (FT.)	B (FT.)	VOL. (C.Y.)		
4.6,8	1.0	2.6	2.0	1.5	0.2	1.0	1.5	0.1	4.6,8	1.5	3.9	2.0	2.0	0.2	1.5	1.5	0.1
10.12	1.5	5.9	2.5	2.5	0.3	2.0	1.5	0.2	10.12	2.2	8.7	3.5	2.5	0.5	2.0	2.5	0.3
16.18	2.2	13.2	3.5	4.0	0.8	3.0	3.0	0.5	16.18	3.2	19.5	5.0	4.5	1.2	3.0	3.5	0.6
20	2.4	16.3	4.5	4.0	1.0	3.0	3.0	0.5	20	3.6	24.1	5.5	4.5	1.5	3.5	3.5	0.7
24	2.9	23.4	6.0	4.0	1.4	3.5	3.5	0.7	24	4.3	34.6	8.0	4.5	2.3	4.5	4.0	1.1
30	3.6	27.5	6.5	5.0	1.9	3.5	4.0	0.9	30	5.4	40.6	8.5	5.0	3.2	5.5	4.0	1.6
36	4.4	39.5	7.0	6.0	3.4	4.5	4.5	1.6	36	6.5	58.5	10.0	6.0	5.3	6.5	4.5	2.6
42	5.1	53.8	8.0	7.0	5.1	5.5	5.0	2.5	42	7.5	79.6	11.5	7.0	8.1	8.0	5.0	4.2
48	5.8	70.3	9.0	8.0	7.4	6.0	6.0	3.7	48	8.6	104.0	13.0	8.0	11.9	9.0	6.0	6.3
54	6.5	89.0	10.0	9.0	10.3	7.0	6.5	5.3	54	9.7	131.5	15.0	9.0	17.1	10.5	6.5	8.9
60	7.3	110.0	11.0	10.0	13.9	7.5	7.5	7.3	60	10.7	162.4	16.5	10.0	23.1	11.0	7.5	12.0
66	8.0	132.9	12.5	11.0	18.9	8.5	8.0	9.6	66	11.8	196.5	18.0	11.0	30.1	12.0	8.5	16.2
72	8.7	158.2	13.5	12.0	24.0	9.0	9.0	12.3	72	12.9	233.9	19.5	12.0	38.6	14.0	8.5	20.7
78	9.4	185.6	14.5	13.0	30.0	10.0	9.5	15.6	78	13.9	274.5	21.5	13.0	49.8	14.5	9.5	25.9
84	10.1	215.3	15.5	14.0	37.1	10.5	10.5	19.5	84	15.0	316.4	23.0	14.0	61.2	15.5	10.5	32.6
90	10.8	247.1	16.5	15.0	45.0	11.5	11.0	23.9	90	16.1	365.5	24.5	15.0	74.5	17.5	10.5	39.6
96	11.6	281.2	18.0	16.0	55.5	12.5	11.5	28.9	96	17.1	415.6	26.0	16.0	89.5	18.5	11.5	48.5

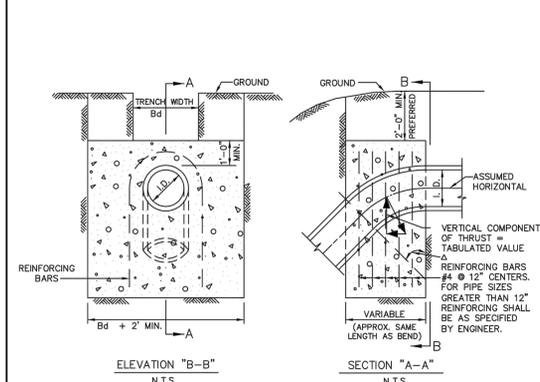
I.D. (IN.)	G (FT.)	Δ = 67.50°						Δ = 90°									
		EARTH			ROCK			EARTH			ROCK						
		THRUST (TONS)	A (FT.)	B (FT.)	VOL. (C.Y.)	A (FT.)	B (FT.)	VOL. (C.Y.)	THRUST (TONS)	A (FT.)	B (FT.)	VOL. (C.Y.)	A (FT.)	B (FT.)	VOL. (C.Y.)		
4.6,8	2.1	5.6	3.0	2.0	0.3	2.0	1.5	0.2	4.6,8	2.7	7.1	5.0	1.5	0.4	2.0	2.0	0.2
10.12	3.1	12.6	5.5	2.5	0.8	3.5	2.0	0.4	10.12	4.0	16.0	6.5	2.5	1.0	3.5	2.5	0.5
16.18	4.7	28.3	7.5	4.0	1.9	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	68.9	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	84.9	14.5	6.0	8.2	9.5	4.5	3.8	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	12.8	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	6.0	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	6.5	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	19.9	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	66.2	22.0	8.5	32.5
72	18.7	339.5	28.0	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	398.5	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	10.5	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

HORIZONTAL THRUST BLOCK AT PIPE BEND
 STANDARD SPECIFICATION REFERENCE 502.4
 DATE OCT. '04 STANDARD DRAWING NO. 4010C

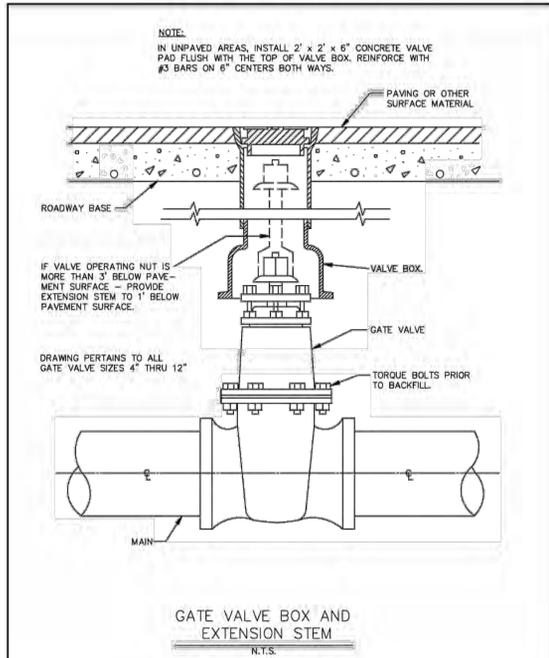


I.D. (IN.)	THRUST (TONS)	EARTH			ROCK		
		C (FT.)	A (FT.)	VOL. (C.Y.)	A (FT.)	VOL. (C.Y.)	VOL. (C.Y.)
4.6,8	5.1	1.5	2.5	0.3	2.0	0.2	
10.12	11.3	1.5	3.5	0.6	2.5	0.3	
16.18	25.5	2.0	5.5	1.6	4.0	0.9	
20	31.5	2.0	6.0	1.8	4.0	0.9	
24	46.2	2.5	7.0	3.1	5.0	1.7	
30	53.0	3.0	7.5	4.1	5.5	2.4	
36	78.3	4.0	9.0	7.3	6.5	4.2	
42	104.0	4.5	10.5	11.0	7.5	6.2	
48	130.0	5.0	12.0	15.6	8.5	8.7	
54	172.0	5.5	13.5	21.4	8.5	11.9	
60	212.0	6.0	15.0	28.4	10.5	15.7	
66	257.0	6.5	16.5	36.8	11.5	20.5	
72	305.0	7.5	17.5	47.2	12.5	27.2	
78	358.0	8.0	19.0	59.9	13.5	33.7	
84	416.0	8.5	20.5	75.3	14.5	41.2	
90	477.0	9.0	22.0	92.7	15.5	49.4	
96	543.0	9.5	23.5	104.8	16.5	58.0	

HORIZONTAL THRUST BLOCK AT TEES AND PLUGS
 STANDARD SPECIFICATION REFERENCE 502.4
 DATE OCT. '04 STANDARD DRAWING NO. 4020



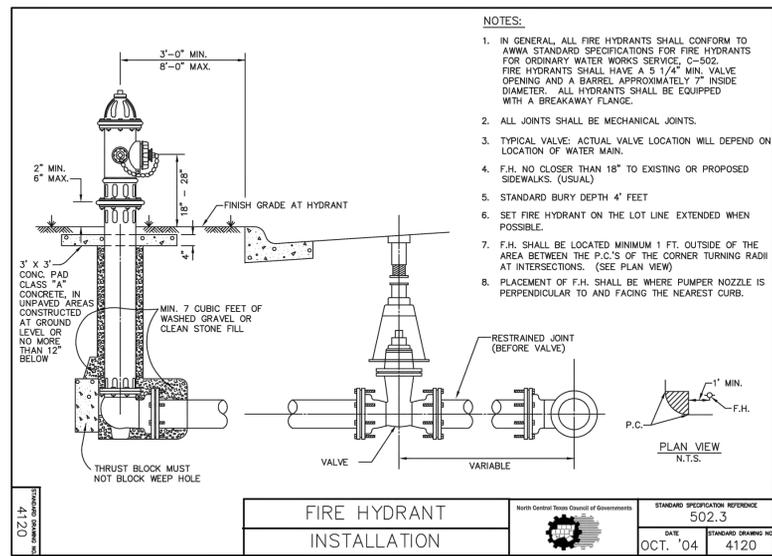
I.D. (IN.)	THRUST (TONS)	11.25°			22.50°			30°			45°			67.50°			90°		
		THRUST (TONS)	VOL. (



**GATE VALVE 4" TO 12"
BOX & EXTENSION STEM**

STANDARD SPECIFICATION REFERENCE	502.6.6 ³
DATE	OCT. '04
STANDARD DRAWING NO.	4050

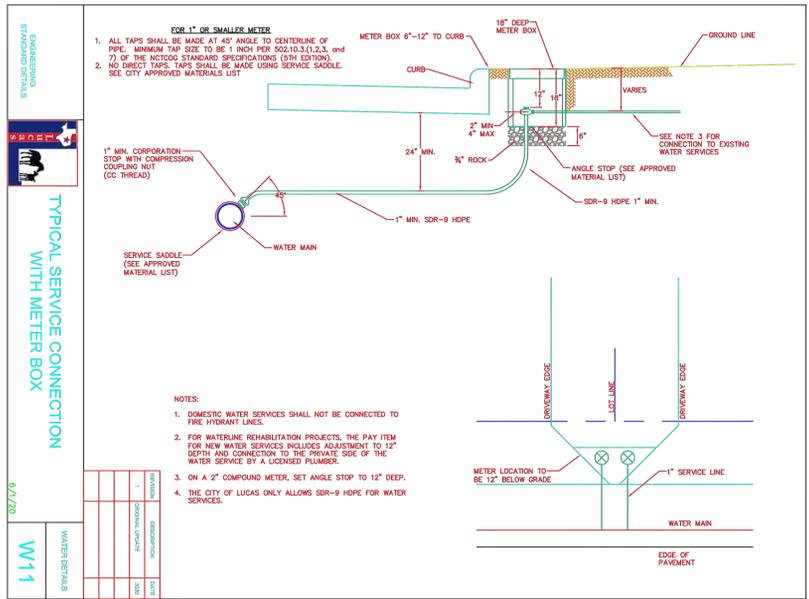
³Section II Standard Drawings as of October 2004. Reference number only has been updated for Fifth Edition Specifications. Public Works Construction Standards North Central Texas, Fifth Edition.



**FIRE HYDRANT
INSTALLATION**

STANDARD SPECIFICATION REFERENCE	502.3
DATE	OCT. '04
STANDARD DRAWING NO.	4120

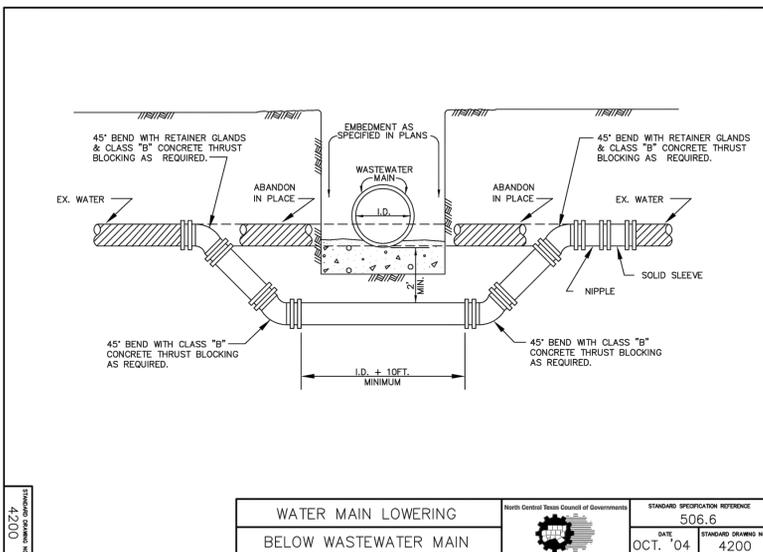
- NOTES:**
1. IN GENERAL, ALL FIRE HYDRANTS SHALL CONFORM TO AWWA STANDARD SPECIFICATIONS FOR FIRE HYDRANTS FOR ORDINARY WATER WORKS SERVICE, C-502. FIRE HYDRANTS SHALL HAVE A 5 1/4" MIN. VALVE OPENING AND A BARREL APPROXIMATELY 7" INSIDE DIAMETER. ALL HYDRANTS SHALL BE EQUIPPED WITH A BREAKAWAY FLANGE.
 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 4' 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 RADI AT INTERSECTIONS. (SEE PLAN VIEW)
 8. PLACEMENT OF F.H. SHALL BE WHERE PUMPER NOZZLE IS PERPENDICULAR TO AND FACING THE NEAREST CURB.



**TYPICAL SERVICE CONNECTION
WITH METER BOX**

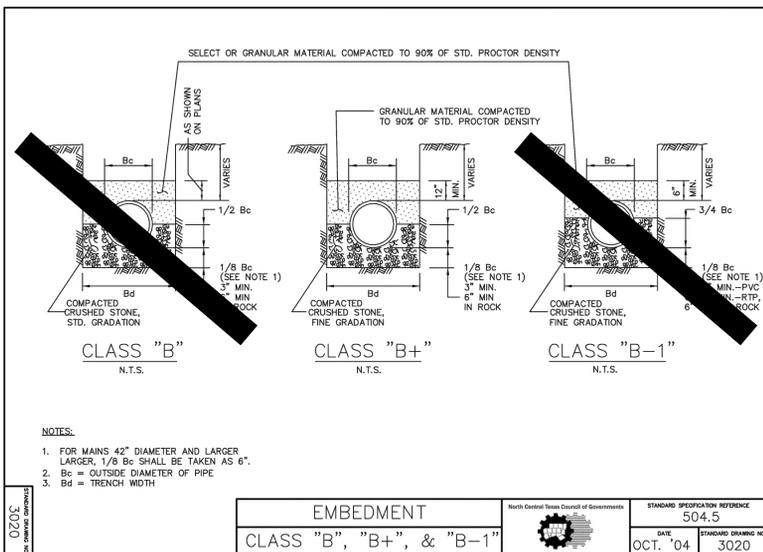
STANDARD SPECIFICATION REFERENCE	504.5
DATE	OCT. '04
STANDARD DRAWING NO.	3020

- NOTES:**
1. ALL TAPS SHALL BE MADE AT 45° ANGLE TO CENTERLINE OF PIPE. MINIMUM TAP SIZE TO BE 1 INCH PER 502.10.3 (1,2,3, and 7) OF THE NCTCOG STANDARD SPECIFICATIONS (5TH EDITION).
 2. NO SWEET TAPS. TAPS SHALL BE MADE USING SERVICE SADDLE. SEE CITY APPROVED MATERIALS LIST
 3. ON A 2" COMPOUND METER, SET ANGLE STOP TO 12" DEEP.
 4. THE CITY OF LUCAS ONLY ALLOWS SDR-9 HDPE FOR WATER SERVICES.



**WATER MAIN LOWERING
BELOW WASTEWATER MAIN**

STANDARD SPECIFICATION REFERENCE	506.6
DATE	OCT. '04
STANDARD DRAWING NO.	4200



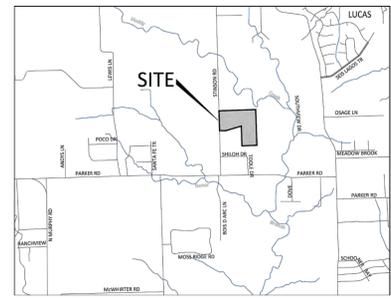
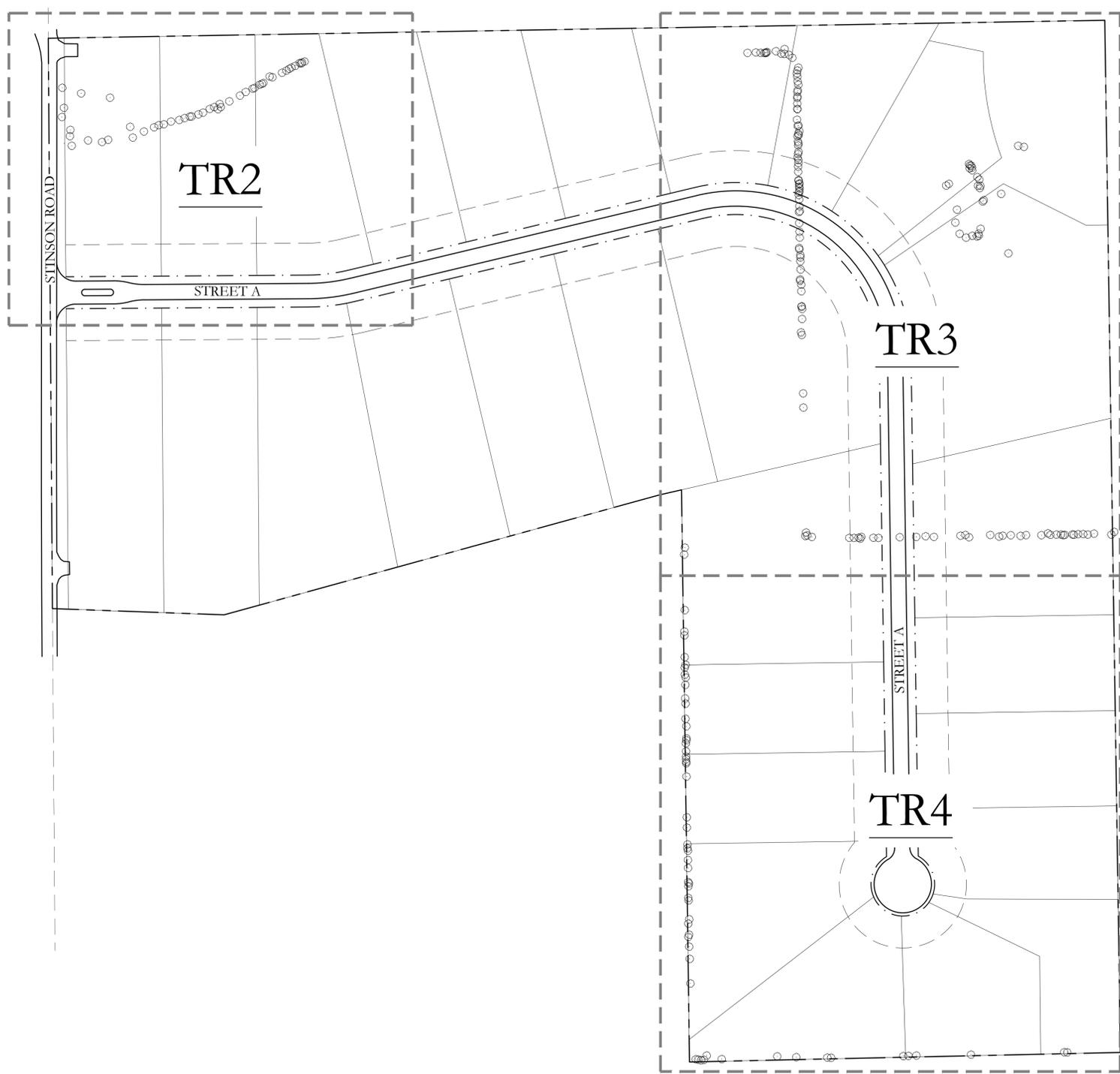
**EMBEDMENT
CLASS "B", "B+", & "B-1"**

STANDARD SPECIFICATION REFERENCE	504.5
DATE	OCT. '04
STANDARD DRAWING NO.	3020

- NOTES:**
1. FOR MAINS 42" DIAMETER AND LARGER LARGER, 1/8 Bc SHALL BE TAKEN AS 6".
 2. Bc = OUTSIDE DIAMETER OF PIPE
 3. Bd = TRENCH WIDTH

I:\level_3d_projects\wla - water\land jobs\wla501 - hometstead at stinson highland\c:\plm\dwg\sheet\construction plans\wla501 - water details.dwg





LOCATION MAP
NOT TO SCALE

OWNER/DEVELOPER:
 WARNER LAND ADVISORS, LP.
 4040 N. CENTRAL EXPRESSWAY, SUITE 850
 DALLAS, TEXAS 75024
 PH. (469) 387-4407
 CONTACT: PRESTON WALHOOD

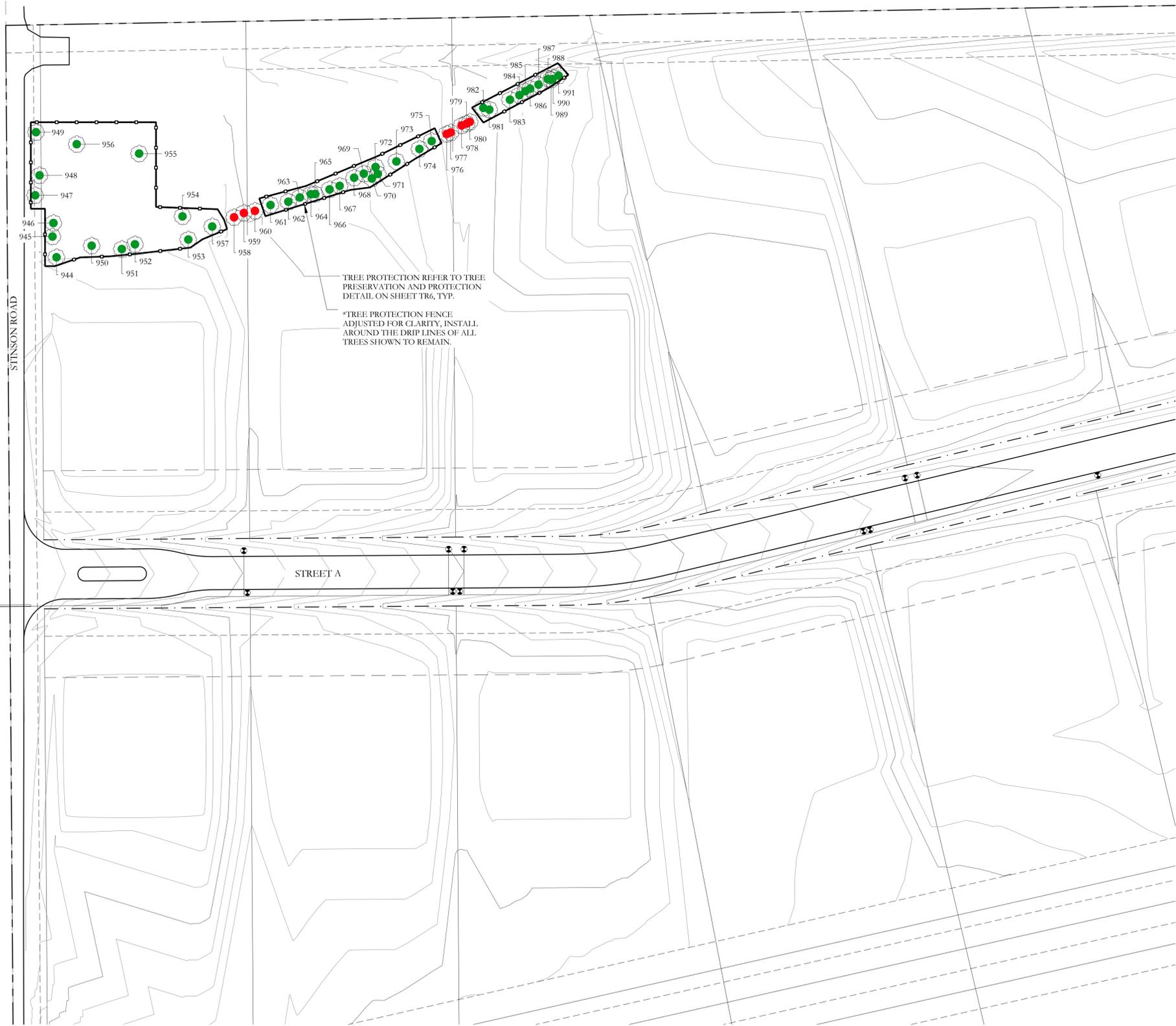
LANDSCAPE ARCHITECT:
 JOHNSON VOLK CONSULTING
 704 CENTRAL PARKWAY EAST, SUITE 1200
 PLANO, TEXAS 75074
 PH. (972) 201-3100
 CONTACT: CODY JOHNSON, RLA, ASLA, LI



SCALE:
 1" = 100'
 One Inch
 WLA051



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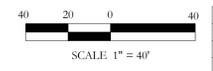
TREE PROTECTION REFER TO TREE PRESERVATION AND PROTECTION DETAIL ON SHEET TR6, TYP.

*TREE PROTECTION FENCE ADJUSTED FOR CLARITY, INSTALL AROUND THE DRIP LINES OF ALL TREES SHOWN TO REMAIN.

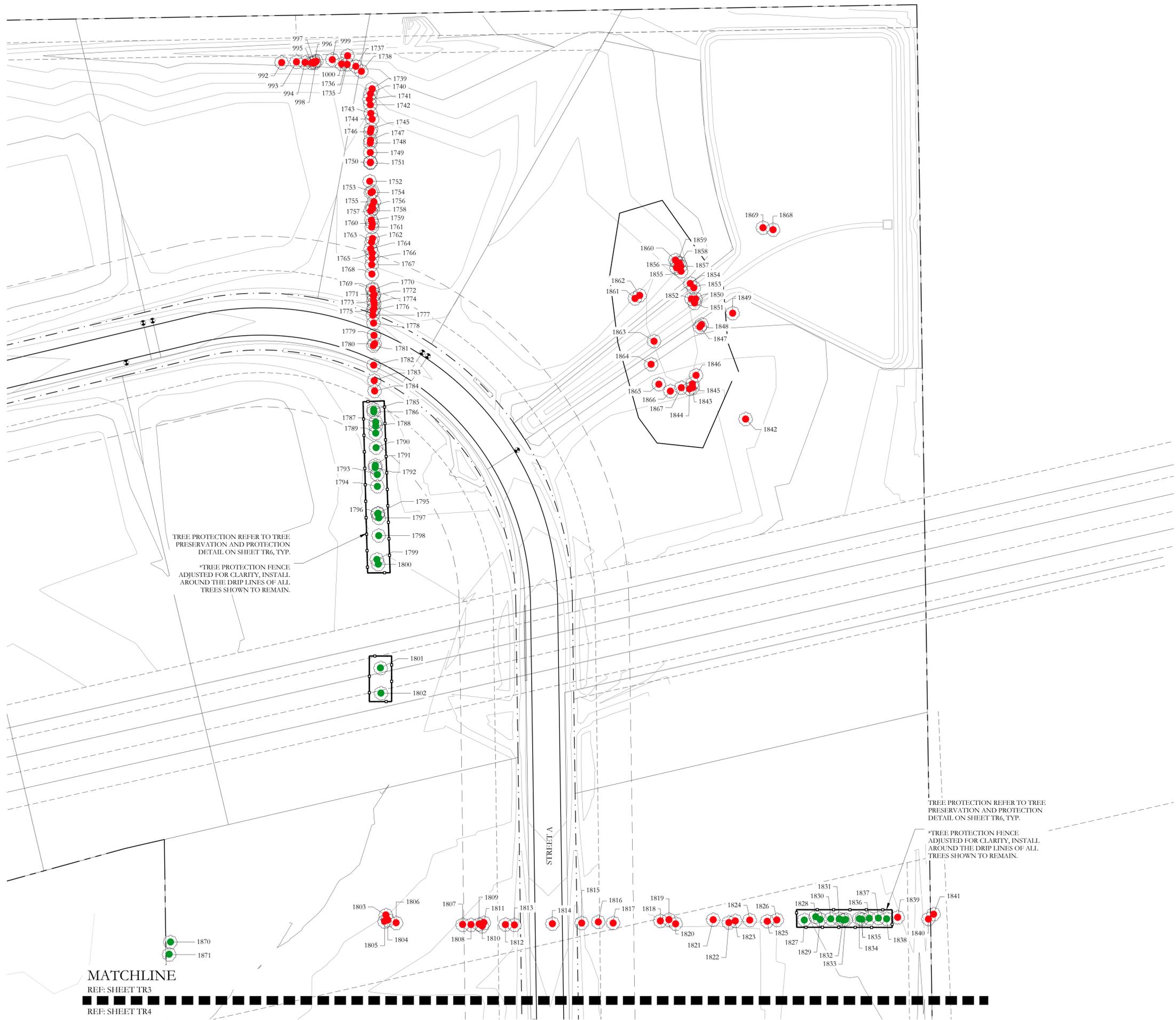
LEGEND

- 13 EXISTING TREE TO BE REMOVED
- 2 EXISTING TREE TO REMAIN
- 2 EXISTING TREE LOCATED OFF-SITE TO REMAIN
- TREE PROTECTION REFER TREE PRESERVATION AND PROTECTION DETAIL ON SHEET TR2

INSTALL TREE PROTECTION FENCE AROUND THE DRIP LINES OF ALL TREES SHOWN TO REMAIN. TYP.



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LEGEND

- 13 EXISTING TREE TO BE REMOVED
- 2 EXISTING TREE TO REMAIN
- 2 EXISTING TREE LOCATED OFF-SITE TO REMAIN
- TREE PROTECTION REFER TREE PRESERVATION AND PROTECTION DETAIL ON SHEET TR2

INSTALL TREE PROTECTION FENCE AROUND THE DRIP LINES OF ALL TREES SHOWN TO REMAIN. TYP.

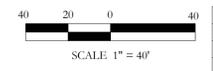
TREE PROTECTION REFER TO TREE PRESERVATION AND PROTECTION DETAIL ON SHEET TR6, TYP.

*TREE PROTECTION FENCE ADJUSTED FOR CLARITY, INSTALL AROUND THE DRIP LINES OF ALL TREES SHOWN TO REMAIN.

TREE PROTECTION REFER TO TREE PRESERVATION AND PROTECTION DETAIL ON SHEET TR6, TYP.

*TREE PROTECTION FENCE ADJUSTED FOR CLARITY, INSTALL AROUND THE DRIP LINES OF ALL TREES SHOWN TO REMAIN.

MATCHLINE
REF: SHEET TR3
REF: SHEET TR4

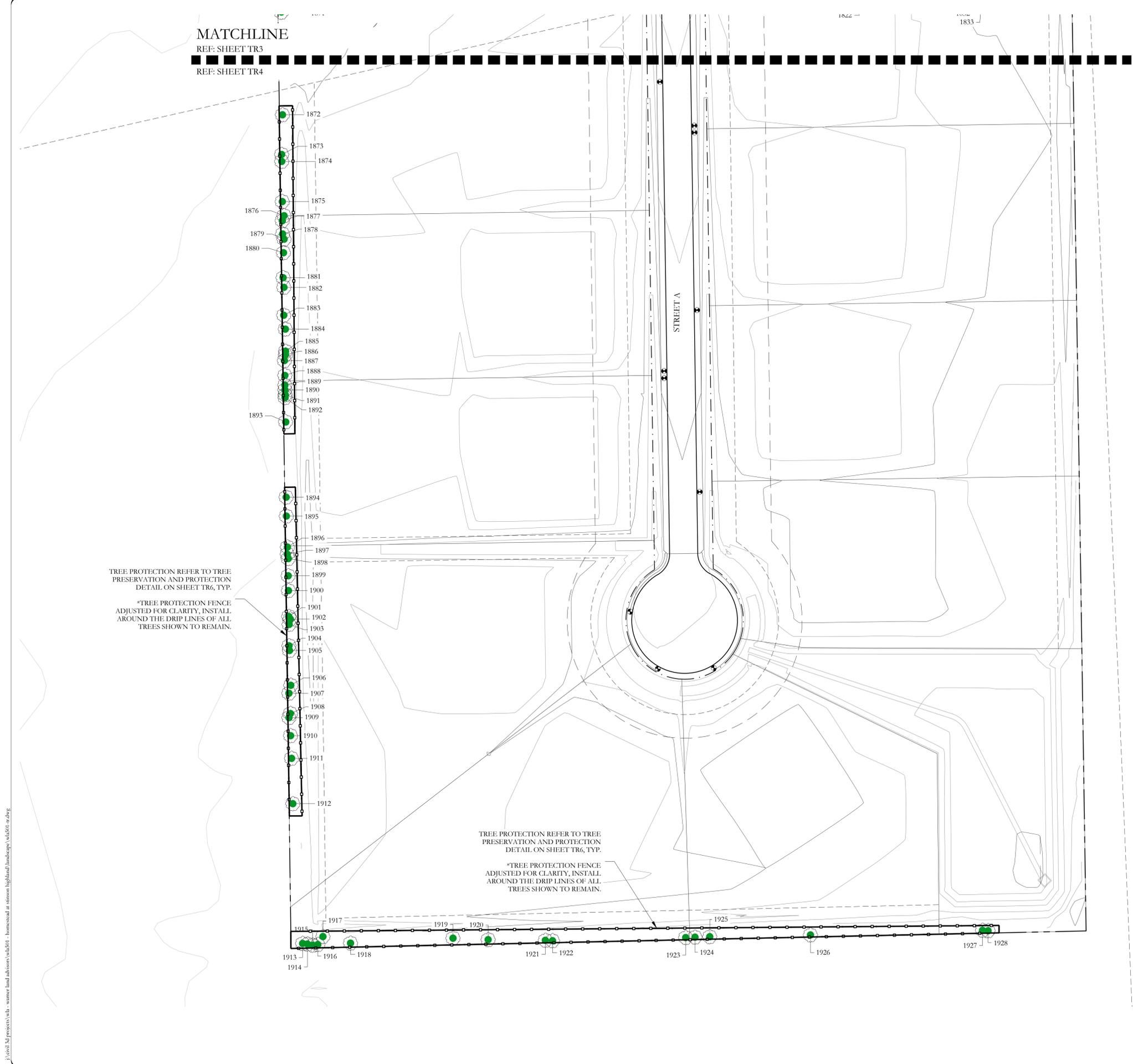


MATCHLINE
 REF: SHEET TR3
 REF: SHEET TR4

LEGEND

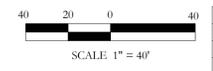
-  -15 EXISTING TREE TO BE REMOVED
-  -2 EXISTING TREE TO REMAIN
-  -2 EXISTING TREE LOCATED OFF-SITE TO REMAIN
-  TREE PROTECTION REFER TREE PRESERVATION AND PROTECTION DETAIL ON SHEET TR6

INSTALL TREE PROTECTION FENCE AROUND THE DRIP LINES OF ALL TREES SHOWN TO REMAIN. TYP.



TREE PROTECTION REFER TO TREE PRESERVATION AND PROTECTION DETAIL ON SHEET TR6, TYP.
 *TREE PROTECTION FENCE ADJUSTED FOR CLARITY, INSTALL AROUND THE DRIP LINES OF ALL TREES SHOWN TO REMAIN.

TREE PROTECTION REFER TO TREE PRESERVATION AND PROTECTION DETAIL ON SHEET TR6, TYP.
 *TREE PROTECTION FENCE ADJUSTED FOR CLARITY, INSTALL AROUND THE DRIP LINES OF ALL TREES SHOWN TO REMAIN.

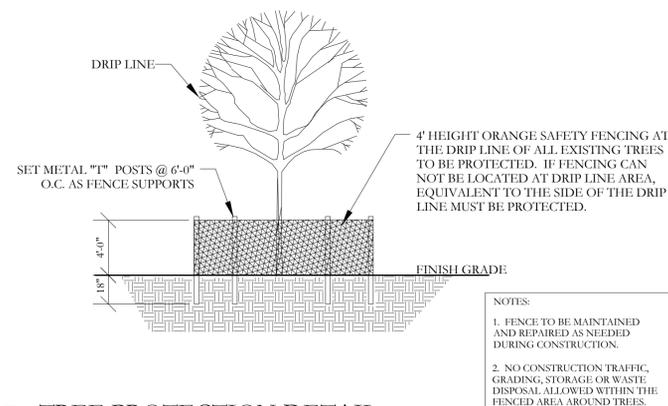


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Tree ID Number	Diameter at Breast Height (DBH) (inches)	Common Name	Scientific Name	Protected Tree?	Condition	Comment	Location	Remove or Remain	Mitigation Required, Percentage	Mitigation Required in Caliper Inches
944	6.0	Yaupon Holly	Ilex vomitoria	Yes	Healthy	Multi-Trunk	Lot	Remain	0%	0.0
945	24.0	Pecan	Celtis occidentalis	Yes	Healthy		Lot	Remain	0%	0.0
946	27.6	Hackberry	Celtis occidentalis	No	Healthy		Lot	Remain	0%	0.0
947	18.0	Crape Myrtle	Lagerstromia	No	Healthy	Multi-Trunk	Lot	Remain	0%	0.0
948	13.2	White Poplar	Populus alba	No	Healthy	Multi-Trunk	Lot	Remain	0%	0.0
949	12.0	White Poplar	Populus alba	No	Healthy	Multi-Trunk	Lot	Remain	0%	0.0
950	24.0	Hackberry	Celtis occidentalis	No	Healthy		Lot	Remain	0%	0.0
951	7.2	Hackberry	Celtis occidentalis	No	Healthy		Lot	Remain	0%	0.0
952	24.0	Cedar Elm	Ulmus crassifolia	Yes	Healthy	Multi-Trunk	Lot	Remain	0%	0.0
953	8.4	Hackberry	Celtis occidentalis	No	Healthy		Lot	Remain	0%	0.0
954	34.8	Red Oak	Quercus texana	Yes	Healthy	Multi-Trunk	Lot	Remain	0%	0.0
955	36.0	Hackberry	Celtis occidentalis	No	Healthy		Lot	Remain	0%	0.0
956	20.4	Pecan	Carya illinoensis	Yes	Healthy		Lot	Remain	0%	0.0
957	9.6	Hackberry	Celtis occidentalis	No	Healthy		Lot	Remain	0%	0.0
958	18.0	Hackberry	Celtis occidentalis	No	Healthy	Multi-Trunk	Lot	Remove	0%	0.0
959	15.6	Hackberry	Celtis occidentalis	No	Healthy		Lot	Remove	0%	0.0
960	12.0	Hackberry	Celtis occidentalis	No	Healthy	Multi-Trunk	Lot	Remove	0%	0.0
961	7.2	Hackberry	Celtis occidentalis	No	Healthy		Lot	Remain	0%	0.0
962	24.0	Hackberry	Celtis occidentalis	No	Healthy	Multi-Trunk	Lot	Remain	0%	0.0
963	16.8	Hackberry	Celtis occidentalis	No	Healthy	Multi-Trunk	Lot	Remain	0%	0.0
964	8.4	Hackberry	Celtis occidentalis	No	Healthy		Lot	Remain	0%	0.0
965	36.0	Hackberry	Celtis occidentalis	No	Healthy	Multi-Trunk	Lot	Remain	0%	0.0
966	19.2	Hackberry	Celtis occidentalis	No	Healthy	Multi-Trunk	Lot	Remain	0%	0.0
967	16.8	Hackberry	Celtis occidentalis	No	Healthy	Multi-Trunk	Lot	Remain	0%	0.0
968	24.0	Hackberry	Celtis occidentalis	No	Healthy	Multi-Trunk	Lot	Remain	0%	0.0
969	36.0	Hackberry	Celtis occidentalis	No	Healthy	Multi-Trunk	Lot	Remain	0%	0.0
970	7.2	Hackberry	Celtis occidentalis	No	Healthy		Lot	Remain	0%	0.0
971	26.4	Hackberry	Celtis occidentalis	No	Healthy	Multi-Trunk	Lot	Remain	0%	0.0
972	12.0	Hackberry	Celtis occidentalis	No	Healthy		Lot	Remain	0%	0.0
973	24.0	Hackberry	Celtis occidentalis	No	Healthy		Lot	Remain	0%	0.0
974	25.2	Hackberry	Celtis occidentalis	No	Healthy	Multi-Trunk	Lot	Remain	0%	0.0
975	24.0	Hackberry	Celtis occidentalis	No	Healthy	Multi-Trunk	Lot	Remain	0%	0.0
976	25.2	Hackberry	Celtis occidentalis	No	Healthy	Multi-Trunk	Lot	Remove	0%	0.0
977	8.4	Hackberry	Celtis occidentalis	No	Healthy		Lot	Remove	0%	0.0
978	16.8	Hackberry	Celtis occidentalis	No	Healthy	Multi-Trunk	Lot	Remove	0%	0.0
979	9.6	Hackberry	Celtis occidentalis	No	Healthy		Lot	Remove	0%	0.0
980	12.0	Hackberry	Celtis occidentalis	No	Healthy		Lot	Remove	0%	0.0
981	10.8	Hackberry	Celtis occidentalis	No	Healthy		Lot	Remain	0%	0.0
982	18.0	Hackberry	Celtis occidentalis	No	Healthy	Multi-Trunk	Lot	Remain	0%	0.0
983	24.0	Hackberry	Celtis occidentalis	No	Healthy		Lot	Remain	0%	0.0
984	13.2	Hackberry	Celtis occidentalis	No	Healthy		Lot	Remain	0%	0.0
985	18.0	Hackberry	Celtis occidentalis	No	Healthy	Multi-Trunk	Lot	Remain	0%	0.0
986	32.4	Hackberry	Celtis occidentalis	No	Healthy	Multi-Trunk	Lot	Remain	0%	0.0
987	34.8	Hackberry	Celtis occidentalis	No	Healthy	Multi-Trunk	Lot	Remain	0%	0.0
988	21.6	Hackberry	Celtis occidentalis	No	Healthy		Lot	Remain	0%	0.0
989	12.0	Hackberry	Celtis occidentalis	No	Healthy		Lot	Remain	0%	0.0
990	10.8	Hackberry	Celtis occidentalis	No	Healthy		Lot	Remain	0%	0.0
991	7.2	Hackberry	Celtis occidentalis	No	Healthy		Lot	Remain	0%	0.0
992	51.6	Hackberry	Celtis occidentalis	No	Healthy		Lot	Remain	0%	0.0
993	14.4	Hackberry	Celtis occidentalis	No	Healthy	Multi-Trunk	Lot	Remove	0%	0.0
994	19.2	Hackberry	Celtis occidentalis	No	Healthy	Multi-Trunk	Lot	Remove	0%	0.0
995	7.2	Hackberry	Celtis occidentalis	No	Healthy		Lot	Remove	0%	0.0
996	14.4	Hackberry	Celtis occidentalis	No	Healthy		Lot	Remove	0%	0.0
997	7.2	Hackberry	Celtis occidentalis	No	Healthy		Lot	Remove	0%	0.0
998	8.4	Cedar Elm	Ulmus crassifolia	Yes	Healthy		Lot	Remove	100%	8.4
999	18.0	Cedar Elm	Ulmus crassifolia	Yes	Healthy	Multi-Trunk	Lot	Remove	100%	18.0
1000	10.8	Hackberry	Celtis occidentalis	No	Healthy		Lot	Remove	0%	0.0
1735	12.0	Hackberry	Celtis occidentalis	No	Healthy	Easement	Lot	Remove	0%	0.0
1736	7.2	Hackberry	Celtis occidentalis	No	Healthy	Easement	Lot	Remove	0%	0.0
1737	19.2	Hackberry	Celtis occidentalis	No	Healthy	Multi-Trunk	Easement	Remove	0%	0.0
1738	21.6	Hackberry	Celtis occidentalis	No	Healthy	Multi-Trunk	Lot	Remove	0%	0.0
1739	16.8	Hackberry	Celtis occidentalis	No	Healthy	Multi-Trunk	Lot	Remove	0%	0.0
1740	7.2	Hackberry	Celtis occidentalis	No	Healthy		Lot	Remove	0%	0.0
1741	21.6	Hackberry	Celtis occidentalis	No	Healthy	Multi-Trunk	Lot	Remove	0%	0.0
1742	15.6	Hackberry	Celtis occidentalis	No	Healthy		Lot	Remove	0%	0.0
1743	13.2	Hackberry	Celtis occidentalis	No	Healthy		Lot	Remove	0%	0.0
1744	24.0	Hackberry	Celtis occidentalis	No	Healthy	Multi-Trunk	Lot	Remove	0%	0.0
1745	13.2	Hackberry	Celtis occidentalis	No	Healthy		Lot	Remove	0%	0.0
1746	16.8	Hackberry	Celtis occidentalis	No	Healthy	Multi-Trunk	Lot	Remove	0%	0.0
1747	8.4	Hackberry	Celtis occidentalis	No	Healthy		Lot	Remove	0%	0.0
1748	18.0	Hackberry	Celtis occidentalis	No	Healthy		Lot	Remove	0%	0.0
1749	20.4	Hackberry	Celtis occidentalis	No	Healthy	Multi-Trunk	Lot	Remove	0%	0.0
1750	21.6	Hackberry	Celtis occidentalis	No	Healthy	Multi-Trunk	Lot	Remove	0%	0.0
1751	45.6	Hackberry	Celtis occidentalis	No	Healthy		Lot	Remove	0%	0.0
1752	19.2	Hackberry	Celtis occidentalis	No	Healthy	Multi-Trunk	Lot	Remove	0%	0.0
1753	8.4	Hackberry	Celtis occidentalis	No	Healthy		Lot	Remove	0%	0.0
1754	7.2	Hackberry	Celtis occidentalis	No	Healthy		Lot	Remove	0%	0.0
1755	18.0	Hackberry	Celtis occidentalis	No	Healthy	Multi-Trunk	Lot	Remove	0%	0.0
1756	12.0	Hackberry	Celtis occidentalis	No	Healthy		Lot	Remove	0%	0.0
1757	26.4	Hackberry	Celtis occidentalis	No	Healthy	Multi-Trunk	Lot	Remove	0%	0.0
1758	13.2	Hackberry	Celtis occidentalis	No	Healthy		Lot	Remove	0%	0.0
1759	12.0	Hackberry	Celtis occidentalis	No	Healthy		Lot	Remove	0%	0.0
1760	21.6	Hackberry	Celtis occidentalis	No	Healthy	Multi-Trunk	Lot	Remove	0%	0.0
1761	9.6	Hackberry	Celtis occidentalis	No	Healthy		Lot	Remove	0%	0.0
1762	21.6	Hackberry	Celtis occidentalis	No	Healthy	Multi-Trunk	Lot	Remove	0%	0.0
1763	7.2	Hackberry	Celtis occidentalis	No	Healthy		Lot	Remove	0%	0.0
1764	8.9	Hackberry	Celtis occidentalis	No	Healthy		Lot	Remove	0%	0.0
1765	36.0	Hackberry	Celtis occidentalis	No	Healthy		Lot	Remove	0%	0.0
1766	19.2	Hackberry	Celtis occidentalis	No	Healthy		Lot	Remove	0%	0.0
1767	24.0	Hackberry	Celtis occidentalis	No	Healthy	Multi-Trunk	Lot	Remove	0%	0.0
1768	9.6	Hackberry	Celtis occidentalis	No	Healthy		Lot	Remove	0%	0.0
1769	8.4	Hackberry	Celtis occidentalis	No	Healthy		Lot	Remove	0%	0.0
1770	16.8	Hackberry	Celtis occidentalis	No	Healthy	Multi-Trunk	Easement	Remove	0%	0.0
1771	19.2	Hackberry	Celtis occidentalis	No	Healthy	Multi-Trunk	Easement	Remove	0%	0.0
1772	32.4	Hackberry	Celtis occidentalis	No	Healthy		Easement	Remove	0%	0.0
1773	25.2	Hackberry	Celtis occidentalis	No	Damaged	Multi-Trunk	Easement	Remove	0%	0.0
1774	7.2	Hackberry	Celtis occidentalis	No	Healthy		Easement	Remove	0%	0.0
1775	7.2	Hackberry	Celtis occidentalis	No	Healthy		Easement	Remove	0%	0.0
1776	15.6	Hackberry	Celtis occidentalis	No	Healthy	Multi-Trunk	Easement	Remove	0%	0.0
1777	10.8	Hackberry	Celtis occidentalis	No	Healthy		Right-Of-Way	Remove	0%	0.0
1778	15.6	Hackberry	Celtis occidentalis	No	Healthy	Multi-Trunk	Right-Of-Way	Remove	0%	0.0
1779	12.0	Hackberry	Celtis occidentalis	No	Healthy		Street	Remove	0%	0.0
1780	12.0	Hackberry	Celtis occidentalis	No	Healthy		Street	Remove	0%	0.0
1781	9.6	Hackberry	Celtis occidentalis	No	Healthy		Street	Remove	0%	0.0

Tree ID Number	Diameter at Breast Height (DBH) (inches)	Common Name	Scientific Name	Protected Tree?	Condition	Comment	Location	Remove or Remain	Mitigation Required, Percentage	Mitigation Required in Caliper Inches
1782	12.0	Hackberry	Celtis occidentalis	No	Healthy		Right-Of-Way	Remove	0%	0.0
1783	30.0	Hackberry	Celtis occidentalis	No	Healthy		Easement	Remove	0%	0.0
1784	12.0	Hackberry	Celtis occidentalis	No	Healthy		Easement	Remove	0%	0.0
1785	24.0	Hackberry	Celtis occidentalis	No	Healthy	Multi-Trunk	Lot	Remain	0%	0.0
1786	8.4	Hackberry	Celtis occidentalis	No	Healthy		Lot	Remain	0%	0.0
1787	10.8	Hackberry	Celtis occidentalis	No	Healthy		Lot	Remain	0%	0.0
1788	9.6	Hackberry	Celtis occidentalis	No	Healthy		Lot	Remain	0%	0.0
1789	7.2	Hackberry	Celtis occidentalis	No	Healthy		Lot	Remain	0%	0.0
1790	8.4	Hackberry	Celtis occidentalis	No	Healthy		Lot	Remain	0%	0.0
1791	31.2	Hackberry	Celtis occidentalis	No	Healthy	Multi-Trunk	Lot	Remain	0%	0.0
1792	12.0	Hackberry	Celtis occidentalis	No	Healthy		Lot	Remain	0%	0.0
1793	19.2	Hackberry	Celtis occidentalis	No	Damaged	Multi-Trunk	Lot	Remain	0%	0.0
1794	38.4	Hackberry	Celtis occidentalis	No	Healthy	Multi-Trunk	Lot	Remain	0%	0.0
1795	27.6	Hackberry	Celtis occidentalis	No	Healthy	Multi-Trunk	Lot	Remain	0%	0.0
1796	31.2	Hackberry	Celtis occidentalis	No	Healthy	Multi-Trunk	Lot	Remain	0%	0.0
1797	31.2	Hackberry	Celtis occidentalis	No	Healthy	Multi-Trunk	Lot	Remain	0%	0.0
1798	27.6	Hackberry	Celtis occidentalis	No	Healthy	Multi-Trunk	Lot	Remain	0%	0.0
1799	13.2	Hackberry	Celtis occidentalis	No	Healthy		Lot	Remain	0%	0.0
1800	9.6	Hackberry	Celtis occidentalis	No	Healthy		Lot	Remain	0%	0.0
1801	37.2	Hackberry	Celtis occidentalis	No	Healthy	Multi-Trunk	Open Space	Remain	0%	0.0
1802	15.6	Hackberry	Celtis occidentalis	No	Healthy	Multi-Trunk	Easement	Remain	0%	0.0
1803	22.8	Hackberry	Celtis occidentalis	No	Healthy	Multi-Trunk	Open Space	Remove	0%	0.0
1805	7.2	Hackberry	Celtis occidentalis	No	Healthy		Open Space	Remove	0%	0.0
1804	10.8	Hackberry	Celtis occidentalis	No	Healthy		Open Space	Remove	0%	0.0
1806	9.6	Hackberry	Celtis occidentalis	No	Healthy		Open Space	Remove	0%	0.0
1807	19.2	Hackberry	Celtis occidentalis	No	Healthy	Multi-Trunk	Open Space	Remove	0%	0.0
1808	19.2	Hackberry	Celtis occidentalis	No	Healthy	Multi-Trunk	Open Space	Remove	0%	0.0
1809	30.0	Hackberry	Celtis occidentalis	No	Healthy		Open Space	Remove	0%	0.0
1810	30.0	Hackberry	Celtis occidentalis	No	Healthy	Multi-Trunk	Open Space	Remove	0%	0.0
1811	7.2	Hackberry	Celtis occidentalis	No	Healthy		Open Space	Remove	0%	0.0
1812	9.6	Hackberry	Celtis occidentalis	No	Healthy		Easement	Remove	0%	0.0
1813	38.4	Hackberry	Celtis occidentalis	No	Healthy	Multi-Trunk	Easement	Remove	0%	0.0
1814	34.8	Hackberry	Celtis occidentalis	No	Healthy	Multi-Trunk	Street	Remove	0%	0.0
1815	32.4	Hackberry	Celtis occidentalis	No	Healthy	Multi-Trunk	Easement	Remove	0%	0.0
1816	15.6	Hackberry	Celtis occidentalis	No	Healthy	Multi-Trunk	Easement	Remove	0%	0.0
1817	36.0	Hackberry	Celtis occidentalis	No	Healthy	Multi-Trunk	Lot	Remove	0%	0.0
1818	31.2	Hackberry	Celtis occidentalis	No	Healthy	Multi-Trunk	Lot	Remove	0%	0.0
1819	16.8	Mesquite	Prosopis grandiflora	Yes	Healthy		Lot	Remove	100%	16.8
1820	13.2	Hackberry	Celtis occidentalis	No	Healthy		Lot	Remove	0%	0.0
1821	21.6	Hackberry	Celtis occidentalis	No	Healthy		Lot	Remove	0%	0.0
1822	7.2	Hackberry	Celtis occidentalis	No	Healthy		Lot	Remove	0%	0.0
1823	7.2	Hackberry	Celtis occidentalis	No	Healthy		Lot	Remove	0%	0.0
1824	14.4	Hackberry	Celtis occidentalis	No	Healthy		Lot	Remove	0%	0.0

Tree ID Number	Diameter at Breast Height (DBH) (inches)	Common Name	Scientific Name	Protected Tree?	Condition	Comment	Location	Remove or Remain	Mitigation Required, Percentage	Mitigation Required in Caliper Inches
1877	7.2	Cottonwood	Populus deltoides	Yes	Healthy		Lot	Remain	0%	0.0
1878	12.0	Cedar Elm	Ulmus crassifolia	Yes	Healthy		Lot	Remain	0%	0.0
1879	8.4	Cottonwood	Populus deltoides	Yes	Healthy		Lot	Remain	0%	0.0
1880	13.2	Cottonwood	Populus deltoides	Yes	Healthy		Lot	Remain	0%	0.0
1881	28.8	Cottonwood	Populus deltoides	Yes	Healthy		Lot	Remain	0%	0.0
1882	12.0	Cottonwood	Populus deltoides	Yes	Healthy		Lot	Remain	0%	0.0
1883	12.0	Cottonwood	Populus deltoides	Yes	Healthy		Lot	Remain	0%	0.0
1884	12.0	Cottonwood	Populus deltoides	Yes	Healthy		Lot	Remain	0%	0.0
1885	12.0	Cottonwood	Populus deltoides	Yes	Healthy		Lot	Remain	0%	0.0
1886	9.6	Cottonwood	Populus deltoides	Yes	Healthy		Lot	Remain	0%	0.0
1887	9.6	Cottonwood	Populus deltoides	Yes	Healthy		Lot	Remain	0%	0.0
1888	30.0	Cottonwood	Populus deltoides	Yes	Healthy	Multi-Trunk	Lot	Remain	0%	0.0
1889	7.2	Cottonwood	Populus deltoides	Yes	Healthy		Lot	Remain	0%	0.0
1890	24.0	Cottonwood	Populus deltoides	Yes	Healthy	Multi-Trunk	Lot	Remain	0%	0.0
1891	8.4	Weeping Willow	Salix babylonica	No	Healthy		Lot	Remain	0%	0.0
1892	9.6	Weeping Willow	Salix babylonica	No	Healthy		Lot	Remain	0%	0.0
1893	32.4	Cedar Elm	Ulmus crassifolia	Yes	Healthy	Multi-Trunk	Lot	Remain	0%	0.0
1894	54.0	Cedar Elm	Ulmus crassifolia	Yes	Healthy	Multi-Trunk	Lot	Remain	0%	0.0
1895	16.8	Cedar Elm	Ulmus crassifolia	Yes	Healthy	Multi-Trunk	Lot	Remain	0%	0.0
1896	9.6	Cedar Elm	Ulmus crassifolia	Yes	Healthy		Lot	Remain	0%	0.0
1897	49.2	Weeping Willow	Ulmus crassifolia	No	Healthy	Multi-Trunk	Lot	Remain	0%	0.0
1898	51.6	Cedar Elm	Ulmus crassifolia	Yes	Healthy	Multi-Trunk	Lot	Remain	0%	0.0
1899	8.4	Cottonwood	Populus deltoides	Yes	Healthy		Lot	Remain	0%	0.0
1900	19.2	Cedar Elm	Ulmus crassifolia	Yes	Healthy	Multi-Trunk	Lot	Remain	0%	0.0
1901	24.0	Cottonwood	Populus deltoides	Yes	Healthy	Multi-Trunk	Lot	Remain	0%	0.0
1902	9.6	Bois d'arc	Maculata pomifera	No	Healthy		Lot	Remain	0%	0.0
1903	24.0	Cottonwood	Populus deltoides	Yes	Healthy	Multi-Trunk	Lot	Remain	0%	0.0
1904	10.8	Cottonwood	Populus deltoides	Yes	Healthy		Lot	Remain	0%	0.0
1905	14.4	Cottonwood	Populus deltoides	Yes	Healthy		Lot	Remain	0%	0.0
1906	12.0	Cottonwood	Populus deltoides	Yes	Healthy		Lot	Remain	0%	0.0
1907	18.0	Cedar Elm	Ulmus crassifolia	Yes	Healthy	Multi-Trunk	Lot	Remain	0%	0.0
1908	13.2	Bois d'arc	Maculata pomifera	Yes	Healthy		Lot	Remain	0%	0.0
1909	27.6	Cottonwood	Populus deltoides	Yes	Healthy	Multi-Trunk	Lot	Remain	0%	0.0
1910	12.0	Cedar Elm	Ulmus crassifolia	Yes	Healthy		Lot	Remain	0%	0.0
1911	18.0	Cedar Elm	Ulmus crassifolia	Yes	Healthy		Lot	Remain	0%	0.0
1912	36.0	Bois d'arc	Maculata pomifera	Yes	Healthy	Multi-Trunk	Lot	Remain	0%	0.0
1914	8.4	Pecan	Carya illinoensis	Yes	Healthy		Lot	Remain	0%	0.0
1915	15.6	Pecan	Carya illinoensis	Yes	Healthy	Multi-Trunk	Lot	Remain	0%	0.0
1916	8.4	Pecan	Carya illinoensis	Yes	Healthy	Multi-Trunk	Lot	Remain	0%	0.0
1917	9.6	Cottonwood	Populus deltoides	Yes	Healthy	Multi-Trunk	Lot	Remain	0%	0.0
1913	12.0	Eastern Red Cedar	Juniperus virginiana	Yes	Healthy		Lot	Remain	0%	0.0
1918	14.4	Cedar Elm	Ulmus crassifolia	Yes	Healthy	Multi-Trunk	Lot	Remain	0%	0.0
1919	8.4	Post Oak	Quercus stellata	No	Healthy		Lot	Remain	0%	0.0
1920	9.6	Post Oak	Quercus stellata	No	Healthy		Lot	Remain	0%	0.0
1921	25.2	Post Oak	Quercus stellata	No	Healthy	Multi-Trunk	Lot	Remain	0%	0.0
1922	9.6	Post Oak	Quercus stellata	No	Healthy		Lot	Remain	0%	0.0
1923	9.6	Hackberry	Celtis occidentalis	No	Healthy		Lot	Remain	0%	0.0
1924	10.8	Cedar Elm	Ulmus crassifolia	Yes	Healthy		Lot	Remain	0%	0.0
1925	7.2	Hackberry	Celtis occidentalis	No	Healthy		Lot	Remain	0%	0.0
1926	9.6	Hackberry	Celtis occidentalis	No	Healthy		Lot	Remain	0%	0.0
1927	8.4	Cedar Elm	Ulmus crassifolia	Yes	Healthy		Open Space	Remain	0%	0.0
1928	7.2	Cedar Elm	Ulmus crassifolia	Yes	Healthy		Open Space	Remain	0%	0.0
4,492.3										163.2
Total Tree Population										Total Tree Replacement, caliper inches



TREE PROTECTION NOTES

- EXISTING TREES SHOWN TO REMAIN ARE TO BE PROTECTED DURING CONSTRUCTION. ORANGE COATED CHAINLINK FENCING (MIN. 4'-0" HEIGHT) SHALL BE INSTALLED AT THE DRIP LINE OF ALL TREES OR TREE GROUPS TO REMAIN. PARKING OF VEHICLES OR PERFORMING WORK WITHIN THESE AREAS OTHER THAN SHOWN ON THE PLAN, WILL NOT BE ALLOWED. THE TREE PROTECTION SHALL REMAIN DURING CONSTRUCTION. OTHER TREE PROTECTION MEASURES SHALL BE IN ACCORDANCE WITH THE CITY'S STANDARDS AND ORDINANCES.
- DISPOSAL OF ANY WASTE MATERIAL SUCH AS, BUT NOT LIMITED TO, PAINT, ASPHALT, OIL SOLVENTS, CONCRETE, MORTAR, ETC. WITHIN THE CANOPY AREA OF THE EXISTING TREES SHALL NOT BE ALLOWED.
- NO ATTACHMENTS OR WIRES OF ANY KIND, OTHER THAN THOSE OF A PROTECTIVE NATURE, SHALL BE ATTACHED TO ANY TREE.
- NO FILL OR EXCAVATION OF ANY NATURE SHALL OCCUR WITHIN THE DRIP LINE OF A TREE TO BE PRESERVED, UNLESS THERE IS A SPECIFIED WELL OR RETAINING WALL SHOWN ON THE GRADING PLAN.
- NO MATERIALS SHALL BE STORED WITHIN THE DRIP LINE AREA OF A TREE TO BE PRESERVED.

NOTES:
 1. FENCE TO BE MAINTAINED AND REPAIRED AS NEEDED DURING CONSTRUCTION.
 2. NO CONSTRUCTION TRAFFIC, GRADING, STORAGE OR WASTE DISPOSAL ALLOWED WITHIN THE FENCED AREA AROUND TREES.

NOT TO SCALE