**NOTICE OF**
**CITY OF CELINA**
**PLANNING AND ZONING COMMISSION**
**CELINA COUNCIL CHAMBERS**
**112 N. COLORADO STREET**
**TUESDAY, JUNE 20, 2017**
**5:30 P.M.**

# AGENDA

## I. CALL TO ORDER, ROLL CALL AND ANNOUNCE A QUORUM PRESENT:

## II. PLEDGE OF ALLEGIANCE:

## III. CONSENT AGENDA:

A. Consider and act upon approval of minutes from the Regular Planning and Zoning Commission Meeting on May 17, 2017.

## IV. DIRECTOR'S REPORT:

A. Report on City Council meeting items of May 9, 2017.

## V. AGENDA:

A. Consider and act upon a Final Plat for Glen Crossing Phase 1, being a ±41.814 acre tract of land situated in the Collin County School Land Survey, Abstract No. 167, Collin County, Texas, comprised of 159 residential lots, and four (4) open space/common areas. The property is located south of County Road 55 (Glendenning Parkway), and west of the BNSF Railroad, and east of Dallas North Tollway. (Glen Crossing Phase 1 Final Plat)

B. Consider and act upon a Final Plat for Bluewood Phase 1, being a ±103.03 acre tract of land situated in the John Cahill Survey, Abstract No. 171 and the Shelby Glass Survey, Abstract No. 346, and generally located on the north side of Ownsby Parkway, south of Choate Parkway and east of Carter Ranch, containing 337 residential lots, one (1) school lot, one (1) amenity center lot, and thirty-three (33) open space lots. (Bluewood Phase 1 Final Plat)

C. Consider and act upon a Construction Plat for Light Farms Brenham, being a ±26.15 acre tract of land situated in the Collin County School Land Survey No. 14, Abstract No. 167, and generally located north of County Road 5, south of County Road 51, east of the Burlington Northern Santa Fe Railroad, and west of Preston Road, containing 127 residential lots, and six (6) open space lots. (Light Farms Brenham Construction Plat)

D. Consider and act upon a Construction Plat for Light Farms Elementary School #2, Bidgewater Boulevard and Montgomery Lane, being a ±15.27 acre tract of land situated in the Collin County School Land Survey No. 14, Abstract No. 167, and generally located north of Frontier Parkway, south of Light Farms Way, west of the Burlington Northern Santa Fe Railroad, and east of Dallas North Tollway, containing one (1) non-residential lot, (Light Farms Brenham Construction Plat)

E. Consider and act upon a request for a Subdivision Ordinance Variance from Martin Marietta and Austin Bridge and Road to Section 10.03.122(g) Streets & Section 10.03.126(f)(1) Streets, to allow the current roadway to be constructed with methods and materials other than those required by city ordinance. This project is located at County Road 53 from Preston Road to County Road 1117. (Subdivision Ordinance Variance)

F. The Planning & Zoning Commission will conduct a public hearing to consider testimony and act upon a rezoning request for an approximately 15.471 acre tract of land from AG, Agricultural zoning district to PD, Planned Development zoning district with base zoning designations of HI, Heavy Industrial. The property is situated in the Collin County School Land #14 Survey, Abstract No. 167, Collin County, Texas. It is generally located north of Frontier Parkway to the west of the Burlington Northern Santa Fe Railroad, and on the east side of CR 51 (Prairie Crossing). (Stelzer Tract Rezoning)

G. The Planning & Zoning Commission will conduct a public hearing to consider testimony and act upon a consideration of proposed land use regulations for Wilson Creek Meadows Extraterritorial Jurisdiction Development Agreement. The property is ±105.94 acres situated in the Jonathan Westover Survey, Abstract No. 1030, and the Coleman Watson Survey, Abstract No. 945, Collin County, Texas. The property is in the City of Celina's ETJ, generally located south of Choate Parkway, north of Frontier Parkway, east of Preston Road, and west of Custer Road. (Wilson Creek Meadows ETJ Development Agreement)

H. The Planning & Zoning Commission will conduct a public hearing to consider testimony and act upon a rezoning request for an ±105.94 acre tract of land from AG, Agricultural zoning district to PD, Planned Development zoning district with base zoning designations of SF-R, single-family residential district. The property is situated in the Jonathan Westover Survey, Abstract No. 1030, and the Coleman Watson Survey, Abstract No. 945, Collin County, Texas. The property generally located south of Choate Parkway, north of Frontier Parkway, east of Preston Road, and west of Custer Road. (Wilson Creek Meadows Rezoning)

I. The Planning & Zoning Commission will conduct a public hearing to consider testimony and take action on a zoning amendment request for a ±96.712 acre tract of land to amend PD#45 - Planned Development #45 located in the W.H. Ratton Survey, Abstract No. 753 and the L.M. Boyd Survey, Abstract No. 48, Collin County, Texas. The property is generally located east of SH 289 (Preston Road), west of CR 97, north of CR 100 and south of CR 134. (Westgate 96)

J. Consider and act on a Construction Plat for Chalk Hill Phase 1, being ±40.769 acres of land situated in the George W. Eastes Survey, Abstract No. 299, and Wade H. Rattan Survey, Abstract No. 753 in the City of Celina, Collin County, Texas, containing 160 residential lots and four (4) open space lots. The property is generally located south of County Road 102, east of Preston Road, and north of County Road 134, and west of County Road 132. (Chalk Hill Construction Plat)

K. Consider and act on a Construction Plat for Sutton Fields North Phase 1 being a ±43.5 acre tract of land situated in the Thomas H. McIntyre Survey, Abstract No. 903, City of Celina, Denton County, containing 162 residential lots and six (6) non-residential lots. The property is generally located east of Farm-to-Market 1385, north of Crutchfield Road, south County Road 428, and west of Smiley Road. (Sutton Fields North Phase 1 Construction Plat)

**VI. <u>ADJOURNMENT</u>:**

"I, the undersigned authority do hereby certify that the Notice of Meeting was posted on the bulletin board at City Hall of the City of Celina, Texas, a place convenient and readily accessible to the general public at all times and said Notice was posted on the following date and time:

Friday, June 16, 2017 at _____ p.m. and remained so posted continuously for at least 72 hours proceeding the scheduled time of said meeting."

_____ _____

Helen-Eve Liebman, AICP Date of Notice
Director of Planning & Development Services
City of Celina, Texas

Celina City Hall is wheelchair accessible. Persons with disabilities who plan to attend this meeting and who may need auxiliary aids or services such as interpreters for persons who are deaf, or hearing impaired, or readers of large print, are requested to contact the City Secretary's Office at 972-382-2682, or fax 972-382-3736 at least two (2) working days prior to the meeting so that appropriate arrangements can be made.

**NOTICE OF**
**CITY OF CELINA**
**PLANNING AND ZONING COMMISSION**
**CELINA COUNCIL CHAMBERS**
**112 N. COLORADO STREET**
**MONDAY MAY 15, 2017**
**5:30 P.M.**

**MINUTES**

**I. CALL TO ORDER, ROLL CALL AND ANNOUNCE A QUORUM PRESENT:**

*Chairman Ousley called the meeting to order at 5:30 p.m.*
*Commisioners present: Shelby Barley, Scott Cromwell, Ben Hangartner, and Jace Ousley.*
*Commissioners absent: Mike Terry, Charles Haley, and Mitch Freeman*
*Staff present: Helen-Eve Liebman, Director of Planning & Development Services, Ben Rodriguez, Senior Planner, Robyn Miga, Planner*

**II. PLEDGE OF ALLEGIANCE:**

*Chairman Ousley led those present in the salute to the American and Texas flags.*

**III. CONSENT AGENDA:**

A. Consider and act upon approval of minutes from the Regular Planning and Zoning Commission Meeting on April 18, 2017.
*Commissioner Barley moved to approve the Consent Agenda.*
*Commissioner Cromwell seconded the motion.*
*Motion carried 4-yes; 0-no*

**IV. DIRECTOR'S REPORT:**

A. Report on City Council meeting items of May 9, 2017.
*Director of Planning and Development Services Helen-Eve Liebman spoke on the agenda items that went before City Council on May 9, 2017.*

**V. AGENDA:**

A. Consider and act on a Final Plat for Ace Hardware, being a ±1.734 acre tract of land situated in the Herrin Addition, Lot 1R, Block A and is generally located north and east of S. Oklahoma Street (Business 289), south of Cherry Wood Lane, and west of Preston Road (SH 289), Celina, Texas. (Ace Hardware)
*Commissioner Cromwell moved to approve the Final Plat for Ace Hardware.*
*Commissioner Barley seconded the motion.*
*Motion carried 4-yes; 0-no*

B. Consider and act on a Final Plat for Sutton Fields Major Improvements Right of Way and Doe Branch Regional Park, being a ±18.611 acre tract of land situated in the Freeman Wilkerson Survey, Abstract No. 1411, and Thomas B. Cox Survey, Abstract No. 309, City of Celina, Denton County, Texas, contained two (2) non-residential lots. The property is generally located south of Crutchfield Road, east of FM 1385, north of Parvin Road, and west of Smiley Road. (Sutton Fields ROW Final Plat)
*Commissioner Hangartner moved to approve the Final Plat for Sutton Fields ROW.*
*Commissioner Barley seconded the motion.*
*Motion carried 4-yes; 0-no*

C. Consider and act on a Final Plat for Sutton Fields Phase 1A, being a ±74.784 acre tract of land situated in the Freeman Wilkerson Survey, Abstract No. 1411, City of Celina, Denton, County, containing 318 residential lots and 10 non-residential lots. The property is generally located south of Crutchfield Road, east of FM 1385, north of Parvin Road, and west of Smiley Road. (Sutton Fields 1A Final Plat)
*Commissioner Barley moved to approve the Final Plat for Sutton Fields 1A.*
*Commissioner Hangartner seconded the motion.*
*Motion carried 4- yes; 0-no*

D. Consider and act on a Final Plat for Sutton Fields Phase 1B, being a ±50.470 acre tract of land situated in the Freeman Wilkerson Survey, Abstract No. 1411, Thomas B. Cox Survey, Abstract No. 309, Carrol Jackson Survey, Abstract No. 1546, and Jacob Rue Survey, Abstract No. 1109, City of Celina, Denton, County, containing 197 residential lots and 5 non-residential lots. The property is generally located south of Crutchfield Road, east of FM 1385, north of Parvin Road, and west of Smiley Road. (Sutton Fields 1B Final Plat)
*Commissioner Hangartner moved to approve the Final Plat for Sutton Fields 1B.*
*Commissioner Cromwell seconded the motion.*
*Motion carried 4-yes; 0-no*

E. Consider and act on a Final Plat for O'Dell Elementary, being a ±12 acre tract of land situated in the Shelby Glass Survey, Abstract No. 346, and the John Cahill Survey, Abstract 171, City of Celina, Collin County, containing one (1) lot. The property is generally located north of Punk Carter Parkway, and east of Palomino Lane. (O'Dell Elementary Final Plat)
*Commissioner Hangartner moved to approve the Final Plat for O'Dell Elementary.*
*Commissioner Cromwell seconded the motion.*
*Motion carried 4-yes; 0-no*

F. Consider and act on a Final Plat for Light Farms Way Extension and Doe Branch Regional Park, being ±87.51 acres of land situated in the John Ragsdale Survey, Abstract No. 734 and Collin County Land Survey No. 14, Abstract No. 167, Collin County, Texas, containing four (4) recreational lots, and one (1) amenity center lot. The property is generally located east of Dallas North Tollway, west of BNSF Railroad, and north of Frontier Parkway. (Light Farms Way Extension Final Plat)
*Commissioner Cromwell moved to approve the Final Plat for Light Farms Way.*
*Commissioner Barley seconded the motion.*
*Motion carried 4-yes; 0-no*

G. Conduct a public hearing to consider testimony and take action on a residential replat request on an ±.389 acre piece of land situated in the Celina Original Donation, block 8, lots 1B, 2B, 3B, 4, & 5B. The property is situated at the southeast corner of W. Maple St. and N. Ohio Drive. (Maple St. Replat)
*Commissioner Cromwell moved to approve the replat for Maple Street. .*
*Commissioner Barley seconded the motion.*
*Motion carried 4-yes; 0-no*

H. Conduct a public hearing to consider testimony and take action on the proposed rezoning of a piece of land from C-2, General Commercial, to PD, Planned Development with the base zoning designation of I-1, Light Industrial. The property is approximately 2.17 acres situated in the Collin County School Land Survey #15, Abstract No. 170 Collin County, Texas. The property is generally located north of E. Malone St., south of County Road 95, west of the BNSF Railroad, and east of Business 289 (Louisiana Dr.). (Staley Rezoning)
*Staff provided an overview of the rezoning request, detailing the two options for the planned development. The options included doing a 4' wainscot on the façade that faces the road, or building the new structure with 100 percent masonry, per current code, with the exception of sides that face the railroad. Staff explained that the applicant's preference would be Option 1, with a 4' wainscot on the side of the building that faced the roadway.*

*Dale Bainum, 3541 Heritage Trail, wanted to know if the recommendation for Option 1 would apply to the property should all of the building being demolished and a new owner decided to build a new structure.*

*Staff explained that the intent was for the regulations to only apply for the site as it is today.*
*Shea Kirkman, on behalf of the applicant presented the options outlined and explained that their preference was to do the 4' wainscot and noted that the applicant would also be painting the buildings to be more uniform.*

*Commissioner Barley moved to approve the rezoning request with the recommendation to utilize option 1.*
*Commissioner Cromwell seconded the motion.*
*Motion passed 4-yes; 0-no*

I. Conduct a public hearing to consider testimony and take action on a zoning amendment request for a ±96.712 acre tract of land to amend PD#45 - Planned Development #45 located in the W.H. Ratton Survey, Abstract No. 753 and the L.M. Boyd Survey, Abstract No. 48, Collin County, Texas. The property is generally located east of SH 289 (Preston Road), west of CR 97, north of CR 100 and south of CR 134. (Westgate 96)

*Per the applicant's request, the public hearing was continued to the June 20, 2017 Planning & Zoning Commission meeting.*
*Commissioner Barley moved to table the request.*
*Commissioner Cromwell seconded the motion.*
*Motion carried 4-yes; 0-no*

J. Conduct a public hearing to consider testimony and act on proposed amendments to the City's Code of Ordinances Chapter 14.05: Development Standards and Use Regulations, Division 5: Exterior Construction and Design Requirements. To amend masonry requirements for architectural features and amenity centers. (Exterior Masonry Requirements)
*Staff provided an overview of the ordinance amendment. Staff explained that this would cleanup the ordinance some to allow for alternative materials with amenity centers in subdivisions, and the other was for providing for alternative materials on single-family houses where it's difficult to incorporate brick without building a box style house.*
*Commissioner Cromwell moved to approve the amendment.*
*Commissioner Barley seconded the request.*
*Motion passed 4-yes; 0- no*

K. Consider and act on a Construction Plat for Chalk Hill Phase 1, being ±40.769 acres of land situated in the George W. Eastes Survey, Abstract No. 299, and Wade H. Rattan Survey, Abstract No. 753 in the City of Celina, Collin County, Texas, containing 160 residential lots and four (4) open space lots. The property is generally located south of County Road 102, east of Preston Road, and north of County Road 134, and west of County Road 132. (Chalk Hill Construction Plat)
*Staff recommended that this item be tabled to the June 20, 2017 Planning & Zoning Commission meeting.*
*Commissioner Cromwell moved to table the request.*
*Commissioner Barley seconded the request.*
*Motion passed 4-yes; 0- no*

## VI. ADJOURNMENT:

"I, the undersigned authority do hereby certify that the Notice of Meeting was posted on the bulletin board at City Hall of the City of Celina, Texas, a place convenient and readily accessible to the general public at all times and said Notice was posted on the following date and time:

Friday, May 12, 2017 at _____ p.m. and remained so posted continuously for at least 72 hours proceeding the scheduled time of said meeting.

_____ _____

Helen-Eve Liebman, AICP — Date of Notice
Director of Planning & Development Services
City of Celina, Texas

Celina City Hall is wheelchair accessible. Persons with disabilities who plan to attend this meeting and who may need auxiliary aids or services such as interpreters for persons who are deaf, or hearing impaired, or readers of large print, are requested to contact the City Secretary's Office at 972-382-2682, or fax 972-382-3736 at least two (2) working days prior to the meeting so that appropriate arrangements can be made.

**Planning & Development Services**
City of Celina, Texas

# Memorandum

| | |
|---|---|
| To: | **The Celina Planning and Zoning Commission** |
| From: | Helen-Eve Liebman, AICP, Director of Planning and Development Services |
| Meeting Date: | June 20, 2017 |
| Re: | Director's Report |

THE FOLLOWING ITEMS WERE CONSIDERED AT THE JUNE 13, 2017 CITY COUNCIL MEETING*:*

**Zoning Ordinance Amendment:**

- Approved an ordinance amendment for construction standards for amenity centers and single-family homes related to exterior building materials.

**Plat:**

- Approved a Final Plat for Light Farms Way Extension located east of Dallas North Tollway, west of BNSF Railroad, and north of Frontier Parkway.
- Approved a replat for Maple Street Unified Pentecostal Church. The property is situated at the southeast corner of W. Maple St. and N. Ohio Drive.
- Approved a Final Plat for Sutton Fields ROW. The property is generally located south of Crutchfield Road, east of FM 1385, north of Parvin Road, and west of Smiley Road.
- Approved a Final Plat for Sutton Fields Phase 1A. The property is generally located south of Crutchfield Road, east of FM 1385, north of Parvin Road, and west of Smiley Road.
- Approved a Final Plat for Sutton Fields Phase 1B. The property is generally located south of Crutchfield Road, east of FM 1385, north of Parvin Road, and west of Smiley Road.
- Approved a Final Plat for O'Dell Elementary School located north of Punk Carter Parkway, and east of Palomino Lane.
- Approved a Final Plat for Ace Hardware located south of Cherry Wood Lane, and west of Preston Road (SH289).

**Zoning:**

- Approved a Planned Development for Staley. The property is generally located north of Pecan Street, south of County Road 95, east of Business 289, and west of the BNSF Railroad.

**Planning & Development Services**
City of Celina, Texas

# Memorandum

| | |
|---|---|
| To: | **The Celina Planning and Zoning Commission** |
| CC: | Lance Vanzant, Interim City Manager<br>Helen-Eve Liebman, AICP, Director of Planning & Development Services |
| From: | Robyn Miga, Planner |
| Meeting Date: | June 20, 2017 |
| Re: | Glen Crossing Phase 1 Final Plat |

---

**Action Requested:**
Consider and act upon a Final Plat for Glen Crossing Phase 1, being a ±41.814 acre tract of land situated in the Collin County School Land Survey, Abstract No. 167, Collin County, Texas, comprised of 159 residential lots, and four (4) open space/common areas. The property is located south of County Road 55 (Glendenning Parkway), and west of the BNSF Railroad, and east of Dallas North Tollway. (Glen Crossing Phase 1 Final Plat)

**Background Information:**
Staff has reviewed the proposed Final Plat for Glen Crossing Phase 1, and the remaining comments are minor in nature and can be addressed prior to City Council approval July 11, 2017.

**Board Review/Citizen Input:**
N/A

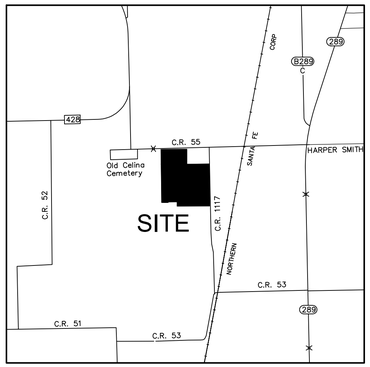
**Alternatives:**
N/A

**Financial Considerations:**
N/A

**Legal Review:**
N/A

**Supporting Documents:**
Plat Exhibit

**Staff Recommendation:**
Staff recommends approval pending all comments being addressed prior to City Council. The plat will not be filed until final acceptance from the Engineering Department.




VICINITY MAP 1 " = 2000 '

100 0 100 200 300 Feet

SCALE : 1 " = 100 '

**NOTES:**

1. Horizontal datum shown is based on Texas State Plane Coordinate System, North Central Zone NAD83 (U.S. Feet) with a combined scale factor of 1.000152710.

2. All corners are ½ inch iron rods set with a yellow cap stamped "Arthur Surveying Company", unless otherwise noted.

3. Selling a portion of this addition by metes and bounds is a violation of town ordinance and State law and is subject to fines and withholding of utilities and building permits.

4. It is my opinion that the property described hereon is partially located within the 100-year flood zone area according to the Federal Emergency Management Agency Flood Insurance Rate Map Community-Panel No. 480130 0120 J, present effective date of map, June 2, 2009, herein property situated within Zone "AE" and "X" (shaded and unshaded).

5. The undersigned does hereby covenant and agree that he or she or they shall construct upon the Fire Lane Easements, as dedicated as shown hereon, a hard surface in accordance with the City of Celina's paving standards for Fire Lane, and that he or she or they shall maintain the same in a state of good repair at all times and keep the same free and clear of any structures, fences, trees, shrubs, or other improvements or obstruction, including but not limited to the parking of motor vehicles, trailers, boats or other impediments to the accessibility of fire appurtenances. The maintenance of paving on the Fire Lane Easements is the responsibility of the owner, and the owner shall post and maintain appropriate signs in conspicuous places along such fire lanes, stating "FIRE LANE, NO PARKING". The local law enforcement agency(s) is hereby authorized to enforce parking regulations within the fire lanes, and to cause such fire lanes and utility easements to be maintained free and unobstructed at all times for fire department and emergency use.

6. The undersigned does hereby covenant and agree that the access easement may be utilized by any person or the general public for ingress and egress to public vehicular and pedestrian use and access, and for fire department and emergency use in, along, upon and across said premises, with the right and privilege at all times of the City of Celina, its agents, employees, workmen and representatives having ingress, egress, and regress in, along, upon and across said premises.

7. Ownership and maintenance of all open space "X" lots shall be the responsibility of the Home Owner's Association (HOA).

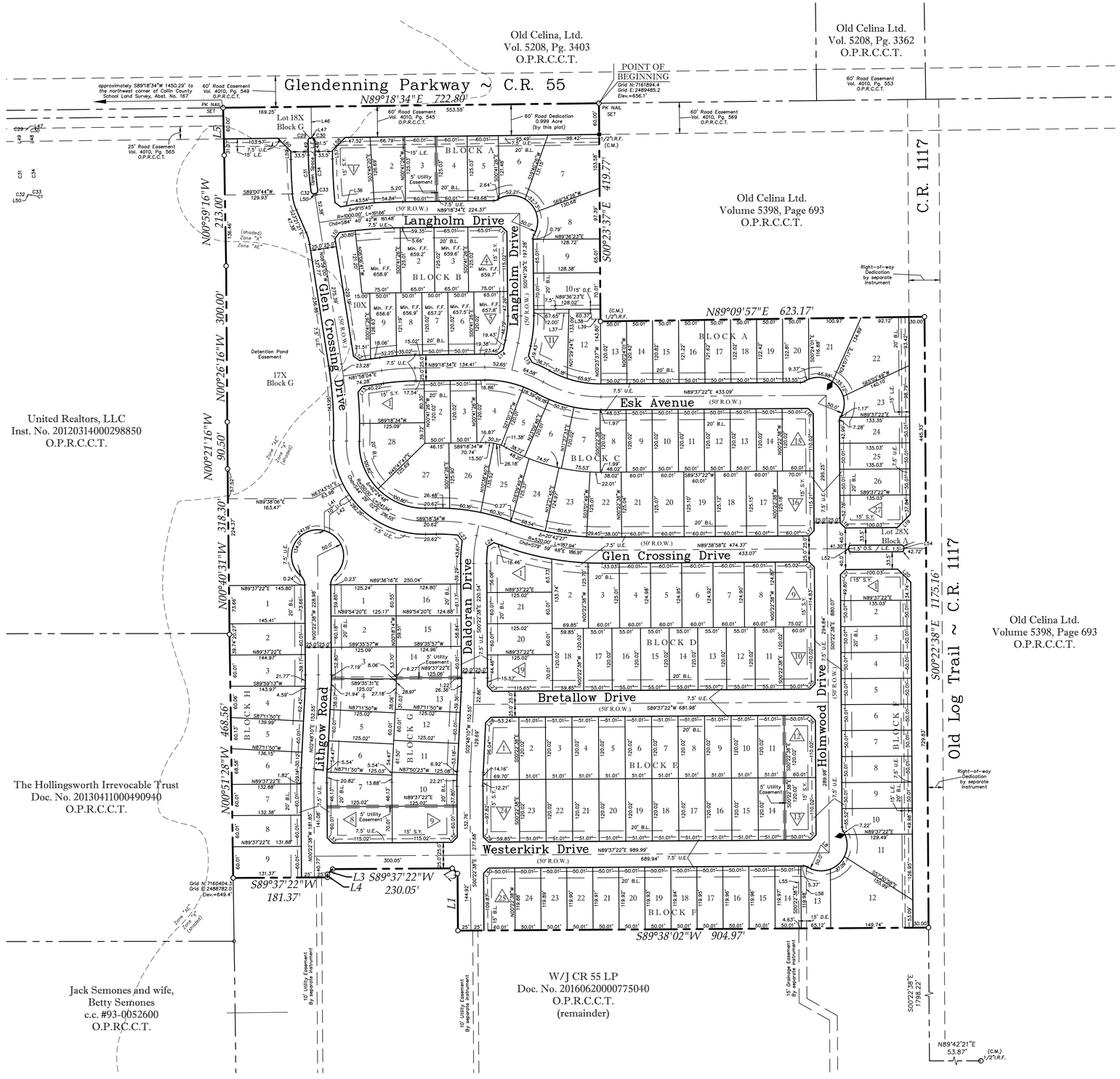
8. The Home Owner's Association (HOA) shall be solely responsible for the maintenance of the storm water detention system and storm drainage system in common area lots. The HOA shall further hold the City of Celina harmless from any damages to persons, to the owner's lot or any lot arising from such maintenance responsibility. The detention easement shown hereunder shall not create any affirmative duty to the City to repair, maintain, or correct any condition that exists or occurs due to the natural flow of storm water runoff including but not limited to, storm water overflow, bank erosion and sloughing, loss of vegetation and trees, bank subsidence and interference with structures, the City retains the right to enter upon these easements for public purposes.

9. There is a 7.5 foot wide Utility Easement dedicated along all rights-of-way.

**LEGEND:**

MON. - MONUMENT
I.R.S. - IRON ROD SET
I.R.F. - IRON ROD FOUND
FND. - FOUND
ROW - RIGHT-OF-WAY
CM - CONTROL MONUMENT
POB - POINT OF BEGINNING
B.L. - BUILDING LINE
S.Y. - SIDE YARD
U.E. - UTILITY EASEMENT
L.E. - LANDSCAPE EASEMENT
V.E. - VISIBILITY EASEMENT
O.S. - OPEN SPACE
A.S.C. - ARTHUR SURVEYING COMPANY
D.R.C.C.T. - DEED RECORDS, COLLIN COUNTY, TEXAS
O.P.R.C.C.T. - OFFICIAL PUBLIC RECORDS, COLLIN COUNTY, TEXAS
P.R.C.C.T. - PLAT RECORDS, COLLIN COUNTY, TEXAS
MIN. F.F. - MINIMUM FINISH FLOOR

♦ - DENOTES STREET NAME CHANGE
○ - 1/2" IRON ROD SET CAPPED "ASC" UNLESS OTHERWISE DENOTED
△ - INDICATES ORIENTATION OF CORNER LOT




| Line Table | | |
|---|---|---|
| Line | Direction | Length |
| L1 | N00°22'38"W | 109.86' |
| L2 | N45°22'38"W | 14.14' |
| L3 | S44°37'22"W | 14.14' |
| L4 | S00°22'38"E | 5.71' |
| L5 | N01°20'16"W | 91.37' |
| L6 | S44°18'34"W | 21.92' |
| L7 | S44°37'22"W | 21.92' |
| L8 | S45°29'28"E | 21.88' |
| L9 | N52°54'23"W | 13.67' |
| L10 | N36°25'31"E | 14.05' |
| L11 | S45°41'26"E | 14.14' |
| L12 | N53°28'58"W | 14.25' |
| L13 | N38°23'02"E | 14.49' |
| L14 | S54°16'25"W | 14.97' |
| L15 | N28°50'29"W | 14.97' |
| L16 | S45°22'38"E | 14.14' |
| L17 | S44°38'10"W | 14.14' |
| L18 | N45°21'50"W | 14.15' |
| L19 | S44°38'10"W | 35.35' |
| L20 | S45°21'50"E | 35.36' |
| L21 | N44°38'10"E | 14.14' |
| L22 | S45°21'50"E | 14.15' |
| L23 | S36°36'42"E | 13.80' |
| L24 | N58°03'48"E | 13.18' |
| L25 | S44°37'22"W | 14.14' |
| L26 | S45°22'38"E | 14.14' |
| L27 | N44°15'17"W | 13.86' |
| L28 | N46°12'46"E | 14.53' |
| L29 | N45°22'38"W | 14.14' |
| L30 | N44°37'22"E | 14.14' |
| L31 | S44°37'22"W | 14.14' |
| L32 | S44°37'22"W | 14.14' |
| L33 | N45°22'38"W | 14.14' |
| L34 | N11°57'31"E | 20.32' |
| L35 | S12°42'55"W | 53.18' |
| L36 | S80°10'48"W | 21.68' |
| L37 | N89°36'23"E | 110.83' |
| L38 | N00°00'00"E | 11.78' |
| L39 | S89°36'23"W | 17.27' |
| L40 | N00°00'00"E | 35.78' |
| L41 | N54°54'53"E | 58.55' |
| L42 | S54°54'53"W | 53.50' |
| L43 | S00°00'00"E | 34.45' |
| L44 | S89°56'32"W | 1461.11' |
| L45 | S89°56'32"W | 1461.11' |
| L46 | S00°41'26"E | 60.00' |
| L47 | N89°18'34"E | 3.00' |
| L48 | S00°41'26"E | 27.94' |
| L49 | S00°41'26"E | 27.94' |
| L50 | S81°28'51"W | 3.00' |
| L51 | N89°38'58"E | 96.02' |
| L52 | S00°21'02"E | 3.00' |
| L53 | N89°38'58"E | 96.02' |
| L54 | N00°21'02"W | 3.00' |
| L55 | S00°14'43"E | 119.98' |
| L56 | S00°14'43"E | 119.06' |
| L57 | N00°41'26"W | 16.07' |
| L58 | N00°18'34"E | 35.36' |
| L59 | N00°41'26"W | 16.07' |
| L60 | N45°41'26"W | 35.36' |

| Curve Table | | | | |
|---|---|---|---|---|
| Curve | Radius | Length | Delta | Chord |
| C1 | 546.00' | 3.95' | 000°24'51" | N08°43'34"W 3.95' |
| C2 | 799.00' | 148.60' | 010°39'22" | N03°36'19"W 148.39' |
| C3 | 375.00' | 137.76' | 021°02'51" | N80°10'00"W 136.98' |
| C4 | 225.00' | 52.64' | 013°24'20" | N06°00'45"E 52.52' |
| C5 | 500.00' | 64.07' | 007°20'30" | S85°38'19"W 64.02' |
| C6 | 225.00' | 117.23' | 029°51'09" | N75°45'51"W 115.91' |
| C7 | 225.00' | 116.00' | 029°32'21" | S75°36'27"E 114.72' |
| C8 | 250.00' | 53.82' | 012°20'08" | S05°47'27"W 53.72' |
| C9 | 500.00' | 27.75' | 003°10'47" | N01°12'46"E 27.75' |
| C10 | 500.00' | 27.75' | 003°10'47" | S01°12'46"W 27.75' |
| C11 | 500.00' | 27.75' | 003°10'47" | S01°12'46"W 27.75' |
| C12 | 500.00' | 27.75' | 003°10'47" | N01°12'46"E 27.75' |
| C13 | 960.00' | 83.85' | 005°00'15" | S03°11'33"E 83.82' |
| C14 | 1040.00' | 66.20' | 003°38'50" | S02°30'51"E 66.19' |
| C15 | 95.50' | 31.70' | 019°01'05" | S13°50'48"E 31.55' |
| C16 | 95.50' | 24.04' | 014°25'21" | N16°08'40"W 23.98' |
| C17 | 80.00' | 41.68' | 029°51'09" | N75°45'51"W 41.21' |
| C18 | 370.00' | 190.76' | 029°32'21" | S75°36'27"E 188.65' |
| C19 | 15.50' | 8.45' | 031°14'40" | N73°41'14"E 8.35' |
| C20 | 15.50' | 8.45' | 031°14'40" | S14°55'54"W 8.35' |
| C21 | 15.50' | 8.45' | 031°14'40" | N74°00'02"E 8.35' |
| C22 | 15.50' | 8.45' | 031°14'40" | S15°14'42"W 8.35' |
| C23 | 15.50' | 8.45' | 031°14'40" | S15°59'58"E 8.35' |
| C24 | 15.50' | 8.45' | 031°14'40" | N74°45'18"W 8.35' |
| C25 | 349.98' | 19.42' | 003°10'47" | S01°12'46"W 19.42' |
| C26 | 650.00' | 35.24' | 003°06'24" | N01°14'58"E 35.24' |
| C27 | 25.00' | 21.03' | 048°11'19" | N24°28'17"W 20.41' |
| C28 | 25.00' | 21.03' | 048°11'27" | S23°43'06"W 20.41' |
| C29 | 5.00' | 7.85' | 090°00'00" | S44°18'34"W 7.07' |
| C30 | 5.00' | 7.85' | 090°00'00" | N45°41'26"W 7.07' |
| C31 | 552.50' | 70.45' | 007°18'19" | S04°20'35"E 70.40' |
| C32 | 5.00' | 7.90' | 090°31'24" | S53°15'27"W 7.10' |
| C33 | 5.00' | 7.78' | 089°06'19" | N36°55'46"E 7.02' |
| C34 | 539.50' | 68.79' | 007°18'21" | S04°20'36"E 68.75' |
| C35 | 5.00' | 7.85' | 090°00'00" | S44°38'58"W 7.07' |
| C36 | 5.00' | 7.85' | 090°00'00" | S45°21'02"E 7.07' |
| C37 | 5.00' | 7.85' | 090°00'00" | N44°38'58"E 7.07' |
| C38 | 5.00' | 7.85' | 090°00'00" | N44°38'58"E 7.07' |
| C39 | 5.00' | 7.85' | 090°00'00" | N45°21'02"W 7.07' |

# FINAL PLAT

## GLEN CROSSING, PHASE 1

Being 159 Residential Lots and
being 4 Open Space Lots
41.814 Acres out of the
Collin County School Land Survey, Abst. No. 167
City of Celina, Collin County, Texas

-- 2017 --

1/2

**OWNER**
W/J CR 55 LP
600 N. Pearl Street, Suite 650
Dallas, TX 75201
Phone:
Contact:

**ENGINEER**
KIRKMAN ENGINEERING
4821 Merlot Avenue, Suite 210
Grapevine, TX 76051
Phone: (817) 488-4960
Contact: Patrick Filson


Arthur Surveying Co., Inc.
Professional Land Surveyors
(972) 221-9439 ~ Fax (972) 221-4675
220 Elm Street, Suite 200 ~ P.O. Box 54
Lewisville, Texas 75067 ~ TBPN No: 10063800
Established 1986
www.arthursurveying.com


DRAWN BY: Jav DATE: 07/29/16 SCALE: 1"=100' CHECKED BY: D.L.A. ASC NO.: 1504238-

**State of Texas §**
**§ Owner's Certificate and Dedication**
**County of Collin §**

**WHEREAS W/J CR 55 LP** is the owner of all that certain lot, tract or parcel of land situated in the Collin County School Land Survey, Abstract Number 167, City of Celina, Collin County, Texas, and being a part of that certain tract of land described by deed to W/J CR 55 LP, recorded under Document Number 20160620000775040 of the Official Public Records of Collin County, Texas, and being more particularly described as follows:

**BEGINNING** at a PK Nail set for the most north northeast corner of said W/J tract, being the northwest corner of that certain tract of land described by deed to Old Celina Ltd., recorded in Volume 5398, Page 693 of the Official Public Records of Collin County, Texas, being in the south line of that certain tract of land described by deed to Old Celina Ltd, recorded in Volume 5208, Page 3403 of the Official Public Records of Collin County, Texas, and being within County Road 55 (CR 55);

**THENCE** South 00 degrees 23 minutes 37 seconds East, with the common line of said W/J tract and said Old Celina tract, a distance of 419.77 feet to a ½ inch iron rod found for corner;

**THENCE** North 89 degrees 09 minutes 57 seconds East, continuing with the common line of said W/J tract and said Old Celina tract, a distance of 623.17 feet to a ½ inch iron rod with a yellow cap stamped *"ARTHUR SURVEYING COMPANY" (ASC)* set for corner, said point being within County Road 1117 (CR 1117);

**THENCE** South 00 degrees 22 minutes 38 seconds East, within said CR 1117, a distance of 1175.16 feet to a ½ inch iron rod with a yellow cap stamped *"ASC"* set for corner;

**THENCE** South 89 degrees 38 minutes 02 seconds West, within said W/J tract, a distance of 904.97 feet to a ½ inch iron rod with a yellow cap stamped *"ASC"* set for corner;

**THENCE** North 00 degrees 22 minutes 38 seconds West, within said W/J tract, a distance of 109.86 feet to a ½ inch iron rod with a yellow cap stamped *"ASC"* set for corner;

**THENCE** North 45 degrees 22 minutes 38 seconds West, continuing within said W/J tract, a distance of 14.14 feet to a ½ inch iron rod with a yellow cap stamped *"ASC"* set for corner;

**THENCE** South 89 degrees 37 minutes 22 seconds West, continuing within said W/J tract, a distance of 230.05 feet to a ½ inch iron rod with a yellow cap stamped *"ASC"* set for corner;

**THENCE** South 44 degrees 37 minutes 22 seconds West, continuing within said W/J tract, a distance of 14.14 feet to a ½ inch iron rod with a yellow cap stamped *"ASC"* set for corner;

**THENCE** South 00 degrees 22 minutes 38 seconds East, continuing within said W/J tract, a distance of 5.71 feet to a ½ inch iron rod with a yellow cap stamped *"ASC"* set for corner;

**THENCE** South 89 degrees 37 minutes 22 seconds West, continuing within said W/J tract, a distance of 181.37 feet to a ½ inch iron rod with a yellow cap stamped *"ASC"* set for corner in the west line of said W/J tract and being in the east line of that certain tract of land described by deed to The Hollingsworth Irrevocable Trust, recorded under Document Number 20130411000490940 of the Official Public Records of Collin County, Texas;

**THENCE** North 00 degrees 51 minutes 28 seconds West, with the common line of said W/J tract and said Trust tract, a distance of 468.56 feet to a ½ inch iron rod with a yellow cap stamped *"ASC"* set for the northeast corner of said Trust tract and the southeast corner of that certain tract of land described by deed to United Realtors, LLC, recorded under Instrument Number 20120314000298850 of the Official Public Records of Collin County, Texas;

**THENCE** North 00 degrees 40 minutes 31 seconds West, with the common line of said W/J tract and said United Realtors tract, a distance of 318.30 feet to a ½ inch iron rod with a yellow cap stamped *"ASC"* set for corner;

**THENCE** North 00 degrees 21 minutes 16 seconds West, continuing with the common line of said W/J tract and said United Realtors tract, a distance of 90.50 feet to a ½ inch iron rod with a yellow cap stamped *"ASC"* set for corner;

**THENCE** North 00 degrees 26 minutes 16 seconds West, continuing with the common line of said W/J tract and said United Realtors tract, a distance of 300.00 feet to a ½ inch iron rod with a yellow cap stamped *"ASC"* set for corner;

**THENCE** North 00 degrees 59 minutes 16 seconds West, continuing with the common line of said W/J tract and said United Realtors tract, a distance of 213.00 feet to a ½ inch iron rod with a yellow cap stamped *"ASC"* set for corner;

**THENCE** North 01 degrees 20 minutes 16 seconds West, continuing with the common line of said W/J tract and said United Realtors tract, a distance of 91.37 feet to a PK Nail set in asphalt road for the common north corner of said W/J tract and said United Realtors tract, being in the south line of said Old Celina tract (V.5208/P.3403), and being within said CR 55;

**THENCE** North 89 degrees 18 minutes 34 seconds East, within said CR 55, a distance of 722.80 feet to the **POINT OF BEGINNING**, and containing 41.814 acres of land, more or less

## NOW, therefore, know all men by these presents:

**THAT W/J CR 55 LP**, acting herein by and through its duly authorized officers, does hereby certify and adopt this plat designating the herein above described property as **GLEN CROSSING, PHASE I**, and does hereby dedicate, in fee simple, to the public use forever, the streets, rights-of-way, and other public improvements shown thereon. The streets and alleys, if any, are dedicated for street purposes. The easements and public use areas, as shown, are dedicated for the public use forever, for the purposes indicated on this plat. No buildings, fences, trees, shrubs or other improvements or growths shall be constructed or placed upon, over or across the easements as shown, except that landscape improvements may be placed on landscape easements, if approved by the city council of the City of Celina. In addition, utility easements may also be used for the mutual use and accommodation of all public utilities desiring to use or using the same unless the easement limits the use to particular utilities, said use by public utilities being subordinate to the public's and City of Celina's use thereof. The City of Celina and public utility entities shall have the right to remove and keep removed all or parts of any buildings, fences, trees, shrubs or other improvements or growths which may in any way endanger or interfere with the construction, maintenance, or efficiency of their respective systems in said easements. The City of Celina and public utility entities shall at all times have the full right of ingress and egress to or from their respective easements for the purpose of constructing, reconstructing, inspecting, patrolling, maintaining, reading meters, and adding to or removing all or parts of their respective systems without the necessity at any time procuring permission from anyone.

This plat is made subject to the following Reservation: For grantor and Grantor's Heirs, Successors, and assigns Forever: A Reservation of oil, gas, and other minerals in and under that may be produced from the property.

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

WITNESS MY HAND AND SEAL OF OFFICE, this _____ day of _____, 2017.

For: **W/J CR 55 LP, LP, a Texas limited partnership**
By: **W/J Celina, GP, LLC, a Texas limited liability company, its general partner.**

By:_____
Christopher C. Jackson, Vice President

**State of Texas §**
**County of Collin §**

BEFORE ME, the undersigned, a Notary Public in and for the State of Texas, 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 as for the purpose and consideration therein expressed, and in the capacity therein stated.

GIVEN UNDER MY HAND AND SEAL OF OFFICE on the _____ day of _____, 2017

_____
Notary Public in and for the State of Texas

| Lot and Block Analysis | | | |
|---|---|---|---|
| Lot | Block | Square Feet | Acreage |
| 1 | A | 9,378 | 0.215 |
| 2 | A | 7,959 | 0.183 |
| 3 | A | 7,503 | 0.172 |
| 4 | A | 7,503 | 0.172 |
| 5 | A | 7,491 | 0.172 |
| 6 | A | 8,673 | 0.199 |
| 7 | A | 15,396 | 0.353 |
| 8 | A | 9,187 | 0.211 |
| 9 | A | 8,357 | 0.192 |
| 10 | A | 8,976 | 0.206 |
| 11 | A | 8,183 | 0.188 |
| 12 | A | 8,789 | 0.202 |
| 13 | A | 6,013 | 0.138 |
| 14 | A | 6,032 | 0.138 |
| 15 | A | 6,052 | 0.139 |
| 16 | A | 6,072 | 0.139 |
| 17 | A | 6,092 | 0.140 |
| 18 | A | 6,112 | 0.140 |
| 19 | A | 6,132 | 0.141 |
| 20 | A | 6,108 | 0.140 |
| 21 | A | 8,638 | 0.198 |
| 22 | A | 14,874 | 0.341 |
| 23 | A | 8,875 | 0.204 |
| 24 | A | 6,749 | 0.155 |
| 25 | A | 6,752 | 0.155 |
| 26 | A | 6,752 | 0.155 |
| 27 | A | 8,118 | 0.186 |
| 28X | A | 1,357 | 0.031 |
| 1 | B | 9,985 | 0.229 |
| 2 | B | 8,128 | 0.187 |
| 3 | B | 8,128 | 0.187 |
| 4 | B | 9,328 | 0.214 |
| 5 | B | 7,468 | 0.171 |
| 6 | B | 6,002 | 0.138 |
| 7 | B | 6,002 | 0.138 |
| 8 | B | 6,016 | 0.138 |
| 9 | B | 6,182 | 0.142 |
| 10X | B | 9,674 | 0.222 |
| 1 | C | 9,662 | 0.222 |
| 2 | C | 6,002 | 0.138 |
| 3 | C | 6,002 | 0.138 |
| 4 | C | 8,392 | 0.193 |
| 5 | C | 6,281 | 0.144 |
| 6 | C | 7,493 | 0.172 |
| 7 | C | 7,557 | 0.173 |
| 8 | C | 6,002 | 0.138 |
| 9 | C | 6,002 | 0.138 |
| 10 | C | 6,002 | 0.138 |
| 11 | C | 6,002 | 0.138 |
| 12 | C | 6,002 | 0.138 |
| 13 | C | 6,002 | 0.138 |
| 14 | C | 6,002 | 0.138 |
| 15 | C | 7,153 | 0.164 |
| 16 | C | 8,716 | 0.200 |
| 17 | C | 7,511 | 0.172 |
| 18 | C | 7,509 | 0.172 |
| 19 | C | 7,508 | 0.172 |
| 20 | C | 7,506 | 0.172 |
| 21 | C | 7,504 | 0.172 |
| 22 | C | 7,969 | 0.183 |
| 23 | C | 8,806 | 0.202 |
| 24 | C | 8,048 | 0.185 |
| 25 | C | 8,701 | 0.200 |
| 26 | C | 9,500 | 0.218 |
| 27 | C | 12,155 | 0.279 |
| 28 | C | 10,995 | 0.252 |
| 1 | D | 9,902 | 0.227 |
| 2 | D | 9,008 | 0.207 |
| 3 | D | 7,508 | 0.172 |
| 4 | D | 7,501 | 0.172 |
| 5 | D | 7,499 | 0.172 |
| 6 | D | 7,497 | 0.172 |
| 7 | D | 7,496 | 0.172 |
| 8 | D | 7,494 | 0.172 |
| 9 | D | 9,316 | 0.214 |
| 10 | D | 7,153 | 0.152 |
| 11 | D | 6,602 | 0.152 |
| 12 | D | 6,602 | 0.152 |
| 13 | D | 6,602 | 0.152 |
| 14 | D | 6,602 | 0.152 |
| 15 | D | 6,602 | 0.152 |
| 16 | D | 6,602 | 0.152 |
| 17 | D | 6,602 | 0.152 |
| 18 | D | 7,183 | 0.165 |
| 19 | D | 8,709 | 0.200 |
| 20 | D | 7,503 | 0.172 |
| 21 | D | 7,503 | 0.172 |

| Lot and Block Analysis | | | |
|---|---|---|---|
| Lot | Block | Square Feet | Acreage |
| 1 | E | 7,939 | 0.182 |
| 2 | E | 6,122 | 0.141 |
| 3 | E | 6,122 | 0.141 |
| 4 | E | 6,122 | 0.141 |
| 5 | E | 6,122 | 0.141 |
| 6 | E | 6,122 | 0.141 |
| 7 | E | 6,122 | 0.141 |
| 8 | E | 6,122 | 0.141 |
| 9 | E | 6,122 | 0.141 |
| 10 | E | 6,122 | 0.141 |
| 11 | E | 6,122 | 0.141 |
| 12 | E | 7,153 | 0.164 |
| 13 | E | 7,153 | 0.164 |
| 14 | E | 6,122 | 0.141 |
| 15 | E | 6,122 | 0.141 |
| 16 | E | 6,122 | 0.141 |
| 17 | E | 6,122 | 0.141 |
| 18 | E | 6,122 | 0.141 |
| 19 | E | 6,122 | 0.141 |
| 20 | E | 6,122 | 0.141 |
| 21 | E | 6,122 | 0.141 |
| 22 | E | 6,122 | 0.141 |
| 23 | E | 6,122 | 0.141 |
| 24 | E | 8,333 | 0.191 |
| 1 | F | 7,033 | 0.161 |
| 2 | F | 6,752 | 0.155 |
| 3 | F | 6,752 | 0.155 |
| 4 | F | 6,752 | 0.155 |
| 5 | F | 6,752 | 0.155 |
| 6 | F | 6,752 | 0.155 |
| 7 | F | 6,752 | 0.155 |
| 8 | F | 6,752 | 0.155 |
| 9 | F | 6,752 | 0.155 |
| 10 | F | 6,717 | 0.154 |
| 11 | F | 10,922 | 0.251 |
| 12 | F | 15,822 | 0.363 |
| 13 | F | 7,238 | 0.166 |
| 14 | F | 6,000 | 0.138 |
| 15 | F | 5,999 | 0.138 |
| 16 | F | 5,999 | 0.138 |
| 17 | F | 5,998 | 0.138 |
| 18 | F | 5,998 | 0.138 |
| 19 | F | 5,997 | 0.138 |
| 20 | F | 5,997 | 0.138 |
| 21 | F | 5,997 | 0.138 |
| 22 | F | 5,996 | 0.138 |
| 23 | F | 5,996 | 0.138 |
| 24 | F | 5,995 | 0.138 |
| 25 | F | 7,144 | 0.164 |
| 1 | G | 7,538 | 0.173 |
| 2 | G | 7,489 | 0.172 |
| 3 | G | 7,613 | 0.175 |
| 4 | G | 7,830 | 0.180 |
| 5 | G | 7,503 | 0.172 |
| 6 | G | 7,503 | 0.172 |
| 7 | G | 7,937 | 0.182 |
| 8 | G | 8,703 | 0.200 |
| 9 | G | 8,703 | 0.200 |
| 10 | G | 7,851 | 0.180 |
| 11 | G | 7,602 | 0.175 |
| 12 | G | 7,503 | 0.172 |
| 13 | G | 7,938 | 0.182 |
| 14 | G | 7,498 | 0.172 |
| 15 | G | 7,392 | 0.170 |
| 16 | G | 7,595 | 0.174 |
| 17X | G | 176,389 | 4.049 |
| 18X | G | 1,377 | 0.032 |
| 1 | H | 10,726 | 0.246 |
| 2 | H | 8,714 | 0.200 |
| 3 | H | 8,748 | 0.201 |
| 4 | H | 9,014 | 0.207 |
| 5 | H | 8,285 | 0.190 |
| 6 | H | 8,695 | 0.200 |
| 7 | H | 7,959 | 0.183 |
| 8 | H | 7,929 | 0.182 |
| 9 | H | 7,899 | 0.181 |

**State of Texas §**
**County of Denton §**

That I, Douglas L. Arthur, do hereby certify that I prepared this plat from an actual and accurate survey of the land and that the corner monuments shown thereon as "SET" were properly placed under my supervision in accordance with the subdivision ordinance of the City of Celina, Texas.

**PRELIMINARY**
THIS DOCUMENT SHALL NOT BE RECORDED FOR ANY PURPOSE AND SHALL NOT BE VIEWED OR RELIED UPON AS A FINAL SURVEY DOCUMENT
DATED 5/22/2017

_____
Douglas L. Arthur, R.P.L.S.
Number 4357

**State of Texas §**
**County of Denton §**

BEFORE ME, the undersigned, a Notary Public in and for the State of Texas, on this day personally appeared Douglas L. Arthur, known to me to be the person whose name is subscribed to the foregoing instrument and acknowledged to me that he executed the same as for the purpose and consideration therein expressed, and in the capacity therein stated.

GIVEN UNDER MY HAND AND SEAL OF OFFICE on the _____ day of _____, 2017.

_____
Notary Public in and for the State of Texas

**PROPERTY LOCATION STATEMENT:**

This property is located in the corporate limits of the City of Celina, Collin County, Texas.

_____ _____
Signature of Mayor Date of Approval

ATTEST:

_____ _____
City Secretary Date

**CERTIFICATE OF APPROVAL**

Approved for preparation of Final Plat following construction of all public improvements (or appropriate sureties thereof) necessary for the subdivision shown on this plat.

Recommended by: Planning and Zoning Commission
City of Celina, Texas

_____ _____
Signature of Chairperson Date of Recommendation

Approved by: City Council
City of Celina, Texas

_____ _____
Signature of Mayor Date of Approval

ATTEST:

_____ _____
City Secretary Date

**OWNER**
W/J CR 55 LP
600 N. Pearl Street, Suite 650
Dallas, TX 75201
Phone:
Contact:

**ENGINEER**
KIRKMAN ENGINEERING
4821 Merlot Avenue, Suite 210
Grapevine, TX 76051
Phone: (817) 488-4960
Contact: Patrick Filson

Arthur Surveying Co., Inc.
Professional Land Surveyors
(972) 221-9430 ~ Fax (972) 221-4675
220 Elm Street, Suite 200 ~ P.O. Box 54
Lewisville, Texas 75067 ~ TFRN No: 10063800
Established 1986
www.arthursurveying.com

# FINAL PLAT
## GLEN CROSSING, PHASE 1
Being 159 Residential Lots and
being 4 Open Space Lots
41.814 Acres out of the
Collin County School Land Survey, Abst. No. 167
City of Celina, Collin County, Texas
-- 2017 --



DRAWN BY: Jav DATE: 07/29/16 SCALE: 1"=100' CHECKED BY: D.L.A. ASC NO.: 1504238-

**Planning & Development Services**
City of Celina, Texas

# Memorandum

| | |
|---|---|
| To: | **The Celina Planning and Zoning Commission** |
| CC: | Lance Vanzant Interim City Manager<br>Helen-Eve Liebman, AICP, Director of Planning & Development Services |
| From: | Robyn Miga, Planner |
| Meeting Date: | June 20, 2017 |
| Re: | Bluewood Phase 1 Final Plat |

---

**Action Requested:**
Consider and act upon a Final Plat for Bluewood Phase 1, being a ±103.03 acre tract of land situated in the John Cahill Survey, Abstract No. 171 and the Shelby Glass Survey, Abstract No. 346, and generally located on the north side of Ownsby Parkway, south of Choate Parkway and east of Carter Ranch, containing 337 residential lots, one (1) school lot, one (1) amenity center lot, and thirty-three (33) open space lots. (Bluewood Phase 1 Final Plat)

**Background Information:**
Staff has reviewed the proposed Final Plat for Bluewood Phase 1, and the remaining comments are minor in nature and can be addressed prior to City Council approval July 11, 2017.

**Board Review/Citizen Input:**
N/A

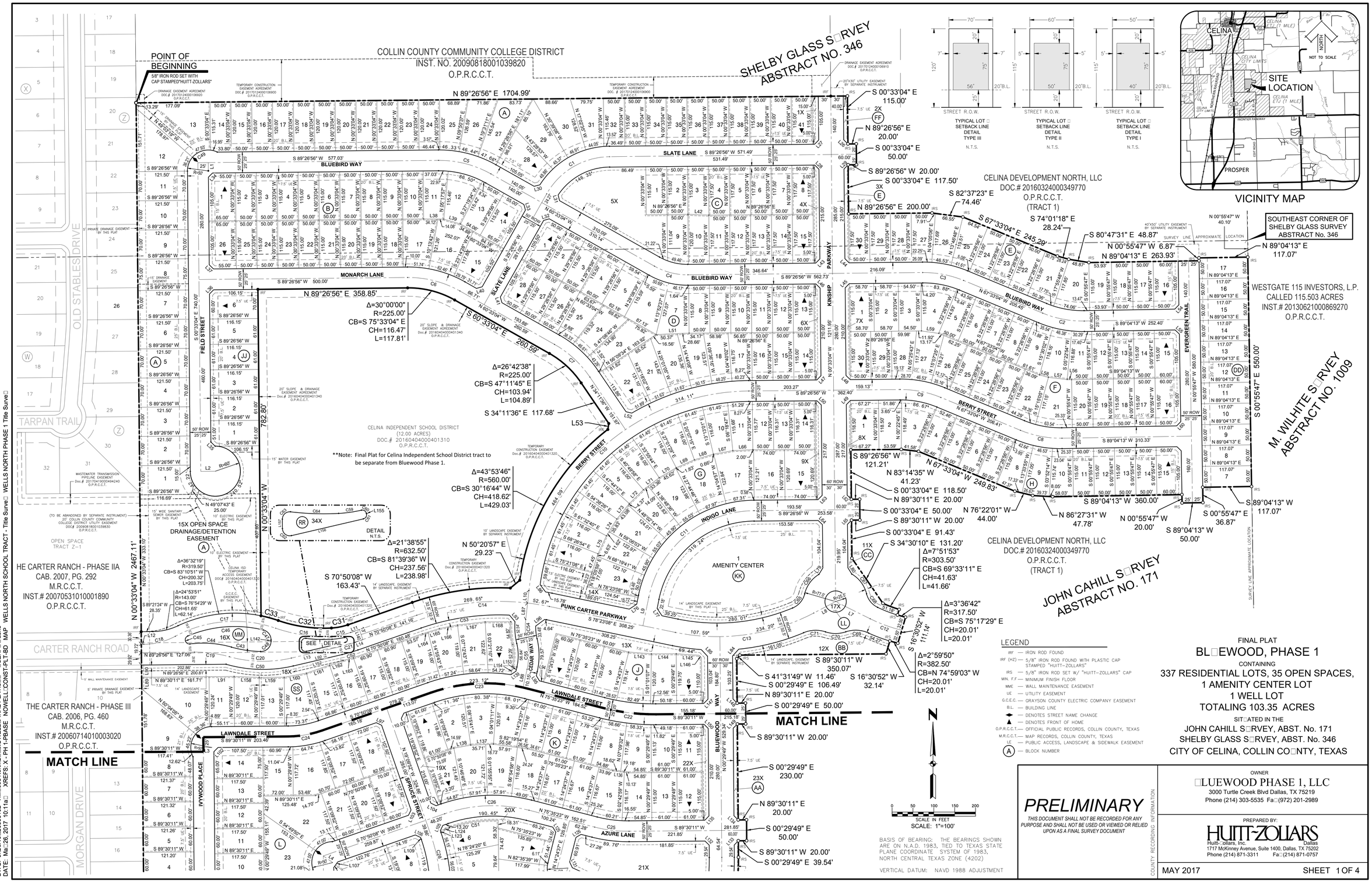
**Alternatives:**
N/A

**Financial Considerations:**
N/A

**Legal Review:**
N/A

**Supporting Documents:**
Plat Exhibit

**Staff Recommendation:**
Staff recommends approval pending all comments being addressed prior to City Council. The plat will not be filed until final acceptance from the Engineering Department.




FINAL PLAT

# BLUEWOOD, PHASE 1

CONTAINING

337 RESIDENTIAL LOTS, 35 OPEN SPACES, 1 AMENITY CENTER LOT 1 WELL LOT

TOTALING 103.35 ACRES

SITUATED IN THE

JOHN CAHILL SURVEY, ABST. No. 171
SHELBY GLASS SURVEY, ABST. No. 346
CITY OF CELINA, COLLIN COUNTY, TEXAS

**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*

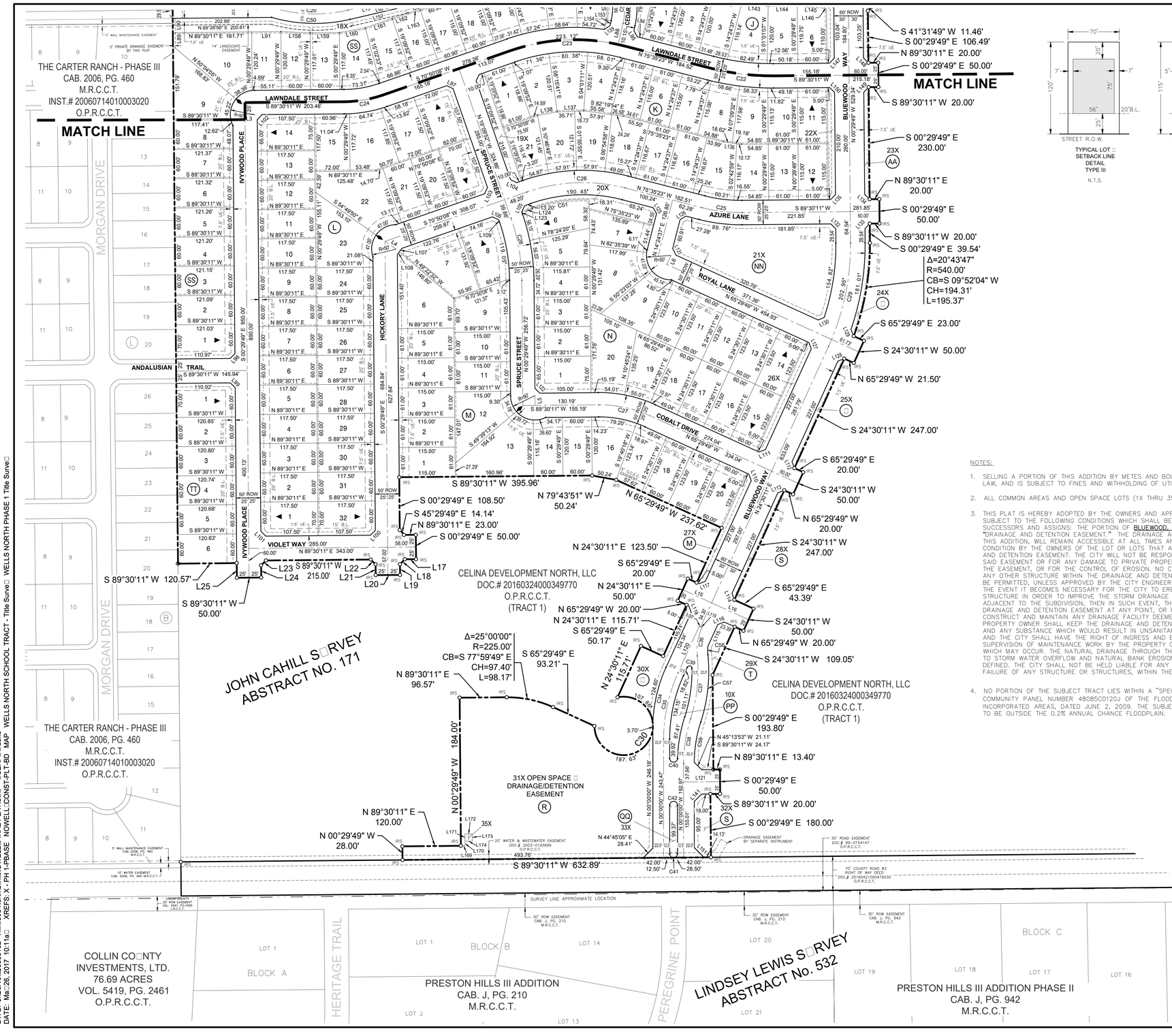
COUNTY RECORDING INFORMATION

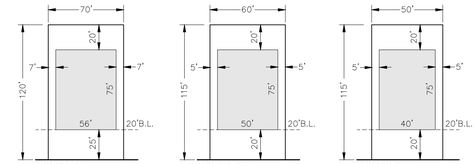
OWNER
BLUEWOOD PHASE 1, LLC
3000 Turtle Creek Blvd Dallas, TX 75219
Phone (214) 303-5535 Fax (972) 201-2989

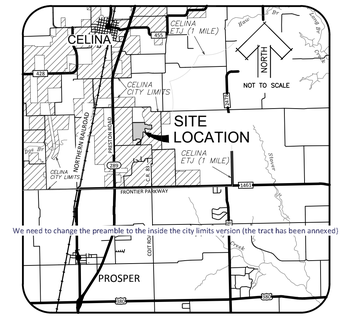
PREPARED BY:
HUITT-ZOLLARS
Huitt-Zollars, Inc. Dallas
1717 McKinney Avenue, Suite 1400, Dallas, TX 75202
Phone (214) 871-3311 Fax (214) 871-0757

MAY 2017 SHEET 1 OF 4

CITY PROJECT NUMBER: P-201606-01 PROJECT NUMBER: R303661.02




We need to change the preamble to the inside the city limits version (the tract has been annexed)

VICINITY MAP

N

SCALE IN FEET
0 50 100 150 200
SCALE: 1"=100'

BASIS OF BEARING: THE BEARINGS SHOWN ARE ON N.A.D. 1983, TIED TO TEXAS STATE PLANE COORDINATE SYSTEM OF 1983, NORTH CENTRAL TEXAS ZONE (4202)

VERTICAL DATUM: NAVD 1988 ADJUSTMENT

## LEGEND

- IRF — IRON ROD FOUND
- IRF (HZ) — 5/8" IRON ROD FOUND WITH PLASTIC CAP STAMPED "HUITT-ZOLLARS"
- IRS — 5/8" IRON ROD SET W/ "HUITT-ZOLLARS" CAP
- MIN. F.F — MINIMUM FINISH FLOOR
- WME — WALL MAINTENANCE EASEMENT
- UE — UTILITY EASEMENT
- G.C.E.C — GRAYSON COUNTY ELECTRIC COMPANY EASEMENT
- B.L. — BUILDING LINE
- ◆ — DENOTES STREET NAME CHANGE
- ▲ — DENOTES FRONT OF HOME
- O.P.R.C.C.T. — OFFICIAL PUBLIC RECORDS, COLLIN COUNTY, TEXAS
- M.R.C.C.T. — MAP RECORDS, COLLIN COUNTY, TEXAS
- LE — PUBLIC ACCESS, LANDSCAPE & SIDEWALK EASEMENT
- (A) — BLOCK NUMBER

NOTES:

1. SELLING A PORTION OF THIS ADDITION BY METES AND BOUNDS IS A VIOLATION OF CITY ORDINANCE AND STATE LAW, AND IS SUBJECT TO FINES AND WITHHOLDING OF UTILITIES AND BUILDING PERMITS.
2. ALL COMMON AREAS AND OPEN SPACE LOTS (1X THRU 35X) WILL BE OWNED AND MAINTAINED BY OF THE H.O.A.
3. THIS PLAT IS HEREBY ADOPTED BY THE OWNERS AND APPROVED BY THE CITY OF CELINA (CALLED "CITY") SUBJECT TO THE FOLLOWING CONDITIONS WHICH SHALL BE BINDING UPON THE OWNERS, THEIR HEIRS, GRANTEES, SUCCESSORS AND ASSIGNS: THE PORTION OF BLUEWOOD, PHASE I AS SHOWN ON THE PLAT IS CALLED "DRAINAGE AND DETENTION EASEMENT." THE DRAINAGE AND DETENTION EASEMENTS WITHIN THE LIMITS OF THIS ADDITION, WILL REMAIN ACCESSIBLE AT ALL TIMES AND WILL BE MAINTAINED IN A SAFE AND SANITARY CONDITION BY THE OWNERS OF THE LOT OR LOTS THAT ARE TRAVERSED BY OR ADJACENT TO THE DRAINAGE AND DETENTION EASEMENT. THE CITY WILL NOT BE RESPONSIBLE FOR THE MAINTENANCE AND OPERATION OF SAID EASEMENT OR FOR ANY DAMAGE TO PRIVATE PROPERTY OR PERSON THAT RESULTS FROM CONDITIONS IN THE EASEMENT, OR FOR THE CONTROL OF EROSION. NO CONSTRUCTION OF ANY TYPE OF BUILDING, FENCE OR ANY OTHER STRUCTURE WITHIN THE DRAINAGE AND DETENTION EASEMENT, AS HEREIN ABOVE DEFINED SHALL BE PERMITTED, UNLESS APPROVED BY THE CITY ENGINEER. PROVIDED, HOWEVER, IT IS UNDERSTOOD THAT IN THE EVENT IT BECOMES NECESSARY FOR THE CITY TO ERECT OR CONSIDER ERECTING ANY TYPE OF DRAINAGE STRUCTURE IN ORDER TO IMPROVE THE STORM DRAINAGE THAT MAY BE OCCASIONED BY DRAINAGE IN OR ADJACENT TO THE SUBDIVISION, THEN IN SUCH EVENT, THE CITY SHALL HAVE THE RIGHT TO ENTER UPON THE DRAINAGE AND DETENTION EASEMENT AT ANY POINT, OR POINTS, TO INVESTIGATE, SURVEY OR TO ERECT, CONSTRUCT AND MAINTAIN ANY DRAINAGE FACILITY DEEMED NECESSARY FOR DRAINAGE PURPOSES. EACH PROPERTY OWNER SHALL KEEP THE DRAINAGE AND DETENTION EASEMENT CLEAN AND FREE OF DEBRIS, SILT, AND ANY SUBSTANCE WHICH WOULD RESULT IN UNSANITARY CONDITIONS OR OBSTRUCT THE FLOW OF WATER, AND THE CITY SHALL HAVE THE RIGHT OF INGRESS AND EGRESS FOR THE PURPOSE OF INSPECTION AND SUPERVISION OF MAINTENANCE WORK BY THE PROPERTY OWNER TO ALLEVIATE ANY UNDESIRABLE CONDITIONS WHICH MAY OCCUR. THE NATURAL DRAINAGE THROUGH THE DRAINAGE AND DETENTION EASEMENT IS SUBJECT TO STORM WATER OVERFLOW AND NATURAL BANK EROSION TO AN EXTENT WHICH CANNOT BE DEFINITELY DEFINED. THE CITY SHALL NOT BE HELD LIABLE FOR ANY DAMAGES OF ANY NATURE RESULTING FROM THE FAILURE OF ANY STRUCTURE OR STRUCTURES, WITHIN THE EASEMENT.
4. NO PORTION OF THE SUBJECT TRACT LIES WITHIN A "SPECIAL FLOOD HAZARD AREA" AS EXPLAINED ON COMMUNITY PANEL NUMBER 48085C0120J OF THE FLOOD INSURANCE RATE MAP, COLLIN COUNTY, TEXAS AND INCORPORATED AREAS, DATED JUNE 2, 2009. THE SUBJECT PARCEL LIES WITHIN "ZONE X" (AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN.

FINAL PLAT

# BLUEWOOD, PHASE 1

CONTAINING

337 RESIDENTIAL LOTS, 35 OPEN SPACES,
1 AMENITY CENTER LOT
1 WELL LOT
TOTALING 103.35 ACRES

SITUATED IN THE

JOHN CAHILL SURVEY, ABST. No. 171
SHELBY GLASS SURVEY, ABST. No. 346
CITY OF CELINA, COLLIN COUNTY, TEXAS

**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*

COUNTY RECORDING INFORMATION


OWNER
BLUEWOOD PHASE 1, LLC
3000 Turtle Creek Blvd Dallas, TX 75219
Phone (214) 303-5535 Fax (972) 201-2989

PREPARED BY:
HUITT-ZOLLARS
Huitt-Zollars, Inc. Dallas
1717 McKinney Avenue, Suite 1400, Dallas, TX 75202
Phone (214) 871-3311 Fax (214) 871-0757


MAY 2017 SHEET 2 OF 4

CITY PROJECT NUMBER: P-201606-01 PROJECT NUMBER: R303661.02

DWG: J:\Survey\30366102 - Hillwood North\NOWELL\FINAL PLAT.dwg USER: adrid
DATE: May 26, 2017 10:11am XREFS: X - PH 1-PBASE NOWELL\CONST-PLT-BD MAP WELLS NORTH SCHOOL TRACT - Title Survey WELLS NORTH PHASE 1 Title Survey

# AREA TABLES - LOT AND BLOCK

| AREA TABLE - BLOCK A | | |
|---|---|---|
| Lot No. | Acres | S□. Feet |
| 1 | 0.2010 | 8,756 |
| 2 | 0.1952 | 8,505 |
| 3 | 0.1952 | 8,505 |
| 4 | 0.1952 | 8,505 |
| 5 | 0.1952 | 8,505 |
| 6 | 0.1952 | 8,505 |
| 7 | 0.1952 | 8,505 |
| 8 | 0.2092 | 9,112 |
| 9 | 0.1952 | 8,505 |
| 10 | 0.1952 | 8,505 |
| 11 | 0.1952 | 8,505 |
| 12 | 0.2779 | 12,104 |
| 13 | 0.3415 | 14,874 |
| 14 | 0.1367 | 5,954 |
| 15 | 0.1377 | 6,000 |
| 16 | 0.1377 | 6,000 |
| 17 | 0.1377 | 6,000 |
| 18 | 0.1377 | 6,000 |
| 19 | 0.1377 | 6,000 |
| 20 | 0.1377 | 6,000 |
| 21 | 0.1377 | 6,000 |
| 22 | 0.1377 | 6,000 |
| 23 | 0.1377 | 6,000 |
| 24 | 0.1377 | 6,000 |
| 25 | 0.1612 | 7,023 |
| 26 | 0.1792 | 7,807 |
| 27 | 0.2292 | 9,984 |
| 28 | 0.2100 | 9,147 |
| 29 | 0.2047 | 8,916 |
| 30 | 0.2118 | 9,225 |
| 31 | 0.1693 | 7,376 |
| 32 | 0.1320 | 5,752 |
| 33 | 0.1320 | 5,750 |
| 34 | 0.1320 | 5,750 |
| 35 | 0.1320 | 5,750 |
| 36 | 0.1320 | 5,750 |
| 37 | 0.1320 | 5,750 |
| 38 | 0.1320 | 5,750 |
| 39 | 0.1320 | 5,750 |
| 40 | 0.1320 | 5,750 |
| 41 | 0.1320 | 5,750 |

| AREA TABLE - BLOCK B | | |
|---|---|---|
| Lot No. | Acres | S□. Feet |
| 1 | 0.1705 | 7,425 |
| 2 | 0.1320 | 5,750 |
| 3 | 0.1320 | 5,750 |
| 4 | 0.1320 | 5,750 |
| 5 | 0.1320 | 5,750 |
| 6 | 0.1320 | 5,750 |
| 7 | 0.1320 | 5,750 |
| 8 | 0.1320 | 5,750 |
| 9 | 0.1320 | 5,750 |
| 10 | 0.1320 | 5,750 |
| 11 | 0.1434 | 6,248 |
| 12 | 0.1717 | 7,480 |
| 13 | 0.1491 | 6,496 |
| 14 | 0.1711 | 7,452 |
| 15 | 0.2058 | 8,964 |
| 16 | 0.2135 | 9,300 |
| 17 | 0.1952 | 8,503 |
| 18 | 0.1320 | 5,750 |
| 19 | 0.1320 | 5,750 |
| 20 | 0.1320 | 5,750 |
| 21 | 0.1320 | 5,750 |
| 22 | 0.1320 | 5,750 |
| 23 | 0.1320 | 5,750 |
| 24 | 0.1320 | 5,750 |
| 25 | 0.1320 | 5,750 |
| 26 | 0.1705 | 7,425 |

| AREA TABLE - BLOCK C | | |
|---|---|---|
| Lot No. | Acres | S□. Feet |
| 1 | 0.1320 | 5,750 |
| 2 | 0.1320 | 5,750 |
| 3 | 0.1334 | 5,812 |
| 4 | 0.1349 | 5,875 |
| 5 | 0.1349 | 5,875 |
| 6 | 0.1349 | 5,875 |
| 7 | 0.1349 | 5,875 |
| 8 | 0.1349 | 5,875 |
| 9 | 0.1345 | 5,858 |
| 10 | 0.1363 | 5,938 |
| 11 | 0.1349 | 5,875 |
| 12 | 0.1349 | 5,875 |
| 13 | 0.1349 | 5,875 |
| 14 | 0.1349 | 5,875 |
| 15 | 0.1349 | 5,875 |

| AREA TABLE - BLOCK D | | |
|---|---|---|
| Lot No. | Acres | S□. Feet |
| 1 | 0.1579 | 6,880 |
| 2 | 0.1326 | 5,775 |
| 3 | 0.1326 | 5,775 |
| 4 | 0.1591 | 6,930 |
| 5 | 0.1614 | 7,029 |
| 6 | 0.1946 | 8,478 |
| 7 | 0.1721 | 7,496 |
| 8 | 0.1320 | 5,750 |
| 9 | 0.1320 | 5,750 |
| 10 | 0.1320 | 5,750 |
| 11 | 0.1320 | 5,750 |
| 12 | 0.1320 | 5,750 |
| 13 | 0.1319 | 5,745 |
| 14 | 0.1319 | 5,745 |
| 15 | 0.1320 | 5,750 |
| 16 | 0.1320 | 5,750 |
| 17 | 0.1396 | 6,081 |
| 18 | 0.1468 | 6,393 |
| 19 | 0.1659 | 7,226 |
| 20 | 0.1903 | 8,291 |
| 21 | 0.1822 | 7,935 |
| 22 | 0.2073 | 9,030 |
| 23 | 0.1988 | 8,661 |
| 24 | 0.1658 | 7,223 |
| 25 | 0.1481 | 6,452 |
| 26 | 0.1326 | 5,775 |
| 27 | 0.1326 | 5,775 |
| 28 | 0.1579 | 6,880 |

| AREA TABLE - BLOCK E | | |
|---|---|---|
| Lot No. | Acres | S□. Feet |
| 16 | 0.1573 | 6,850 |
| 17 | 0.1320 | 5,750 |
| 18 | 0.1320 | 5,750 |
| 19 | 0.1424 | 6,202 |
| 20 | 0.1844 | 8,034 |
| 21 | 0.1689 | 7,355 |
| 22 | 0.1320 | 5,750 |
| 23 | 0.1320 | 5,750 |
| 24 | 0.1320 | 5,750 |
| 25 | 0.1483 | 6,458 |
| 26 | 0.1526 | 6,646 |
| 27 | 0.1434 | 6,249 |
| 28 | 0.1349 | 5,875 |
| 29 | 0.1349 | 5,875 |
| 30 | 0.1349 | 5,875 |

| AREA TABLE - BLOCK F | | |
|---|---|---|
| Lot No. | Acres | S□. Feet |
| 1 | 0.1550 | 6,750 |
| 2 | 0.1550 | 6,750 |
| 3 | 0.1439 | 6,268 |
| 4 | 0.1728 | 7,525 |
| 5 | 0.1320 | 5,750 |
| 6 | 0.1320 | 5,750 |
| 7 | 0.1320 | 5,750 |
| 8 | 0.1320 | 5,750 |
| 9 | 0.1448 | 6,307 |
| 10 | 0.1532 | 6,675 |
| 11 | 0.1433 | 6,244 |
| 12 | 0.1320 | 5,750 |
| 13 | 0.1320 | 5,750 |
| 14 | 0.1320 | 5,750 |
| 15 | 0.1573 | 6,850 |
| 16 | 0.1573 | 6,850 |
| 17 | 0.1320 | 5,750 |
| 18 | 0.1320 | 5,750 |
| 19 | 0.1320 | 5,750 |
| 20 | 0.1320 | 5,750 |
| 21 | 0.1944 | 8,469 |
| 22 | 0.1731 | 7,542 |
| 23 | 0.1320 | 5,750 |
| 24 | 0.1320 | 5,750 |
| 25 | 0.1320 | 5,750 |
| 26 | 0.1454 | 6,336 |
| 27 | 0.1543 | 6,722 |
| 28 | 0.1428 | 6,219 |
| 29 | 0.1320 | 5,750 |
| 30 | 0.1320 | 5,750 |

| AREA TABLE - BLOCK G | | |
|---|---|---|
| Lot No. | Acres | S□. Feet |
| 1 | 0.1456 | 6,340 |
| 2 | 0.1456 | 6,340 |
| 3 | 0.1456 | 6,340 |
| 4 | 0.1456 | 6,340 |
| 5 | 0.1456 | 6,340 |
| 6 | 0.1456 | 6,340 |
| 7 | 0.1456 | 6,340 |
| 8 | 0.1456 | 6,340 |
| 9 | 0.1456 | 6,340 |
| 10 | 0.1454 | 6,333 |
| 11 | 0.1433 | 6,241 |
| 12 | 0.1332 | 5,802 |
| 13 | 0.1335 | 5,815 |
| 14 | 0.1335 | 5,815 |
| 15 | 0.2050 | 8,931 |
| 16 | 0.2053 | 8,944 |
| 17 | 0.2298 | 10,012 |
| 18 | 0.2335 | 10,172 |
| 19 | 0.1904 | 8,292 |
| 20 | 0.1590 | 6,926 |
| 21 | 0.1896 | 8,261 |
| 22 | 0.1569 | 6,836 |
| 23 | 0.1856 | 8,085 |

| AREA TABLE - BLOCK H | | |
|---|---|---|
| Lot No. | Acres | S□. Feet |
| 1 | 0.1830 | 7,971 |
| 2 | 0.1484 | 6,464 |
| 3 | 0.1733 | 7,548 |
| 4 | 0.1385 | 6,033 |
| 5 | 0.1320 | 5,750 |
| 6 | 0.1320 | 5,750 |
| 7 | 0.1320 | 5,750 |
| 8 | 0.1482 | 6,455 |
| 9 | 0.1514 | 6,593 |
| 10 | 0.1407 | 6,129 |
| 11 | 0.1320 | 5,750 |
| 12 | 0.1320 | 5,750 |
| 13 | 0.1320 | 5,750 |
| 14 | 0.1320 | 5,750 |
| 15 | 0.1573 | 6,850 |

| AREA TABLE - BLOCK SS | | |
|---|---|---|
| Lot No. | Acres | S□. Feet |
| 1 | 0.1933 | 8,420 |
| 2 | 0.1668 | 7,264 |
| 3 | 0.1668 | 7,267 |
| 4 | 0.1669 | 7,270 |
| 5 | 0.1670 | 7,274 |
| 6 | 0.1671 | 7,277 |
| 7 | 0.1671 | 7,281 |
| 8 | 0.1666 | 7,257 |
| 9 | 0.2773 | 12,080 |
| 10 | 0.3737 | 16,279 |
| 11 | 0.1653 | 7,200 |
| 12 | 0.1632 | 7,110 |
| 13 | 0.1612 | 7,020 |
| 14 | 0.1887 | 8,221 |
| 15 | 0.1684 | 7,337 |
| 16 | 0.1607 | 7,001 |
| 17 | 0.1608 | 7,003 |
| 18 | 0.1608 | 7,003 |
| 19 | 0.1660 | 7,230 |
| 20 | 0.1759 | 7,664 |
| 21 | 0.1727 | 7,522 |
| 22 | 0.1752 | 7,634 |

| AREA TABLE - BLOCK J | | |
|---|---|---|
| Lot No. | Acres | S□. Feet |
| 1 | 0.1653 | 7,200 |
| 2 | 0.1653 | 7,200 |
| 3 | 0.1651 | 7,192 |
| 4 | 0.1888 | 8,222 |
| 5 | 0.1684 | 7,334 |
| 6 | 0.1614 | 7,030 |

| AREA TABLE - BLOCK K | | |
|---|---|---|
| Lot No. | Acres | S□. Feet |
| 1 | 0.1664 | 7,250 |
| 2 | 0.1844 | 8,032 |
| 3 | 0.1879 | 8,183 |
| 4 | 0.1833 | 7,986 |
| 5 | 0.1620 | 7,057 |
| 6 | 0.1610 | 7,015 |
| 7 | 0.1610 | 7,015 |
| 8 | 0.1768 | 7,702 |
| 9 | 0.1774 | 7,728 |
| 10 | 0.1611 | 7,016 |
| 11 | 0.1610 | 7,015 |
| 12 | 0.1610 | 7,015 |
| 13 | 0.1610 | 7,015 |
| 14 | 0.1801 | 7,846 |
| 15 | 0.1970 | 8,579 |
| 16 | 0.1634 | 7,117 |
| 17 | 0.1634 | 7,117 |
| 18 | 0.1940 | 8,450 |
| 19 | 0.1852 | 8,067 |
| 20 | 0.1885 | 8,213 |
| 21 | 0.1804 | 7,859 |

| AREA TABLE - BLOCK L | | |
|---|---|---|
| Lot No. | Acres | S□. Feet |
| 1 | 0.1877 | 8,175 |
| 2 | 0.1618 | 7,050 |
| 3 | 0.1618 | 7,050 |
| 4 | 0.1618 | 7,050 |
| 5 | 0.1618 | 7,050 |
| 6 | 0.1618 | 7,050 |
| 7 | 0.1618 | 7,050 |
| 8 | 0.1618 | 7,050 |
| 9 | 0.1618 | 7,050 |
| 10 | 0.1618 | 7,050 |
| 11 | 0.1618 | 7,050 |
| 12 | 0.1618 | 7,050 |
| 13 | 0.1618 | 7,050 |
| 14 | 0.2012 | 8,763 |
| 15 | 0.1942 | 8,461 |
| 16 | 0.2314 | 10,079 |
| 17 | 0.1943 | 8,462 |
| 18 | 0.2200 | 9,585 |
| 19 | 0.1877 | 8,175 |
| 20 | 0.1618 | 7,050 |
| 21 | 0.1618 | 7,050 |
| 22 | 0.3443 | 15,000 |
| 23 | 0.3048 | 13,276 |
| 24 | 0.1618 | 7,050 |
| 25 | 0.1618 | 7,050 |
| 26 | 0.1618 | 7,050 |
| 27 | 0.1618 | 7,050 |
| 28 | 0.1618 | 7,050 |
| 29 | 0.1618 | 7,050 |
| 30 | 0.1618 | 7,050 |
| 31 | 0.1618 | 7,050 |
| 32 | 0.1877 | 8,175 |

| AREA TABLE - BLOCK M | | |
|---|---|---|
| Lot No. | Acres | S□. Feet |
| 1 | 0.1610 | 7,015 |
| 2 | 0.1610 | 7,015 |
| 3 | 0.1610 | 7,015 |
| 4 | 0.1610 | 7,015 |
| 5 | 0.1610 | 7,015 |
| 6 | 0.2931 | 12,766 |
| 7 | 0.2852 | 12,422 |
| 8 | 0.2371 | 10,329 |
| 9 | 0.2353 | 10,250 |
| 10 | 0.1610 | 7,015 |
| 11 | 0.1610 | 7,015 |
| 12 | 0.2654 | 11,561 |
| 13 | 0.3284 | 14,305 |
| 14 | 0.1631 | 7,107 |
| 15 | 0.1653 | 7,200 |
| 16 | 0.2030 | 8,841 |
| 17 | 0.1780 | 7,755 |
| 18 | 0.1701 | 7,410 |
| 19 | 0.1701 | 7,410 |
| 20 | 0.1701 | 7,410 |

| AREA TABLE - BLOCK N | | |
|---|---|---|
| Lot No. | Acres | S□. Feet |
| 1 | 0.1969 | 8,575 |
| 2 | 0.1610 | 7,015 |
| 3 | 0.1610 | 7,015 |
| 4 | 0.1612 | 7,022 |
| 5 | 0.1854 | 8,077 |
| 6 | 0.1954 | 8,511 |
| 7 | 0.1894 | 8,249 |
| 8 | 0.2725 | 11,870 |
| 9 | 0.2189 | 9,534 |
| 10 | 0.1701 | 7,410 |
| 11 | 0.1701 | 7,410 |
| 12 | 0.1701 | 7,410 |
| 13 | 0.1701 | 7,410 |
| 14 | 0.1701 | 7,410 |
| 15 | 0.1701 | 7,410 |
| 16 | 0.1701 | 7,410 |
| 17 | 0.1701 | 7,410 |
| 18 | 0.1701 | 7,411 |
| 19 | 0.2066 | 8,997 |
| 20 | 0.2922 | 12,730 |

| AREA TABLE - BLOCK TT | | |
|---|---|---|
| Lot No. | Acres | S□. Feet |
| 1 | 0.1931 | 8,412 |
| 2 | 0.1664 | 7,249 |
| 3 | 0.1663 | 7,246 |
| 4 | 0.1663 | 7,243 |
| 5 | 0.1662 | 7,239 |
| 6 | 0.1661 | 7,236 |

| AREA TABLE - BLOCK DD | | |
|---|---|---|
| Lot No. | Acres | S□. Feet |
| 7 | 0.1344 | 5,853 |
| 8 | 0.1344 | 5,853 |
| 9 | 0.1344 | 5,853 |
| 10 | 0.1344 | 5,853 |
| 11 | 0.1344 | 5,853 |
| 12 | 0.1344 | 5,853 |
| 13 | 0.1344 | 5,853 |
| 14 | 0.1344 | 5,853 |
| 15 | 0.1344 | 5,853 |
| 16 | 0.1344 | 5,853 |
| 17 | 0.1344 | 5,853 |

| AREA TABLE - BLOCK JJ | | |
|---|---|---|
| Lot No. | Acres | S□. Feet |
| 1 | 0.1615 | 7,035 |
| 2 | 0.1627 | 7,085 |
| 3 | 0.1627 | 7,085 |
| 4 | 0.1627 | 7,085 |
| 5 | 0.1627 | 7,085 |
| 6 | 0.1855 | 8,080 |
| 7 | 12.0020 | 522,806 |

| AREA TABLE - BLOCK KK | | |
|---|---|---|
| Lot No. | Acres | S□. Feet |
| 1 | 1.7485 | 76,164 |

| AREA TABLE - OPEN SPACE | | | |
|---|---|---|---|
| Lot No. | Block No. | Acres | S□. Feet |
| 1X | A | 0.0385 | 1,675 |
| 2X | FF | 0.0253 | 1,100 |
| 3X | E | 0.0517 | 2,250 |
| 4X | C | 0.0786 | 3,425 |
| 5X | C | 0.7253 | 31,596 |
| 6X | D | 0.0772 | 3,361 |
| 7X | F | 0.0505 | 2,200 |
| 8X | H | 0.0521 | 2,270 |
| 9X | G | 0.0793 | 3,455 |
| 10X | PP | 0.1009 | 4,396 |
| 11X | CC | 0.0914 | 3,980 |
| 12X | BB | .3702 | 16,124 |
| 13X | J | 0.3724 | 16,220 |
| 14X | G | 0.2695 | 11,741 |
| 15X | A | 2.1549 | 93,869 |
| 16X | MM | 0.1951 | 8,497 |
| 17X | LL | 0.0469 | 2,043 |
| 18X | SS | 0.4457 | 19,414 |
| 19X | K | 0.1056 | 4,600 |
| 20X | N | 0.1382 | 6,021 |
| 21X | NN | 1.0199 | 44,427 |
| 22X | K | 0.0769 | 3,350 |
| 23X | AA | 0.0505 | 2,200 |
| 24X | □ | 0.0511 | 2,227 |
| 25X | □ | 0.0544 | 2,370 |
| 26X | N | 0.0828 | 3,605 |
| 27X | M | 0.0828 | 3,605 |
| 28X | S | 0.0544 | 2,370 |
| 29X | T | 0.1417 | 6,174 |
| 30X | □ | 0.2121 | 9,239 |
| 31X | R | 2.5769 | 112,251 |
| 32X | S | 0.0930 | 4,051 |
| 33X | □□ | 0.0411 | 1,791 |
| 34X | RR | 0.0487 | 2,120 |
| 35X | R | 0.0052 | 225 |

| LAND □SE TABLE | | | |
|---|---|---|---|
| Gross Site Area (Acrea□e): | 103.35 Ac. | | |
| Street Ri□ht o□Wa□(Acrea□e): | XX.XX Ac. | | |
| NET ACREAGE: | XX.XX Ac. | | |
| Residential Lots (Acrea□e): | 55.35 Ac. | Residential Lots (Nu□□er): | 337 |
| Open Space Lots Area (Acrea□e): | 10.05 Ac. | Open Space Lots (Nu□□er): | 35 |
| A□enit□Center Lot (Acrea□e): | 1.75 Ac. | A□enit□Lots (Nu□□er): | 1 |
| Well Lot (Acrea□e): | 0.01 Ac. | Ele□entar□School Lots (Nu□□er): | 1 |
| Ele□entar□School Lot (Acrea□e): | 12.00 Ac. | Ele□entar□School Lots (Nu□□er): | 1 |

# C□RVE TABLES

| C□RVE TABLE | | | | | |
|---|---|---|---|---|---|
| C□RVE | DELTA | RADI□S | CH. BEARING | CH. LENGTH | ARC LENGTH |
| C1 | 60°00'00" | 175.00' | S 59°26'56" W | 175.00' | 183.26' |
| C2 | 23°22'43" | 250.00' | N 79°14'26" W | 101.30' | 102.01' |
| C3 | 23°00'00" | 250.00' | N 79°03'04" W | 99.68' | 100.36' |
| C4 | 30°00'00" | 160.00' | N 75°33'04" W | 82.82' | 83.78' |
| C5 | 30°00'00" | 250.00' | N 75°33'04" W | 129.41' | 130.90' |
| C6 | 30°00'00" | 250.00' | N 75°33'04" W | 129.41' | 130.90' |
| C7 | 26°42'38" | 250.00' | N 47°11'45" W | 115.49' | 116.55' |
| C8 | 23°22'43" | 250.00' | N 79°14'26" W | 101.30' | 102.01' |
| C9 | 23°00'00" | 250.00' | N 79°03'04" W | 99.68' | 100.36' |
| C10 | 83°20'28" | 535.00' | S 47°46'42" W | 711.39' | 778.20' |
| C11 | 77°50'03" | 260.00' | S 50°31'54" W | 326.66' | 353.20' |
| C12 | 13°12'36" | 350.00' | S 70°09'22" E | 80.52' | 80.70' |
| C13 | 39°09'57" | 500.00' | N 82°01'54" E | 335.17' | 341.79' |
| C14 | 30°46'44" | 600.00' | N 86°13'30" E | 318.45' | 322.32' |
| C15 | 16°05'18" | 162.50' | N 78°52'47" E | 45.48' | 45.63' |
| C16 | 22°12'03" | 354.00' | S 81°58'32" E | 136.31' | 137.17' |
| C17 | 47°24'48" | 300.00' | N 85°25'05" E | 241.23' | 248.26' |
| C18 | 27°44'15" | 162.50' | N 75°34'49" E | 77.90' | 78.67' |
| C19 | 16°09'51" | 300.00' | S 82°28'08" E | 84.36' | 84.64' |
| C20 | 28°43'16" | 300.00' | S 88°44'51" E | 148.81' | 150.38' |
| C21 | 6°03'23" | 354.00' | N 73°51'50" E | 37.40' | 37.42' |
| C22 | 14°54'26" | 500.00' | N 83°02'36" W | 129.72' | 130.09' |
| C23 | 33°34'28" | 400.00' | S 87°37'22" W | 231.06' | 234.39' |
| C24 | 18°40'03" | 250.00' | S 80°10'10" W | 81.09' | 81.45' |
| C25 | 14°54'26" | 320.00' | N 83°02'36" W | 83.02' | 83.26' |
| C26 | 33°34'28" | 350.00' | S 87°37'22" W | 202.17' | 205.10' |
| C27 | 25°00'00" | 250.00' | N 77°59'49" W | 108.22' | 109.08' |
| C28 | 18°40'03" | 400.00' | N 09°49'50" W | 129.75' | 130.32' |
| C29 | 25°00'00" | 500.00' | N 12°00'11" E | 216.44' | 218.17' |
| C30 | 281°58'50" | 60.00' | N 38°53'19" E | 75.53' | 295.29' |
| C31 | 16°05'18" | 143.00' | N 78°52'47" E | 40.02' | 40.15' |
| C32 | 22°12'03" | 334.50' | S 81°58'32" E | 128.80' | 129.61' |
| C33 | 7°40'29" | 319.50' | N 74°42'45" W | 42.76' | 42.80' |
| C34 | 24°30'11" | 300.00' | S 12°15'05" W | 127.32' | 128.30' |
| C35 | 24°30'11" | 326.19' | S 12°15'05" W | 138.44' | 139.50' |
| C36 | 30°18'48" | 112.59' | S 09°20'49" W | 58.88' | 59.57' |
| C37 | 23°39'57" | 316.06' | S 06°01'21" W | 129.62' | 130.55' |
| C38 | 153°35'00" | 5.00' | N 78°42'19" W | 9.74' | 13.40' |
| C38 | 17°51'20" | 300.00' | S 08°55'40" W | 93.11' | 93.49' |
| C39 | 19°46'09" | 287.50' | N 07°58'15" E | 98.71' | 99.20' |
| C39 | 154°16'06" | 5.00' | S 78°21'46" E | 9.75' | 13.46' |
| C40 | 6°32'52" | 312.50' | S 14°34'54" W | 35.69' | 35.71' |
| C40 | 172°06'50" | 8.10' | N 89°05'41" W | 16.16' | 24.33' |
| C41 | 103°11'43" | 15.00' | N 62°54'19" E | 23.51' | 27.02' |
| C41 | 180°00'00" | 8.00' | N 90°00'00" W | 16.00' | 25.13' |
| C42 | 78°33'53" | 20.00' | S 26°12'52" E | 25.33' | 27.42' |
| C42 | 180°00'00" | 8.00' | N 90°00'00" E | 16.00' | 25.13' |
| C43 | 11°26'07" | 287.50' | S 18°47'08" W | 57.28' | 57.38' |
| C43 | 14°40'35" | 276.50' | N 81°29'56" W | 70.63' | 70.83' |
| C44 | 23°01'33" | 250.00' | N 85°40'25" W | 99.79' | 100.47' |
| C45 | 164°14'18" | 10.00' | N 15°04'03" W | 19.81' | 28.67' |
| C46 | 36°46'57" | 287.50' | N 85°26'35" E | 181.41' | 184.57' |
| C47 | 75°36'52" | 24.50' | S 38°21'30" E | 30.04' | 32.33' |
| C48 | 91°42'51" | 24.50' | S 45°18'21" W | 35.16' | 39.22' |
| C49 | 115°50'32" | 50.00' | S 57°22'11" W | 84.73' | 101.09' |
| C50 | 29°08'52" | 319.50' | S 88°32'03" E | 160.79' | 162.54' |
| C51 | 21°35'57" | 315.00' | S 81°38'07" W | 118.05' | 118.75' |
| C52 | 6°03'23" | 373.50' | N 73°51'50" E | 39.46' | 39.48' |
| C53 | 21°43'26" | 567.50' | S 81°41'51" W | 213.88' | 215.17' |
| C54 | 19°50'34" | 150.00' | S 03°20'11" E | 51.69' | 51.95' |
| C55 | 26°03'09" | 150.00' | N 00°13'53" W | 67.62' | 68.21' |
| C56 | 11°11'18" | 90.59' | S 00°12'58" E | 17.66' | 17.69' |
| C57 | 23°39'57" | 338.06' | N 06°01'21" E | 138.65' | 139.64' |
| C58 | 17°23'47" | 278.00' | S 09°09'27" W | 84.08' | 84.41' |
| C59 | 10°05'07" | 170.00' | N 81°52'53" E | 29.89' | 29.92' |
| C60 | 90°03'12" | 5.50' | S 58°08'05" E | 7.78' | 8.64' |
| C61 | 90°00'00" | 5.50' | S 31°53'31" W | 7.78' | 8.64' |
| C62 | 102°33'25" | 9.50' | N 51°49'46" W | 14.82' | 17.00' |
| C63 | 97°26'07" | 9.50' | N 48°09'59" E | 14.28' | 16.16' |
| C64 | 9°57'36" | 361.50' | S 88°05'45" E | 62.76' | 62.84' |
| C65 | 53°20'43" | 49.50' | N 40°37'30" E | 44.44' | 46.09' |
| C66 | 44°24'21" | 76.50' | S 36°09'19" W | 57.82' | 59.29' |
| C67 | 45°17'45" | 76.50' | N 36°48'45" W | 58.92' | 60.48' |
| C68 | 50°05'08" | 49.50' | S 39°12'27" E | 41.91' | 43.27' |
| C69 | 43°11'42" | 74.50' | N 86°57'13" W | 54.84' | 56.17' |
| C70 | 36°57'19" | 76.50' | N 89°55'36" E | 48.49' | 49.34' |
| C71 | 41°16'38" | 74.50' | S 87°45'57" W | 52.52' | 53.67' |

# LINE TABLES

| LINE TABLE | | |
|---|---|---|
| LINE | BEARING | DISTANCE |
| L1 | S 00°33'04" E | 20.00' |
| L2 | N 89°26'56" E | 35.00' |
| L3 | N 89°30'11" E | 20.00' |
| L4 | S 54°49'50" E | 27.69' |
| L5 | N 00°29'49" W | 20.00' |
| L6 | S 24°30'11" W | 20.00' |
| L7 | S 63°33'04" E | 92.38' |
| L8 | N 62°26'56" E | 59.03' |
| L9 | S 11°36'52" W | 69.68' |
| L10 | S 06°06'28" W | 30.46' |
| L11 | N 70°50'08" E | 22.27' |
| L12 | N 89°26'56" E | 5.96' |
| L13 | N 76°53'31" E | 120.36' |
| L14 | N 70°50'08" E | 19.32' |
| L15 | N 65°29'49" W | 65.00' |
| L16 | N 65°29'49" W | 83.39' |
| L17 | S 89°30'11" W | 23.00 |
| L18 | S 44°30'11" W | 14.14' |
| L19 | S 00°29'49" E | 22.00 |
| L20 | S 89°30'11" W | 50.00' |
| L21 | N 00°29'49" W | 22.00' |
| L22 | N 45°29'49" W | 14.14' |
| L23 | S 44°30'11" W | 14.14' |
| L24 | S 00°29'49" E | 25.00' |
| L25 | N 00°29'49" W | 30.13' |
| L26 | N 45°33'04" W | 14.14' |
| L27 | N 44°26'56" E | 14.14' |
| L28 | S 45°33'04" E | 14.14' |
| L29 | N 44°26'56" E | 14.14' |
| L30 | N 75°16'20" E | 14.34' |
| L31 | N 14°27'45" W | 13.87' |
| L32 | S 74°26'56" W | 14.14' |
| L33 | S 15°33'04" E | 14.14' |
| L34 | N 44°26'56" E | 14.14' |
| L35 | S 45°33'04" E | 14.14' |
| L36 | N 44°26'56" E | 14.14' |
| L37 | S 45°33'04" E | 14.14' |
| L38 | N 89°19'38" W | 48.20' |
| L39 | N 73°44'00" W | 41.86' |
| L40 | N 74°26'56" E | 14.14' |
| L41 | S 15°33'04" E | 14.14' |
| L42 | N 87°41'20" W | 50.06' |
| L43 | S 44°26'56" W | 14.14' |
| L44 | N 45°33'04" W | 14.14' |
| L45 | S 44°26'56" W | 14.14' |
| L46 | S 45°33'04" E | 14.14' |
| L47 | S 44°26'56" W | 14.14' |
| L48 | N 45°33'04" W | 14.14' |
| L49 | N 44°26'56" E | 14.14' |
| L50 | N 45°33'04" W | 14.14' |
| L51 | S 87°45'43" W | 79.03' |
| L52 | N 77°39'21" W | 14.52' |
| L53 | N 09°16'24" E | 14.52' |
| L54 | N 44°04'13" E | 14.14' |
| L55 | N 45°55'47" W | 14.14' |
| L56 | N 88°14'38" W | 10.49' |
| L57 | N 83°24'42" W | 45.30' |
| L58 | N 75°24'24" W | 21.92' |
| L59 | N 81°54'28" W | 41.72' |
| L60 | S 44°04'13" W | 14.14' |

| LINE TABLE | | |
|---|---|---|
| LINE | BEARING | DISTANCE |
| L61 | N 45°55'47" W | 14.14' |
| L62 | N 45°33'04" W | 14.14' |
| L63 | S 44°26'56" W | 14.14' |
| L64 | N 45°33'04" W | 14.14' |
| L65 | N 44°26'56" E | 14.14' |
| L66 | N 87°10'30" E | 47.90' |
| L67 | N 79°50'39" E | 47.47' |
| L68 | N 73°19'52" E | 47.45' |
| L69 | N 66°25'38" E | 47.45' |
| L70 | N 59°31'24" E | 47.45' |
| L71 | N 52°37'10" E | 47.45' |
| L72 | N 45°42'55" E | 47.45' |
| L73 | N 38°48'41" E | 47.45' |
| L74 | N 31°54'27" E | 47.45' |
| L75 | N 25°00'13" E | 47.45' |
| L76 | S 56°36'52" W | 21.21' |
| L77 | N 33°23'08" W | 21.21' |
| L78 | N 32°48'25" E | 17.04' |
| L79 | N 31°07'20" E | 17.02' |
| L80 | S 32°13'28" E | 17.02' |
| L81 | S 31°36'54" E | 17.54' |
| L82 | N 86°49'20" E | 16.92' |
| L83 | S 85°59'57" E | 17.35' |
| L84 | S 42°22'57" W | 21.98' |
| L85 | S 43°34'51" E | 21.91' |
| L86 | N 36°41'50" W | 21.65' |
| L87 | N 06°35'06" E | 40.00' |
| L88 | N 12°47'41" E | 44.61' |
| L89 | N 00°33'04" W | 28.09' |
| L90 | N 00°33'04" W | 29.14' |
| L91 | N 89°30'11" E | 60.00' |
| L92 | S 76°53'31" W | 120.36' |
| L93 | S 40°08'59" E | 20.63' |
| L94 | N 75°35'23" W | 10.01' |
| L95 | S 31°23'51" E | 14.34' |
| L96 | S 53°30'53" W | 26.69' |
| L97 | N 64°09'52" W | 14.14' |
| L98 | S 44°30'11" W | 14.14' |
| L99 | N 45°29'49" W | 14.14' |
| L100 | N 44°30'11" E | 14.14' |
| L101 | N 45°29'49" W | 14.14' |
| L102 | N 44°30'11" E | 14.14' |
| L103 | N 25°50'08" E | 14.14' |
| L104 | N 64°09'52" W | 14.14' |
| L105 | N 25°50'08" E | 14.14' |
| L106 | N 64°09'52" W | 14.14' |
| L107 | N 35°10'10" E | 8.68' |
| L108 | N 35°10'10" E | 7.57' |
| L109 | S 19°09'52" E | 4.86' |
| L110 | S 20°29'49" E | 14.14' |
| L111 | N 69°30'11" E | 14.14' |
| L112 | N 20°29'49" W | 14.14' |
| L113 | S 69°30'11" W | 14.14' |
| L114 | S 20°29'49" E | 14.14' |
| L115 | N 24°30'11" E | 48.98' |
| L116 | N 69°30'11" E | 14.14' |
| L117 | N 69°30'11" E | 14.14' |

| LINE TABLE | | |
|---|---|---|
| LINE | BEARING | DISTANCE |
| L118 | N 20°29'49" W | 14.14' |
| L119 | N 65°29'49" W | 3.00' |
| L120 | S 24°30'11" W | 105.55' |
| L121 | N 89°30'11" E | 74.79' |
| L122 | N 45°29'49" W | 14.14' |
| L123 | N 19°09'52" W | 4.86' |
| L124 | N 70°50'08" E | 23.20' |
| L125 | S 30°35'23" E | 14.14' |
| L126 | N 59°24'37" E | 14.14' |
| L127 | S 20°29'49" E | 14.14' |
| L128 | N 69°30'11" E | 14.14' |
| L129 | N 23°01'03" W | 14.75' |
| L130 | N 66°44'42" E | 13.44' |
| L131 | S 25°32'36" E | 15.33' |
| L132 | S 45°29'49" E | 14.14' |
| L133 | N 44°30'11" E | 14.14' |
| L134 | N 45°29'49" W | 14.14' |
| L135 | S 44°30'11" W | 14.14' |
| L136 | S 82°15'17" E | 27.68' |
| L137 | S 87°52'45" W | 54.44' |
| L138 | S 79°35'01" W | 41.10' |
| L139 | S 55°50'15" W | 14.65' |
| L140 | N 19°09'52" W | 26.00' |
| L141 | N 44°45'05" E | 21.30' |
| L142 | S 00°33'04" E | 3.23' |
| L143 | N 85°46'45" W | 54.56' |
| L144 | S 89°51'56" W | 59.57' |
| L145 | S 85°58'23" E | 55.19' |
| L146 | S 43°14'06" E | 7.34' |
| L147 | S 44°30'11" W | 14.14' |
| L148 | N 45°29'49" W | 14.14' |
| L149 | S 44°30'11" W | 14.14' |
| L150 | S 45°29'49" E | 14.14' |
| L151 | N 45°14'55" W | 28.16' |
| L152 | S 76°56'12" W | 120.13' |
| L153 | S 12°47'41" W | 10.35' |
| L154 | S 12°47'41" W | 21.06' |
| L155 | S 13°06'29" E | 0.61' |
| L156 | S 76°53'31" W | 96.33' |
| L157 | N 00°33'04" W | 12.34' |
| L158 | S 87°38'24" E | 60.07' |
| L159 | N 89°30'31" E | 60.00' |
| L160 | N 79°34'08" E | 54.09' |
| L164 | N 72°52'56" E | 58.42' |
| L165 | N 72°52'56" E | 26.09' |
| L166 | N 79°02'09" E | 25.00' |
| L167 | N 83°23'01" E | 66.71' |
| L168 | N 89°48'00" E | 61.61' |
| L169 | N 89°30'11" E | 8.51' |
| L170 | N 00°29'49" W | 9.25' |
| L171 | N 00°29'49" W | 15.00' |
| L172 | N 89°30'11" E | 15.00' |
| L173 | S 00°29'49" E | 15.00' |
| L174 | S 89°30'11" W | 15.00' |

FINAL PLAT

## BL□EWOOD, PHASE 1

CONTAINING

337 RESIDENTIAL LOTS, 35 OPEN SPACES,
1 AMENITY CENTER LOT
1 WELL LOT
TOTALING 103.35 ACRES

SIT□ATED IN THE

JOHN CAHILL S□RVEY, ABST. No. 171
SHELBY GLASS S□RVEY, ABST. No. 346
CITY OF CELINA, COLLIN CO□NTY, TEXAS

**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*

COUNTY RECORDING INFORMATION


OWNER

□LUEWOOD PHASE 1, LLC
3000 Turtle Creek Blvd Dallas, TX 75219
Phone (214) 303-5535 Fa□(972) 201-2989

PREPARED BY:

HUITT-ZOLLARS
Huitt-□ollars, Inc. Dallas
1717 McKinney Avenue, Suite 1400, Dallas, TX 75202
Phone (214) 871-3311 Fa□(214) 871-0757


MAY 2017



CITY PROJECT N□MBER: P-201606-01 PROJECT N□MBER: R303661.02


DWG: J:□Surve□30366102 - Hill□ood North□d□□NOWELL□FINAL PLAT.d□□ □SER: □□adrid
DATE: Ma□26, 2017 10:11a□ XREFS: X - PH 1-PBASE NOWELL□CONST-PLT-BD MAP WELLS NORTH SCHOOL TRACT - Title Surve□ WELLS NORTH PHASE 1 Title Surve□

**OWNER'S CERTIFICATE**
**STATE OF TEXAS**
**COUNTY OF COLLIN**

**WHEREAS,** Celina Develop□ent North, LLC, and Celina Independent School District are the o□ners o□a tract o□land situated in the John Cahill Surve□, A□stract No. 171, and in the Shel□□Glass Surve□, A□stract No. 346, Collin Count□, Te□as, and □ein□a portion o□a tract o□land descri□ed in instru□ent to Celina Develop□ent North, LLC, recorded in Docu□ent No. 20160324000349770, o□the O□icial Pu□lic Records o□Collin Count□, Te□as (O.P.R.C.C.T.), also □ein□a portion o□Streets 1 , 2, and 3 as descri□ed in instru□ent to the Cit□o□Celina, recorded in Docu□ent No. 20160421000479030 , O.P.R.C.C.T and □ein□□ore particularl□descri□ed as □ollo□s:

**BEGINNING** at a 5/8" iron rod set with plastic cap stamped "Huitt-Zollars Cap at the southwest corner of a called 75.0000 acre tract of land descri□ed in instru□ent to Collin Count□Co□□unit□Colle□e District, recorded under Docu□ent No. 20090818001039820, O.P.R.C.C.T., and □ein□ in the east line o□The Carter Ranch Phase IIA, an addition to the Cit□o□Celina, Te□as, recorded in Ca□inet 2007, Pa□e 972 o□the Map Records o□ Collin Count□Te□as□

**THENCE**, North 89 de□rees 26 □inutes 56 seconds East alon□the south line o□the Collin Count□Co□□unit□Colle□e District, passin□at a distance of 1,665.00 feet a 5/8 inch iron rod found with plastic cap stamped "KHA" at the southeast corner of the Collin County Community College tract, in all a total distance o□1,704.99 □eet to a 5/8 inch iron rod set □ith plastic cap sta□ped "Huitt-□ollars"□

**THENCE**, South 00 de□rees 33 □inutes 04 seconds East, a distance o□115.00 □eet to a 5/8 inch iron rod set □ith plastic cap sta□ped "Huitt-□ollars"□

**THENCE**, North 89 de□rees 26 □inutes 56 seconds East, a distance o□20.00 □eet to a 5/8 inch iron rod set □ith plastic cap sta□ped "Huitt-□ollars"□

**THENCE**, South 00 de□rees 33 □inutes 04 seconds East, a distance o□50.00 □eet to a 5/8 inch iron rod set □ith plastic cap sta□ped "Huitt-□ollars"□

**THENCE**, South 89 de□rees 26 □inutes 56 seconds West, a distance o□20.00 □eet to a 5/8 inch iron rod set □ith plastic cap sta□ped "Huitt-□ollars"□

**THENCE**, South 00 de□rees 33 □inutes 04 seconds East, a distance o□117.50 □eet to a 5/8 inch iron rod set □ith plastic cap sta□ped "Huitt-□ollars"□

**THENCE**, North 89 de□rees 26 □inutes 56 seconds East, a distance o□200.00 □eet to a 5/8 inch iron rod set □ith plastic cap sta□ped "Huitt-□ollars"□

**THENCE**, South 82 de□rees 37 □inutes 23 seconds East, a distance o□74.46 □eet to a 5/8 inch iron rod set □ith plastic cap sta□ped "Huitt-□ollars"□

**THENCE**, South 67 de□rees 33 □inutes 04 seconds East, a distance o□245.29 □eet to a 5/8 inch iron rod set □ith plastic cap sta□ped "Huitt-□ollars"□

**THENCE**, South 74 de□rees 01 □inute 18 seconds East, a distance o□28.24 □eet to a 5/8 inch iron rod set □ith plastic cap sta□ped "Huitt-□ollars"□

**THENCE**, South 80 de□rees 47 □inutes 31 seconds East, a distance o□48.87 □eet to a 5/8 inch iron rod set □ith plastic cap sta□ped "Huitt-□ollars"□

**THENCE**, North 89 de□rees 04 □inutes 13 seconds East, a distance o□263.93 □eet to a 5/8 inch iron rod set □ith plastic cap sta□ped "Huitt-□ollars"□

**THENCE**, North 00 de□rees 55 □inutes 47 seconds West, a distance o□6.87 □eet to a 5/8 inch iron rod set □ith plastic cap sta□ped "Huitt-□ollars"□

**THENCE**, North 89 de□rees 04 □inutes 13 seconds East, a distance o□117.07 □eet to a 5/8 inch iron rod set □ith plastic cap sta□ped "Huitt-□ollars"□

**THENCE**, South 00 de□rees 55 □inutes 47 seconds East, a distance o□550.00 □eet to a 5/8 inch iron rod set □ith plastic cap sta□ped "Huitt-□ollars"□

**THENCE**, South 89 de□rees 04 □inutes 13 seconds West, a distance o□117.07 □eet to a 5/8 inch iron rod set □ith plastic cap sta□ped "Huitt-□ollars"□

**THENCE**, South 00 de□rees 55 □inutes 47 seconds East, a distance o□36.87 □eet to a 5/8 inch iron rod set □ith plastic cap sta□ped "Huitt-□ollars"□

**THENCE**, South 89 de□rees 04 □inutes 13 seconds West, a distance o□50.00 □eet to a 5/8 inch iron rod set □ith plastic cap sta□ped "Huitt-□ollars"□

**THENCE**, North 00 de□rees 55 □inutes 47 seconds West, a distance o□20.00 □eet to a 5/8 inch iron rod set □ith plastic cap sta□ped "Huitt-□ollars"□

**THENCE**, South 89 de□rees 04 □inutes 13 seconds West, a distance o□310.00 □eet to a 5/8 inch iron rod set □ith plastic cap sta□ped "Huitt-□ollars"□

**THENCE**, North 86 de□rees 27 □inutes 31 seconds West, a distance o□47.78 □eet to a 5/8 inch iron rod set □ith plastic cap sta□ped "Huitt-□ollars"□

**THENCE**, North 76 de□rees 22 □inutes 01 second West, a distance o□44.00 □eet to a 5/8 inch iron rod set □ith plastic cap sta□ped "Huitt-□ollars"□

**THENCE**, North 67 de□rees 33 □inutes 04 seconds West, a distance o□249.83 □eet to a 5/8 inch iron rod set □ith plastic cap sta□ped "Huitt-□ollars"□

**THENCE**, North 83 de□rees 14 □inutes 35 seconds West, a distance o□41.23 □eet to a 5/8 inch iron rod set □ith plastic cap sta□ped "Huitt-□ollars"□

**THENCE**, South 89 de□rees 26 □inutes 56 seconds West, a distance o□121.21 □eet to a 5/8 inch iron rod set □ith plastic cap sta□ped "Huitt-□ollars"□

**THENCE**, South 00 de□rees 33 □inutes 04 seconds East, a distance o□118.50 □eet to a 5/8 inch iron rod set □ith plastic cap sta□ped "Huitt-□ollars"□

**THENCE**, North 89 de□rees 30 □inutes 11 seconds East, a distance o□20.00 □eet to a 5/8 inch iron rod set □ith plastic cap sta□ped "Huitt-□ollars"□

**THENCE**, South 00 de□rees 33 □inutes 04 seconds East, a distance o□50.00 □eet to a 5/8 inch iron rod set □ith plastic cap sta□ped "Huitt-□ollars"□

**THENCE**, South 89 de□rees 30 □inutes 11 seconds West, a distance o□20.00 □eet to a 5/8 inch iron rod set □ith plastic cap sta□ped "Huitt-□ollars"□

**THENCE**, South 00 de□rees 33 □inutes 04 seconds East, a distance o□91.43 □eet to a 5/8 inch iron rod set □ith plastic cap sta□ped "Huitt-□ollars"□

**THENCE**, South 34 de□rees 30 □inutes 10 seconds East, a distance o□131.20 □eet to a 5/8 inch iron rod set □ith plastic cap sta□ped "Huitt-□ollars", and □ein□the □e□innin□o□a non-tan□ent curve to the le□t havin□a central an□le o□07 de□rees 51 □inutes 53 seconds, a radius o□303.50 □eet, su□tended □□a 41.63 □oot chord □hich □ears South 69 de□rees 33 □inutes 11 seconds East□

**THENCE**, alon□said curve to the le□t an arc distance o□41.66 □eet to a 5/8 inch iron rod set □ith plastic cap sta□ped "Huitt-□ollars"□

**THENCE**, South 16 de□rees 30 □inutes 52 seconds West, a distance o□14.00 □eet to a 5/8 inch iron rod set □ith plastic cap sta□ped "Huitt-□ollars", and □ein□the □e□innin□o□a non-tan□ent curve to the le□t havin□a central an□le o□03 de□rees 36 □inutes 42 seconds, a radius o□317.50 □eet, su□tended □□a 20.01 □oot chord □hich □ears South 75 de□rees 17 □inutes 29 seconds East□

**THENCE**, alon□said curve to the le□t an arc distance o□20.01 □eet to a 5/8 inch iron rod set □ith plastic cap sta□ped "Huitt-□ollars"□

**THENCE**, South 16 de□rees 30 □inutes 52 seconds West, a distance o□65.11 □eet to a 5/8 inch iron rod set □ith plastic cap sta□ped "Huitt-□ollars", and □ein□the □e□innin□o□a non-tan□ent curve to the ri□ht havin□a central an□le o□02 de□rees 59 □inutes 50 seconds, a radius o□382.50 □eet, su□tended □□a 20.01 □oot chord □hich □ears North 74 de□rees 59 □inutes 03 seconds West□

**THENCE**, alon□said curve to the ri□ht an arc distance o□20.01 □eet to a 5/8 inch iron rod set □ith plastic cap sta□ped "Huitt-□ollars"□

**THENCE**, South 16 de□rees 30 □inutes 52 seconds West, a distance o□32.14 □eet to a 5/8 inch iron rod set □ith plastic cap sta□ped "Huitt-□ollars"□

**THENCE**, South 89 de□rees 30 □inutes 11 seconds West, a distance o□350.07 □eet to a 5/8 inch iron rod set □ith plastic cap sta□ped "Huitt-□ollars"□

**THENCE**, South 41 de□rees 31 □inutes 49 seconds West, a distance o□11.46 □eet to a 5/8 inch iron rod set □ith plastic cap sta□ped "Huitt-□ollars"□

**THENCE**, South 00 de□rees 29 □inutes 49 seconds East, a distance o□106.49 □eet to a 5/8 inch iron rod set □ith plastic cap sta□ped "Huitt-□ollars"□

**THENCE**, North 89 de□rees 30 □inutes 11 seconds East, a distance o□20.00 □eet to a 5/8 inch iron rod set □ith plastic cap sta□ped "Huitt-□ollars"□

**THENCE**, South 00 de□rees 29 □inutes 49 seconds East, a distance o□50.00 □eet to a 5/8 inch iron rod set □ith plastic cap sta□ped "Huitt-□ollars"□

**THENCE**, South 89 de□rees 30 □inutes 11 seconds West, a distance o□20.00 □eet to a 5/8 inch iron rod set □ith plastic cap sta□ped "Huitt-□ollars"□

**THENCE**, South 00 de□rees 29 □inutes 49 seconds East, a distance o□230.00 □eet to a 5/8 inch iron rod set □ith plastic cap sta□ped "Huitt-□ollars"□

**THENCE**, North 89 de□rees 30 □inutes 11 seconds East, a distance o□20.00 □eet to a 5/8 inch iron rod set □ith plastic cap sta□ped "Huitt-□ollars"□

**THENCE**, South 00 de□rees 29 □inutes 49 seconds East, a distance o□50.00 □eet to a 5/8 inch iron rod set □ith plastic cap sta□ped "Huitt-□ollars"□

**THENCE**, South 89 de□rees 30 □inutes 11 seconds West, a distance o□20.00 □eet to a 5/8 inch iron rod set □ith plastic cap sta□ped "Huitt-□ollars"□

**THENCE**, South 00 de□rees 29 □inutes 49 seconds East, a distance o□39.54 □eet to a 5/8 inch iron rod set □ith plastic cap sta□ped "Huitt-□ollars", and □ein□the □e□innin□o□a curve to the ri□ht havin□a central an□le o□20 de□rees 43 □inutes 47 seconds, a radius o□540.00 □eet, su□tended □□a 194.31 □oot chord □hich □ears South 09 de□rees 52 □inutes 04 seconds West□

**THENCE**, alon□said curve to the ri□ht an arc distance o□195.37 □eet to a 5/8 inch iron rod set □ith plastic cap sta□ped "Huitt-□ollars"□

**THENCE**, South 65 de□rees 29 □inutes 49 seconds East, a distance o□23.00 □eet to a 5/8 inch iron rod set □ith plastic cap sta□ped "Huitt-□ollars"□

**THENCE**, South 24 de□rees 30 □inutes 11 seconds West, a distance o□50.00 □eet to a 5/8 inch iron rod set □ith plastic cap sta□ped "Huitt-□ollars"□

**THENCE**, North 65 de□rees 29 □inutes 49 seconds West, a distance o□21.50 □eet to a 5/8 inch iron rod set □ith plastic cap sta□ped "Huitt-□ollars"□

**THENCE**, South 24 de□rees 30 □inutes 11 seconds West, a distance o□247.00 □eet to a 5/8 inch iron rod set □ith plastic cap sta□ped "Huitt-□ollars"□

**THENCE**, South 65 de□rees 29 □inutes 49 seconds East, a distance o□20.00 □eet to a 5/8 inch iron rod set □ith plastic cap sta□ped "Huitt-□ollars"□

**THENCE**, South 24 de□rees 30 □inutes 11 seconds West, a distance o□50.00 □eet to a 5/8 inch iron rod set □ith plastic cap sta□ped "Huitt-□ollars"□

**THENCE**, North 65 de□rees 29 □inutes 49 seconds West, a distance o□20.00 □eet to a 5/8 inch iron rod set □ith plastic cap sta□ped "Huitt-□ollars"□

**THENCE**, South 24 de□rees 30 □inutes 11 seconds West, a distance o□247.00 □eet to a 5/8 inch iron rod set □ith plastic cap sta□ped "Huitt-□ollars"□

**THENCE**, South 65 de□rees 29 □inutes 49 seconds East, a distance o□43.39 □eet to a 5/8 inch iron rod set □ith plastic cap sta□ped "Huitt-□ollars"□

**THENCE**, South 24 de□rees 30 □inutes 11 seconds West, a distance o□50.00 □eet to a 5/8 inch iron rod set □ith plastic cap sta□ped "Huitt-□ollars"□

**THENCE**, North 65 de□rees 29 □inutes 49 seconds West, a distance o□20.00 □eet to a 5/8 inch iron rod set □ith plastic cap sta□ped "Huitt-□ollars"□

**THENCE**, South 24 de□rees 30 □inutes 11 seconds West, a distance o□109.05 □eet to a 5/8 inch iron rod set □ith plastic cap sta□ped "Huitt-□ollars"□

**THENCE**, South 00 de□rees 29 □inutes 49 seconds East, a distance o□193.80 □eet to a 5/8 inch iron rod set □ith plastic cap sta□ped "Huitt-□ollars"□

**THENCE**, North 89 de□rees 30 □inutes 11 seconds East, a distance o□13.40 □eet to a 5/8 inch iron rod set □ith plastic cap sta□ped "Huitt-□ollars"□

**THENCE**, South 00 de□rees 29 □inutes 49 seconds East, a distance o□50.00 □eet to a 5/8 inch iron rod set □ith plastic cap sta□ped "Huitt-□ollars"□

**THENCE**, South 89 de□rees 30 □inutes 11 seconds West, a distance o□20.00 □eet to a 5/8 inch iron rod set □ith plastic cap sta□ped "Huitt-□ollars"□

**THENCE**, South 00 de□rees 29 □inutes 49 seconds East, a distance o□130.00 □eet to a 5/8 inch iron rod set □ith plastic cap sta□ped "Huitt-□ollars" on the north ri□ht o□□a□line o□Count□Road 83 (70 □oot □ide ri□ht o□□a□) as descri□ed in instru□ent to the Cit□o□Celina, recorded in Docu□ent No. 20160421000479030 , O.P.R.C.C.T□

**THENCE**, South 89 de□rees 30 □inutes 11 seconds West, alon□the north ri□ht o□□a□line o□said Count□Road 83, a distance o□632.89 □eet to a 5/8 inch iron rod set □ith plastic cap sta□ped "Huitt-□ollars"□

**THENCE**, North 00 de□rees 29 □inutes 49 seconds West, departin□the north ri□ht o□□a□line o□said Count□Road 83, a distance o□28.00 □eet to a 5/8 inch iron rod set □ith plastic cap sta□ped "Huitt-□ollars"□

**THENCE**, North 89 de□rees 30 □inutes 11 seconds East, a distance o□120.00 □eet to a 5/8 inch iron rod set □ith plastic cap sta□ped "Huitt-□ollars"□

**THENCE**, North 00 de□rees 29 □inutes 49 seconds West, a distance o□184.00 □eet to a 5/8 inch iron rod set □ith plastic cap sta□ped "Huitt-□ollars"□

**THENCE**, North 00 de□rees 29 □inutes 49 seconds West, a distance o□120.00 □eet to a 5/8 inch iron rod set □ith plastic cap sta□ped "Huitt-□ollars"□

**THENCE**, North 89 de□rees 30 □inutes 11 seconds East, a distance o□96.57 □eet to a 5/8 inch iron rod set □ith plastic cap sta□ped "Huitt-□ollars", and □ein□the □e□innin□o□a curve to the ri□ht havin□a central an□le o□25 de□rees 00 □inutes 00 seconds, a radius o□225.00 □eet, su□tended □□a 97.40 □oot chord □hich □ears South 77 de□rees 59 □inutes 49 seconds East□

**THENCE**, alon□said curve to the ri□ht an arc distance o□98.17 □eet to a 5/8 inch iron rod set □ith plastic cap sta□ped "Huitt-□ollars"□

**THENCE**, South 65 de□rees 29 □inutes 49 seconds East, a distance o□93.21 □eet to a 5/8 inch iron rod set □ith plastic cap sta□ped "Huitt-□ollars", and □ein□the □e□innin□o□a non-tan□ent curve to the le□t havin□a central an□le o□281 de□rees 58 □inutes 50 seconds, a radius o□60.00 □eet, su□tended □□a 75.53 □oot chord □hich □ears North 38 de□rees 53 □inutes 19 seconds East□

**THENCE**, alon□said curve to the le□t an arc distance o□295.29 □eet to a 5/8 inch iron rod set □ith plastic cap sta□ped "Huitt-□ollars"□

**THENCE**, North 24 de□rees 30 □inutes 11 seconds East, a distance o□115.71 □eet to a 5/8 inch iron rod set □ith plastic cap sta□ped "Huitt-□ollars"□

**THENCE**, South 65 de□rees 29 □inutes 49 seconds East, a distance o□50.17 □eet to a 5/8 inch iron rod set □ith plastic cap sta□ped "Huitt-□ollars"□

**THENCE**, North 24 de□rees 30 □inutes 11 seconds East, a distance o□115.71 □eet to a 5/8 inch iron rod set □ith plastic cap sta□ped "Huitt-□ollars"□

**THENCE**, North 65 de□rees 29 □inutes 49 seconds West, a distance o□20.00 □eet to a 5/8 inch iron rod set □ith plastic cap sta□ped "Huitt-□ollars"□

**THENCE**, North 24 de□rees 30 □inutes 11 seconds East, a distance o□50.00 □eet to a 5/8 inch iron rod set □ith plastic cap sta□ped "Huitt-□ollars"□

**THENCE**, South 65 de□rees 29 □inutes 49 seconds East, a distance o□20.00 □eet to a 5/8 inch iron rod set □ith plastic cap sta□ped "Huitt-□ollars"□

**THENCE**, North 24 de□rees 30 □inutes 11 seconds East, a distance o□123.50 □eet to a 5/8 inch iron rod set □ith plastic cap sta□ped "Huitt-□ollars"□

**THENCE**, North 65 de□rees 29 □inutes 49 seconds West, a distance o□237.62 □eet to a 5/8 inch iron rod set □ith plastic cap sta□ped "Huitt-□ollars"□

**THENCE**, North 79 de□rees 43 □inutes 51 seconds West, a distance o□50.24 □eet to a 5/8 inch iron rod set □ith plastic cap sta□ped "Huitt-□ollars"□

**THENCE**, South 89 de□rees 30 □inutes 11 seconds West, a distance o□395.96 □eet to a 5/8 inch iron rod set □ith plastic cap sta□ped "Huitt-□ollars"□

**THENCE**, South 00 de□rees 29 □inutes 49 seconds East, a distance o□108.50 □eet to a 5/8 inch iron rod set □ith plastic cap sta□ped "Huitt-□ollars"□

**THENCE**, South 45 de□rees 29 □inutes 49 seconds East, a distance o□14.14 □eet to a 5/8 inch iron rod set □ith plastic cap sta□ped "Huitt-□ollars"□

**THENCE**, North 89 de□rees 30 □inutes 11 seconds East, a distance o□23.00 □eet to a 5/8 inch iron rod set □ith plastic cap sta□ped "Huitt-□ollars"□

**THENCE**, South 00 de□rees 29 □inutes 49 seconds East, a distance o□50.00 □eet to a 5/8 inch iron rod set □ith plastic cap sta□ped "Huitt-□ollars"□

**THENCE**, South 89 de□rees 30 □inutes 11 seconds West, a distance o□23.00 □eet to a 5/8 inch iron rod set □ith plastic cap sta□ped "Huitt-□ollars"□

**THENCE**, South 44 de□rees 30 □inutes 11 seconds West, a distance o□14.14 □eet to a 5/8 inch iron rod set □ith plastic cap sta□ped "Huitt-□ollars"□

**THENCE**, South 00 de□rees 29 □inutes 49 seconds East, a distance o□22.00 □eet to a 5/8 inch iron rod set □ith plastic cap sta□ped "Huitt-□ollars"□

**THENCE**, South 89 de□rees 30 □inutes 11 seconds West, a distance o□50.00 □eet to a 5/8 inch iron rod set □ith plastic cap sta□ped "Huitt-□ollars"□

**THENCE**, North 00 de□rees 29 □inutes 49 seconds West, a distance o□22.00 □eet to a 5/8 inch iron rod set □ith plastic cap sta□ped "Huitt-□ollars"□

**THENCE**, North 45 de□rees 29 □inutes 49 seconds West, a distance o□14.14 □eet to a 5/8 inch iron rod set □ith plastic cap sta□ped "Huitt-□ollars"□

**THENCE**, South 89 de□rees 30 □inutes 11 seconds West, a distance o□215.00 □eet to a 5/8 inch iron rod set □ith plastic cap sta□ped "Huitt-□ollars"□

**THENCE**, South 44 de□rees 30 □inutes 11 seconds West, a distance o□14.14 □eet to a 5/8 inch iron rod set □ith plastic cap sta□ped "Huitt-□ollars"□

**THENCE**, South 00 de□rees 29 □inutes 49 seconds East, a distance o□25.00 □eet to a 5/8 inch iron rod set □ith plastic cap sta□ped "Huitt-□ollars"□

**THENCE**, South 89 de□rees 30 □inutes 11 seconds West, a distance o□50.00 □eet to a 5/8 inch iron rod set □ith plastic cap sta□ped "Huitt-□ollars"□

**THENCE**, North 00 de□rees 29 □inutes 49 seconds West, a distance o□30.13 □eet to a 5/8 inch iron rod set □ith plastic cap sta□ped "Huitt-□ollars"□

**THENCE**, South 89 de□rees 30 □inutes 11 seconds West, a distance o□120.57 □eet to a 5/8 inch iron rod set □ith plastic cap sta□ped "Huitt-□ollars" in the east line o□The Carter Ranch Phase III, an addition to the Cit□o□Celina, Te□as, recorded in Ca□inet 2006, Pa□e 460, M.R.C.C.T. □

**THENCE**, alon□the easterl□lines o□said Carter Ranch Phase III and said Carter Ranch Phase IIA, North 00 de□rees 33 □inutes 04 seconds West, passing at a distance of 1,199.00 feet a 5/8 inch iron rod found with plastic cap stamped "Huitt-Zollars" at the northeast corner of Carter Ranch Road (80 □oot ri□ht o□□a□), recorded in Ca□inet 2007, Pa□e 292, M.R.C.C.T., in all a total distance o□2,467.11 □eet to the **POINT OF BEGINNING** and **CONTAINING** havin□an area o□103.35 acres o□land, □ore or less.

**SAVE & EXCEPT TRACT**

**BEING** all o□a 12.00 acre tract o□land descri□ed in instru□ent to Celina Independent School District, recorded in Docu□ent No. 20160404000401310, O.P.R.C.C.T.,

**GROSS AREA - 103.35 Acres**
**NET AREA - 91.35 Acres**

NOW, THEREFORE, KNOW ALL MEN BY THESE PRESENTS:

That Celina Develop□ent North, LLC, the Celina Independent School District, and the Cit□o□Celina actin□herein □□and throu□h his/her(its) dul□authori□ed o□icer(s), does here□□adopt this plat desi□natin□the herein a□ove descri□ed propert□as Blue□ood Phase I, an addition to the Cit□ o□Celina, Te□as, and does here□□dedicate, in □ee si□ple to the pu□lic use □orever, the streets, ri□hts-o□-□a□, and other pu□lic i□prove□ents sho□n thereon. The streets and alle□s, i□an□, are dedicated □or street purposes. The ease□ents and pu□lic use areas, as sho□n, are dedicated, □or the pu□lic use □orever, □or the purposes indicated on this plat. No □uildin□s, □ences, trees, shru□s or other i□prove□ents or □ro□ths shall □e constructed or placed upon, over or across the ease□ents as sho□n, e□cept that landscape i□prove□ents □a□□e placed on landscape ease□ents, i□approved □□the Cit□Council o□the Cit□o□ Celina. In addition, utilit□ease□ents □a□also □e used □or the □utual use and acco□□odation o□all pu□lic utilities desirin□to use or usin□the sa□e unless the ease□ent li□its the use to particular utilities, said use □□pu□lic utilities □ein□su□ordinate to the pu□lic's and Cit□o□Celina's use thereo□ The Cit□o□Celina and pu□lic utilit□entities shall have the ri□ht to re□ove and keep re□oved all or parts o□ an□□uildin□s, □ences, trees, shru□s or other i□prove□ents or □ro□ths □hich □a□in an□□a□endan□er or inter□ere □ith the construction, □aintenance, or e□icienc□o□their respective s□ste□s in said ease□ents. The Cit□o□Celina and pu□lic utilit□entities shall at all ti□es have the □ull ri□ht in□ress and e□ress to or □ro□ their respective ease□ents □or the purpose o□constructin□, reconstructin□, inspectin□, patrollin□, □aintainin□, readin□□eters, and addin□to or re□ovin□all or parts o□their respective s□ste□s □ithout the necessit□at an□ ti□e procurin□per□ission □ro□ an□one.

This plat approved su□ect to all plattin□ordinances, rules, re□ulations and resolutions o□the Cit□o□Celina, Te□as.

WITNESS, my hand this the _____day of, ________________ 2017.

B□

Authori□ed Si□nature o□□□□□□□□□□□□□□□□□□□□□□□□□□□□, Celina Develop□ent North, LLC

□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□
Title

STATE OF TEXAS
CO□NTY OF DALLAS

Be□ore □e, the undersi□ned authorit□, a Notar□Pu□lic in and □or the State o□Te□as, on this da□personall□appeared □□□□□□□□□□ □□□□□□□□□□□□□□□□□□□□, O□ner, kno□n to □e to □e the person □hose na□e is su□scri□ed to the □ore□oin□instru□ent and ackno□led□ed to □e that he e□ecuted the sa□e □or the purpose and considerations therein e□pressed.

Given under □□hand and seal o□o□ice, this □□□□□□□□da□o□ □□□□□□□□□□□□□□□□, 2017.

□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□
Notar□Pu□lic in and □or the State o□Te□as

M□Co□□ission E□pires On: □□□□□□□□□□□□□□□□□□□□□□□□□□□□□

B□

Authori□ed Si□nature o□□□□□□□□□□□□□□□□□□□□□□□□□□□□, Cit□o□Celina

□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□
Title

STATE OF TEXAS
CO□NTY OF DALLAS

Be□ore □e, the undersi□ned authorit□, a Notar□Pu□lic in and □or the State o□Te□as, on this da□personall□appeared □□□□□□□□□□ □□□□□□□□□□□□□□□□□□□□, O□ner, kno□n to □e to □e the person □hose na□e is su□scri□ed to the □ore□oin□instru□ent and ackno□led□ed to □e that he e□ecuted the sa□e □or the purpose and considerations therein e□pressed.

Given under □□hand and seal o□o□ice, this □□□□□□□□da□o□ □□□□□□□□□□□□□□□□, 2017.

□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□
Notar□Pu□lic in and □or the State o□Te□as

M□Co□□ission E□pires On: □□□□□□□□□□□□□□□□□□□□□□□□□□□□□

KNOW ALL MEN BY THESE PRESENTS:

THAT, I, Eric J. Yahoud□do here□□certi□□that I prepared this plat □ro□ an actual and accurate surve□o□the land and that the corner □onu□ents sho□n thereon □ere properl□placed under □□personal supervision, in accordance □ith the su□division re□ulations o□the Cit□o□Celina, Te□as.

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

Eric J. Yahoud□, Re□istered Pro□essional Land Surve□or
Te□as Re□istration No. 4862
Fir□ Re□istration No. 10025600

Date: □□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□

STATE OF TEXAS
CO□NTY OF DALLAS

Be□ore □e, the undersi□ned authorit□, a Notar□Pu□lic in and □or the State o□Te□as, on this da□personall□appeared Eric J. Yahoud□, kno□n to □e to □e the person □hose na□e is su□scri□ed to the □ore□oin□instru□ent and ackno□led□ed to □e that he e□ecuted the sa□e □or the purpose and considerations therein e□pressed.

Given under □□hand and seal o□o□ice, this □□□□□□□da□o□□□□□□□□□□□□□□□□□□□□□□, 2017.

Notar□Pu□lic in and □or the State o□Te□as□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□

M□Co□□ission E□pires On:□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□

PROPERTY LOCATION STATEMENT
This propert□is located in the corporate li□its o□the Cit□o□Celina, Collin Count□, Te□as.

Si□nature o□Ma□or | Date o□approval

ATTEST:

Cit□Secretar□ | Date

Approved □or preparation o□□inal plat □ollo□in□construction o□all pu□lic i□prove□ents (or appropriate sureties thereo□) necessar□□or the su□division sho□n on the plat.

RECOMMENDED BY: | Plannin□and □onin□Co□□ission, Cit□o□Celina, Te□as

Si□nature o□Chairperson | Date o□Reco□□endation

APPROVED BY: | Cit□Council, Cit□o□Celina, Te□as

Si□nature o□Ma□or | Date o□Approval

ATTEST:

Cit□Secretar□ | Date

FINAL PLAT
## BL□EWOOD, PHASE 1
CONTAINING
337 RESIDENTIAL LOTS, 35 OPEN SPACES,
1 AMENITY CENTER LOT
1 WELL LOT
TOTALING 103.35 ACRES
SIT□ATED IN THE
JOHN CAHILL S□RVEY, ABST. No. 171
SHELBY GLASS S□RVEY, ABST. No. 346
CITY OF CELINA, COLLIN CO□NTY, TEXAS

*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*

COUNTY RECORDING INFORMATION

OWNER
□LUEWOOD PHASE 1, LLC
3000 Turtle Creek Blvd Dallas, TX 75219
Phone (214) 303-5535 Fa□(972) 201-2989

PREPARED BY:
HUITT-ZOLLARS
Huitt-□ollars, Inc. Dallas
1717 McKinney Avenue, Suite 1400, Dallas, TX 75202
Phone (214) 871-3311 Fa□(214) 871-0757

MAY 2017 SHEET 4 OF 4

CITY PROJECT N□MBER: P-201606-01 PROJECT N□MBER: R303661.02

DWG: J:\Surve□30366102 - Hill□ood North□d□□NOWELL□FINAL PLAT.d□□ □SER: □□adrid
DATE: Ma□26, 2017 10:11a□ XREFS: X - PH 1-PBASE NOWELL□CONST-PLT-BD MAP WELLS NORTH SCHOOL TRACT - Title Surve□ WELLS NORTH PHASE 1 Title Surve□

**Planning & Development Services**
City of Celina, Texas

# Memorandum

| | |
|---|---|
| To: | **The Celina Planning and Zoning Commission** |
| CC: | Lance Vanzant, Interim City Manager<br>Helen-Eve Liebman, AICP, Director of Planning & Development Services |
| From: | Robyn Miga, Planner |
| Meeting Date: | June 20, 2017 |
| Re: | Light Farms Brenham Construction Plat |

---

**Action Requested:**
Consider and act upon a Construction Plat for Light Farms Brenham, being a ±26.15 acre tract of land situated in the Collin County School Land Survey No. 14, Abstract No. 167, and generally located north of County Road 5, south of County Road 51, east of the Burlington Northern Santa Fe Railroad, and west of Preston Road, containing 127 residential lots, and six (6) open space lots. (Light Farms Brenham Construction Plat)

**Background Information:**
Staff has reviewed the proposed Construction Plat for Light Farms Brenham, and the remaining comments are minor in nature and can be addressed prior to City Council approval July 11, 2017.

**Board Review/Citizen Input:**
N/A

**Alternatives:**
N/A

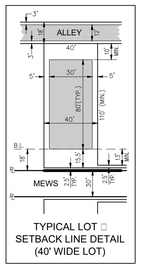
**Financial Considerations:**
N/A

**Legal Review:**
N/A

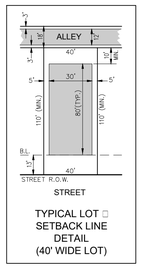
**Supporting Documents:**
Plat Exhibit

**Staff Recommendation:**
Staff recommends approval pending all comments being addressed prior to City Council.

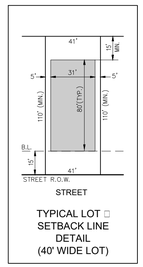
| CURVE TABLE | | | | | |
|---|---|---|---|---|---|
| CURVE | DELTA | RADIUS | CH BEARING | CHORD | LENGTH |
| C45 | 11°17'12" | 500.50' | N 72°44'37" W | 98.43' | 98.59' |
| C46 | 82°41'31" | 40.00' | S 29°43'59" E | 52.85' | 57.73' |
| C47 | 95°14'56" | 40.00' | N 59°14'15" E | 59.10' | 66.50' |
| C48 | 90°00'00" | 40.00' | S 33°23'14" E | 56.57' | 62.83' |
| C49 | 90°00'00" | 40.00' | N 56°36'46" E | 56.57' | 62.83' |
| C50 | 8°06'51" | 650.00' | N 50°20'15" W | 91.98' | 92.05' |



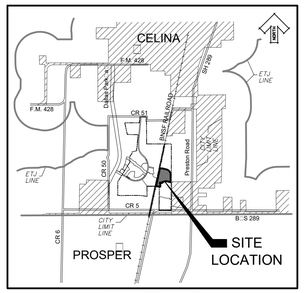

TYPICAL LOT □ SETBACK LINE DETAIL (40' WIDE LOT)




TYPICAL LOT □ SETBACK LINE DETAIL (40' WIDE LOT)




TYPICAL LOT □ SETBACK LINE DETAIL (40' WIDE LOT)




VICINITY MAP

SCALE IN FEET

BASIS OF BEARING: THE BEARINGS SHOWN ARE ON N.A.D. 1983, TIED TO TEXAS STATE PLANE COORDINATE SYSTEM OF 1983, NORTH CENTRAL TEXAS □ONE (4202)

## LEGEND

- IRF — IRON ROD FO□ND
- IRF (H□) — 5/8" IRON ROD FO□ND WITH PLASTIC CAP STAMPED "H□ITT-□OLLARS"
- IRS — 5/8" IRON ROD SET W/ "H□ITT-□OLLARS" CAP
- MIN. F.F — MINIM□M FINISH FLOOR
- WME — WALL MAINTENANCE EASEMENT
- □E — □TILITY EASEMENT
- B.L. — B□ILDING LINE
- ◆ — DENOTES STREET NAME CHANGE
- L.R.C.C.T. — LAND RECORDS, COLLIN CO□NTY, TEXAS
- P.R.C.C.T. — PLAT RECORDS, COLLIN CO□NTY, TEXAS

| LINE TABLE | | |
|---|---|---|
| LINE | BEARING | LENGTH |
| L46 | S 89°59'37" E | 15.65' |
| L47 | S 31°11'00" E | 13.44' |
| L48 | N 30°02'52" E | 15.81' |
| L49 | S 06°49'19" E | 15.81' |
| L50 | S 57°47'51" W | 13.68' |
| L51 | N 27°00'40" W | 12.99' |
| L52 | N 59°57'08" W | 15.92' |
| L53 | N 78°45'17" E | 16.12' |
| L54 | S 86°43'32" E | 15.91' |
| L55 | S 47°47'47" E | 15.91' |
| L56 | N 85°43'15" W | 28.45' |
| L57 | N 32°26'42" E | 21.46' |
| L58 | S 59°57'08" E | 15.81' |

| LINE TABLE | | |
|---|---|---|
| LINE | BEARING | LENGTH |
| L1 | S 52°18'16" W | 52.95' |
| L2 | N 85°43'15" W | 44.61' |
| L3 | S 32°26'42" W | 5.45' |
| L4 | S 32°02'25" E | 14.45' |
| L5 | S 85°00'08" W | 10.00' |
| L6 | N 79°50'18" E | 54.42' |
| L7 | N 32°32'13" E | 35.90' |
| L8 | S 78°23'14" E | 1.84' |
| L9 | N 32°26'42" E | 21.46' |
| L10 | S 78°23'14" E | 37.37' |
| L11 | S 71°04'45" E | 43.12' |
| L12 | S 78°23'14" E | 96.37' |
| L13 | N 85°00'08" E | 78.09' |
| L15 | N 79°35'15" E | 47.36' |
| L16 | N 10°24'45" W | 56.81' |
| L17 | N 22°44'21" E | 52.08' |
| L18 | N 10°28'00" E | 48.69' |
| L19 | S 56°36'46" W | 14.14' |
| L20 | N 14°26'02" W | 13.56' |
| L21 | S 74°50'17" W | 14.62' |
| L22 | N 47°29'52" W | 16.82' |
| L23 | S 13°26'14" W | 15.81' |
| L24 | S 23°25'58" E | 15.81' |
| L25 | N 31°00'44" E | 14.88' |
| L26 | N 50°18'57" W | 15.38' |
| L27 | N 71°15'00" E | 19.08' |
| L28 | S 07°45'07" E | 20.35' |
| L29 | S 75°50'33" W | 36.46' |
| L30 | S 10°46'24" E | 22.03' |
| L31 | N 33°23'14" W | 35.36' |
| L32 | N 56°36'46" E | 14.14' |
| L33 | S 56°36'46" W | 35.36' |
| L34 | S 33°23'14" E | 12.73' |
| L35 | N 39°07'13" W | 16.10' |
| L36 | N 76°56'46" W | 15.57' |
| L37 | N 83°10'41" E | 15.81' |
| L38 | N 59°57'08" W | 15.81' |
| L39 | S 33°23'14" E | 14.00' |
| L40 | S 83°10'41" W | 15.81' |
| L41 | N 59°57'08" W | 15.81' |
| L42 | S 30°25'26" W | 15.85' |
| L43 | S 06°49'19" E | 15.81' |
| L44 | S 83°10'41" W | 15.81' |
| L45 | N 56°44'20" W | 15.65' |

| CURVE TABLE | | | | | |
|---|---|---|---|---|---|
| CURVE | DELTA | RADIUS | CH BEARING | CHORD | LENGTH |
| C1 | 16°45'18" | 398.50' | S 60°39'57" W | 115.90' | 116.31' |
| C2 | 11°52'57" | 350.00' | N 72°26'45" W | 72.46' | 72.59' |
| C3 | 11°52'57" | 350.00' | N 72°26'45" W | 72.46' | 72.59' |
| C4 | 18°27'46" | 275.00' | N 23°12'48" E | 88.23' | 88.62' |
| C5 | 18°27'46" | 250.00' | S 66°47'12" E | 80.21' | 80.56' |
| C6 | 32°26'34" | 275.00' | S 73°46'35" E | 153.64' | 155.71' |
| C7 | 21°56'25" | 250.00' | S 67°25'01" E | 95.15' | 95.73' |
| C8 | 21°56'25" | 79.00' | S 67°25'01" E | 30.07' | 30.25' |
| C9 | 7°18'29" | 300.00' | S 74°43'59" E | 38.24' | 38.26' |
| C10 | 16°36'38" | 200.00' | S 86°41'33" E | 57.78' | 57.98' |
| C11 | 20°49'55" | 106.00' | N 22°01'44" E | 38.33' | 38.54' |
| C12 | 21°46'28" | 250.00' | S 89°16'28" E | 94.44' | 95.01' |
| C13 | 22°01'31" | 49.00' | S 89°23'59" E | 18.72' | 18.84' |
| C14 | 10°13'52" | 517.00' | S 73°00'43" E | 92.20' | 92.32' |
| C15 | 10°29'27" | 500.00' | S 73°08'30" E | 91.42' | 91.55' |
| C16 | 21°56'25" | 800.00' | S 67°25'01" E | 304.48' | 306.34' |
| C17 | 5°01'15" | 500.00' | N 14°07'24" E | 43.80' | 43.82' |
| C18 | 20°49'55" | 250.00' | N 22°01'44" E | 90.40' | 90.90' |
| C19 | 33°09'06" | 175.00' | N 6°09'48" E | 99.85' | 101.26' |
| C20 | 20°52'45" | 150.00' | N 0°01'38" E | 54.36' | 54.66' |
| C21 | 12°14'31" | 350.00' | S 38°39'28" W | 74.64' | 74.78' |
| C22 | 45°14'55" | 275.00' | N 22°09'16" E | 211.58' | 217.18' |
| C23 | 18°35'13" | 250.00' | N 9°45'48" W | 80.75' | 81.10' |
| C24 | 14°03'32" | 250.00' | N 12°01'38" W | 61.19' | 61.34' |
| C25 | 134°16'42" | 50.00' | S 10°48'19" E | 92.15' | 117.18' |
| C26 | 44°43'16" | 30.00' | N 33°58'24" E | 22.83' | 23.42' |
| C27 | 38°14'41" | 20.00' | N 7°30'34" W | 13.10' | 13.35' |
| C28 | 165°50'58" | 50.00' | S 56°17'35" W | 99.24' | 144.73' |
| C29 | 37°36'17" | 20.00' | S 59°35'05" E | 12.89' | 13.13' |
| C30 | 120°39'33" | 50.00' | N 29°40'06" W | 86.89' | 105.29' |
| C31 | 35°39'33" | 30.00' | S 12°49'54" W | 18.37' | 18.67' |
| C32 | 90°00'00" | 40.00' | N 33°23'14" W | 56.57' | 62.83' |
| C33 | 108°39'24" | 40.00' | S 65°56'28" W | 64.99' | 75.86' |
| C34 | 104°39'48" | 40.00' | N 49°16'53" E | 63.32' | 73.07' |
| C35 | 78°00'52" | 40.00' | N 39°22'48" W | 50.35' | 54.46' |
| C36 | 90°00'00" | 15.00' | S 77°26'42" W | 21.21' | 23.56' |
| C37 | 90°00'00" | 15.00' | N 12°33'18" W | 21.21' | 23.56' |
| C38 | 90°00'00" | 15.00' | S 49°59'52" E | 21.21' | 23.56' |
| C39 | 88°52'02" | 15.00' | S 73°38'52" W | 21.00' | 23.27' |
| C40 | 90°00'00" | 15.00' | N 33°23'14" W | 21.21' | 23.56' |
| C41 | 90°00'00" | 15.00' | N 56°36'46" E | 21.21' | 23.56' |
| C42 | 89°43'41" | 60.00' | N 33°31'23" W | 84.65' | 93.96' |
| C43 | 90°00'00" | 15.00' | N 56°36'46" E | 21.21' | 23.56' |
| C44 | 11°17'12" | 378.50' | N 72°44'37" W | 74.44' | 74.56' |

CONSTR□CTION PLAT

# LIGHT FARMS

## THE BRENHAM NEIGHBORHOOD

CONTAINING

127 RESIDENTIAL LOTS, 6 OPEN SPACES

TOTALING 26.15 ACRES

SIT□ATED IN THE

COLLIN CO□NTY SCHOOL LAND S□RVEY No. 14, ABST. No. 167

COLLIN CO□NTY, TEXAS

OWNER


LFC DE□CO □RENHAM, LLC

8401 NORTH CENTRAL EXPRESSWA□, SUITE 350, DALLAS, TX 75225

TEL. 214-292-3410 FAX. 214-292-3411

CONTACT: TONY R□GGERI

PREPARED BY:

HUITT-ZOLLARS

Huitt- ollars, Inc. Dallas

1717 McKinney Avenue, Suite 1400, Dallas, TX 75202

Phone (214) 871-3311 Fa□(214) 871-0757


MAY, 2017 SHEET 1 OF 3

CO□NTY RECORDING INFORMATION

DWG: I:\pro\R013905.65 - Li□ht Far□s - Brenha□ Residential Dev\10 CADD □ BIM\10.1 AutoCAD\BRENHAM\CONST PLAT.d□□ □SER: ta□

DATE: Ma□23, 2017 11:07a□ XREFS: BRENHAM\PLAT BORDER BRENHAM-BASE BRENHAM-EXISTING LF-MASTER-BASE BRENHAM\EX CONTO□R

CAD FILE PATH: I:\pro\R013905.65 - Li□ht Far□s - Brenha□ Residential Dev\10 CADD □ BIM\10.1 AutoCAD\BRENHAM\CONST PLAT.d□□

CITY PROJECT N□MBER: P-2017XX-01

PROJECT N□MBER: R013905.65

STATE OF TEXAS

CO□NTY OF COLLIN

OWNER'S CERTIFICATE

WHEREAS, LFC DEVCO BRENHAM, LLC ("Co□pan□") is the o□ner o□a tract o□land situated in the Collin Count□School Land Surve□No. 14, A□stract No. 167, Collin Count□, Te□as and □ein□a portion o□Tract B (209.022 acres o□land) as descri□ed in instru□ent to LFC Land Co□pan□, LLC as recorded in Docu□ent No. 20120423000464780 o□the O□icial Pu□lic Records o□Collin Count□, Te□as, (O.P.R.C.C.T.) and □ein□ □ore particular□descri□ed as □ollo□s:

BEGINNING at a 5/8 inch iron rod found with plastic cap stamped "Huitt-Zollars" on the north right-of-way line of Worthington Way, (a variable width right-of-way as shown on plat recorded under Count□Clerk's File No. 2016-601 o□the Plat Records o□Collin Count□, Te□as), at the intersection □ith the easterl□ri□ht-o□□a□line (100' ri□ht-o□□a□) o□the Burlin□ton Northern Santa Fe Rail□a□Co□pan□ (□or□erl□Red River Te□as □ Southern Rail□a□Co.) as recorded in Volu□e 121, Pa□e 20, O.P.R.C.C.T.□

THENCE, North 11 de□ree 20 □inutes 28 seconds East alon□easterl□ri□ht-o□□a□line o□Burlin□ton Northern Santa Fe Rail□a□Co□pan□, a distance o□1,037.73 □eet to a 5/8 inch iron rod set with plastic cap stamped "Huitt-Zollars" for a corner;

THENCE, North 84 de□rees 14 □inutes 18 seconds East departin□said easterl□ri□ht-o□□a□line o□Burlin□ton Northern Santa Fe Rail□a□Co□pan□, a distance o□116.33 □eet to a 5/8 inch iron rod set with plastic cap stamped "Huitt-Zollars" for the beginning of a curve to the right having a central angle of 38 degrees 12 minutes 23 seconds, a radius of 276.40 □eet and □ein□su□tended □□a 180.92 □oot chord □hich □ears South 76 de□rees 39 □inutes 30 seconds East□

THENCE easterly along said curve to the right, an arc distance of 184.31 feet to a 5/8 inch iron rod set with plastic cap stamped "Huitt-Zollars" at the end of said curve;

THENCE, South 57 degrees 33 minutes 18 seconds East a distance of 418.79 feet to a 5/8 inch iron rod set with plastic cap stamped "Huitt-Zollars" at an angle point;

THENCE, South 74 degrees 41 minutes 43 seconds East a distance of 41.62 feet to a 5/8 inch iron rod set with plastic cap stamped "Huitt-Zollars" at an angle point;

THENCE, South 57 degrees 33 minutes 18 seconds East a distance of 70.01 feet to a 5/8 inch iron rod set with plastic cap stamped "Huitt-Zollars" at an angle point;

THENCE, South 44 degrees 12 minutes 31 seconds East a distance of 257.53 feet to a 5/8 inch iron rod set with plastic cap stamped "Huitt-Zollars" at an angle point;

THENCE, North 85 degrees 00 minutes 08 seconds East a distance of 96.66 feet to a 5/8 inch iron rod set with plastic cap stamped "Huitt-Zollars" on the east line of the a□ore□entioned Tract B (209.022 acres), also □ein□on the □est line o□Tracts 1 and 2 as descri□ed in instru□ent to O□ns□□1880 Far□s, Ltd. (O□ns□□) as recorded under the Count□Clerk's No. 99-0005737, O.P.R.C.C.T.□

THENCE, South 0 de□rees 28 □inutes 05 seconds East alon□the east line o□said Tract B (209.022 acres) and □est line o□said Tracts 1 and 2 (O□ns□□), a distance o□788.29 □eet to a 5/8 inch iron rod found with plastic cap stamped "Huitt-Zollars" on the northerly right-of-way line of John Campbell Trail (60 foot right-of-way as shown on the aforementioned plat o□Worthin□ton Wa□), said point also □ein□on a non-tan□ent curve to the le□t havin□central an□le o□16 de□rees 43 □inutes 22 seconds, a radius o□398.50 □eet and □ein□su□tended □□a 115.90 □oot chord □hich □ears South 60 de□rees 39 □inutes 57 seconds West□

THENCE south□esterl□alon□said northerl□ri□ht-o□□a□line o□John Ca□p□ell Trail and curve to the le□t, an arc distance o□116.31 □eet to a 5/8 inch iron rod □ound □ith plastic cap stamped "Huitt-Zollars" at the end of said curve;

THENCE, South 52 de□rees 18 □inutes 16 seconds West continuin□alon□the northerl□line o□said John Ca□p□ell Trail, a distance o□52.95 □eet to a 5/8 inch iron rod □ound □ith plastic cap stamped "Huitt-Zollars" for a corner;

THENCE, North 85 de□rees 43 □inutes 15 seconds West continuin□alon□a northerl□ri□ht-o□□a□corner clip at the intersection □ith the a□ore□entioned Worthin□ton Wa□, a distance of 44.61 feet to a 5/8 inch iron rod found with plastic cap stamped "Huitt-Zollars" for a corner, said point being on the northerly right-of-way line of Worthington Way (70 foot ri□ht-o□□a□at this point) and the □e□innin□o□a non-tan□ent curve to the le□t havin□a central an□le o□33 de□rees 17 □inutes 14 seconds, a radius o□635.00 □eet and □ein□su□tended □□a 363.75 □oot chord □hich □ears North 61 de□rees 44 □inutes 37 seconds West□

THENCE continuin□ □esterl□alon□the northerl□ri□ht-o□□a□line o□Worthin□ton Wa□the □ollo□in□:

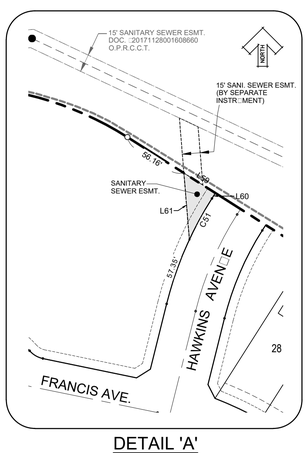
Along said curve to the left, an arc distance of 368.92 feet to a 5/8 inch iron rod found with plastic cap stamped "Huitt-Zollars" at the end of said curve;

North 78 degrees 23 minutes 14 seconds West a distance of 397.12 feet to a 5/8 inch iron rod found with plastic cap stamped "Huitt-Zollars" at the beginning of a curve to the ri□ht havin□a central an□le o□11 de□rees 52 □inutes 57 seconds, a radius o□350.00 □eet and □ein□su□tended □□a 72.46 □oot chord □hich □ears North 72 de□rees 26 □inutes 45 seconds West□

Along said curve to the right, an arc distance of 72.59 feet to a 5/8 inch iron rod found with plastic cap stamped "Huitt-Zollars" at the point of reverse curvature of a curve to the le□t havin□a central an□le o□11 de□rees 52 □inutes 57 seconds, a radius o□350.00 □eet and □ein□su□tended □□a 72.46 □oot chord □hich □ears North 72 de□rees 26 □inutes 45 seconds West□

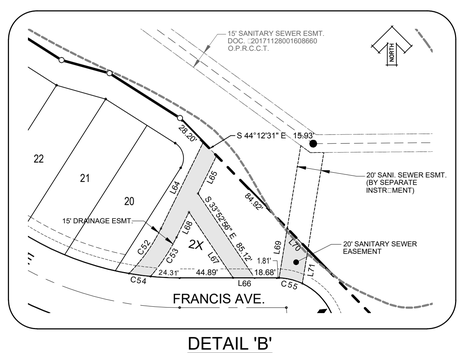
Along said curve to the left, an arc distance of 72.59 feet to a 5/8 inch iron rod found with plastic cap stamped "Huitt-Zollars" at the end of said curve (a 100 foot right-of-way at this point)□

North 78 de□rees 23 □inutes 14 seconds West a distance o□199.91 □eet to the POINT OF BEGINNING and containin□26.15 acres o□land, □ore or less.




DETAIL 'A'
SCALE: 1"=60'

| C□RVE TABLE | | | | | |
|---|---|---|---|---|---|
| C□RVE | DELTA | RADI□S | CH BEARING | CHORD | LENGTH |
| C51 | 7°30'35" | 300.00' | S 28°41'24" W | 39.29' | 39.32' |
| C52 | 18°25'37" | 144.45' | N 35°23'20" E | 46.26' | 46.46' |
| C53 | 14°39'53" | 157.50' | S 33°27'00" W | 40.20' | 40.31' |
| C54 | 4°11'09" | 250.00' | N 82°19'59" W | 18.26' | 18.26' |
| C55 | 23°08'27" | 50.00' | N 76°20'57" W | 20.06' | 20.19' |




DETAIL 'B'
SCALE: 1"=60'

| LINE TABLE | | |
|---|---|---|
| LINE | BEARING | LENGTH |
| L59 | S 57°33'16" E | 31.24' |
| L60 | S 32°26'42" W | 5.45' |
| L61 | N 04°41'19" W | 56.02' |
| L64 | N 26°07'04" E | 80.72' |
| L65 | S 26°07'04" W | 35.33' |
| L66 | N 89°59'52" W | 18.07' |
| L67 | N 33°52'56" W | 66.39' |
| L68 | S 26°07'04" W | 22.71' |
| L69 | N 09°19'06" E | 42.11' |
| L70 | S 44°12'31" E | 24.87' |
| L71 | S 09°19'06" W | 28.84' |

NOTES:

1. SELLING A PORTION OF THIS ADDITION BY METES AND BO□NDS IS A VIOLATION OF CITY ORDINANCE AND STATE LAW, AND IS S□BJECT TO FINES AND WITHHOLDING OF □TILITIES AND B□ILDING PERMITS.

2. THE OWNERSHIP, CARE AND MAINTENANCE OF ALL COMMON AREA LOTS 1-X, 2-X, 3-X, 4-X □ 5-X IS THE RESPONSIBILITY OF THE H.O.A.

3. FOR LOTS 40', 50', OR 60' WIDE WITH J-DRIVE, FRONT YARD SETBACK MAY BE RED□CED BY FIVE (5) FEET.

4. ALL LOT CORNERS WILL BE SET □PON COMPLETION OF CONSTR□CTION □SING A 5/8 INCH REBAR WITH A YELLOW PLASTIC CAP STAMPED "H□ITT-□OLLARS" IN AREAS WHERE IT IS NOT PHYSICALLY POSSIBLE TO SET REBAR, AN X C□T OR P.K. NAIL WILL BE □TILI□ED. THE CENTERLINE OF THE STREET RIGHT-OF-WAY WILL BE MON□MENTED WITH A SCRIBED "X" IN CONCRETE AT P.C.'S, P.T.'S AND INTERSECTION POINTS.

5. THE HOMEOWNER'S ASSOCIATION SHALL BE SOLELY RESPONSIBLE FOR THE MAINTENANCE OF THE STORM WATER SYSTEM AND STORM DRAINAGE SYSTEM ON PRIVATE PROPERTY. HOMEOWNER'S ASSOCIATION SHALL F□RTHER HOLD THE CITY OF CELINA HARMLESS FROM ANY DAMAGES TO PERSONS, TO THE OWNER'S LOT OR ANY LOT ARISING FROM S□CH MAINTENANCE RESPONSIBILITY. THE DRAINAGE EASEMENT SHOWN HERE□NDER SHALL NOT CREATE ANY AFFIRMATIVE D□TY TO THE CITY TO REPAIR, MAINTAIN OR CORRECT ANY CONDITION THAT EXISTS OR OCC□RS D□E TO THE NAT□RAL FLOW OF STORM WATER R□NOFF, INCL□DING B□T NOT LIMITED TO , STORM WATER OVERFLOW, EROSION AND SLO□GHING, LOSS OF VEGETATION AND TREES, S□BSIDENCE, AND INTERFERENCE WITH STR□CT□RES. THE CITY RETAINS THE RIGHT TO ENTER □PON THESE EASEMENTS FOR P□BLIC P□RPOSES.

NOW, THEREFORE, KNOW ALL MEN BY THESE PRESENTS:

That LFC DEVCO BRENHAM, LLC ("Co□pan□"), actin□herein □□and throu□h their respective dul□ authori□ed o□icer(s), do here□□adopt this plat desi□natin□the herein descri□ed propert□as **LIGHT FARMS**, **THE BRENHAM NEIGHBORHOOD**, an addition to Collin Count□, Te□as □ithin the e□tra-territorial □risdiction o□the Cit□o□Celina, Te□as. Co□pan□does here□□dedicate, in □ee si□ple, to the Collin Count□Municipal □tilit□District No. 1 ("District") □orever, the ease□ents and pu□lic use areas, streets, ri□hts-o□□a□, and pu□lic i□prove□ents contained therein. District does here□□ dedicate □or the pu□lic use □orever, the ease□ents and pu□lic use areas, the streets, ri□hts-o□□a□, and pu□lic i□prove□ents contained therein. The streets and alle□s, i□an□, are dedicated □or street purposes. The ease□ents and pu□lic use areas, as sho□n, are dedicated, □or the pu□lic use □orever, □or the purposes indicated on this plat. Not□ithstandin□the □ore□oin□, the District does here□□ dedicate to the Cit□o□Celina all □ater and sanitar□se□er i□prove□ents contained in the ri□ht-o□□a□ and ease□ents as sho□n on this plat in consideration □or the Cit□o□Celina's a□ree□ent to utili□e such i□prove□ents to serve propert□□□ithin the District. No □uildin□s, □ences, trees, shru□s or other i□prove□ents or □ro□ths shall □e constructed or placed upon, over or across the ease□ents as sho□n, e□cept that landscape i□prove□ents □a□□e placed in landscape ease□ents. In addition, utilit□ease□ents □a□also □e used □or the □utual use and acco□□odation o□all pu□lic utilities desirin□to use or usin□the sa□e ease□ents li□it the use to particular utilities, said use □□ pu□lic utilities □ein□su□ordinate to the pu□lic's, District's and Cit□o□Celina's use thereo□. The Cit□o□ Celina, District and pu□lic utilit□entities shall have the ri□ht to re□ove and keep re□oved all or parts o□an□□uildin□s, □ences, trees, shru□s or other i□prove□ents or □ro□ths □hich □a□in an□□a□ endan□er or inter□ere □ith the construction, □aintenance, or e□□cienc□o□their respective s□ste□s in said ri□hts-o□□a□and ease□ents. The Cit□o□Celina, District and pu□lic utilit□entities shall at all ti□es have the □ull ri□ht o□in□ress and e□ress to or □ro□ their respective ri□hts-o□□a□and ease□ents □or the purpose o□constructin□, reconstructin□, inspectin□, patrollin□, □aintainin□, readin□□eters, and addin□to or re□ovin□all or parts o□their respective s□ste□s □ithout the necessit□at an□ti□e procurin□per□ission □ro□ an□one.

This plat approved su□ect to all plattin□ordinances, rules, re□ulations and resolutions o□the Cit□o□Celina, Te□as,

WITNESS, □□hand, this the _____ da□o□_____ , 2017.

LFC DEVCO BRENHAM, LLC, a Te□as li□ited lia□ilit□co□pan□

B□: RJM/Celina III, L.P., a Te□as li□ited partnerhip, Mana□er

B□: RJM/Celina III GP, Inc., a Te□as corporation, General Partner

Authori□ed Si□nature o□LFC Devco, LLC, O□ner

_____
Ton□Ru□□eri, Co-CEO

STATE OF TEXAS
CO□NTY OF DALLAS

Be□ore □e, the undersi□ned authori□, a Notar□Pu□lic in and □or the State o□ Te□as, on this da□personall□appeared Ton□Ru□□eri, kno□n to □e to □e the person □hose na□e is su□scri□ed to the □ore□oin□ instru□ent and ackno□led□ed to □e that he e□ecuted the sa□e □or the purpose and considerations therein e□pressed.

Given under □□hand and seal o□o□ice, this _____ da□o□ _____ , 2017.

Notar□Pu□lic in and □or the State o□Te□as

M□Co□□ission E□pires On: _____

CERTIFICATE OF APPROVAL

Approved this _____ da□o□ _____ 2017
□□the COLLIN CO□NTY M□NICIPAL □TILITY DISTRICT No. 1

_____
Keller W. We□ster President Collin Count□Municipal □tilit□District No. 1

STATE OF TEXAS
CO□NTY OF DALLAS

Be□ore □e, the undersi□ned authori□, a Notar□Pu□lic in and □or the State o□Te□as, on this da□ personall□appeared Keller W. We□ster, kno□n to □e to □e the person □hose na□e is su□scri□ed to the □ore□oin□instru□ent and ackno□led□ed to □e that he e□ecuted the sa□e □or the purpose and considerations therein e□pressed.

Given under □□hand and seal o□o□ice, this _____ da□o□ _____ , 2017.

Notar□Pu□lic in and □or the State o□Te□as _____

M□Co□□ission E□pires On: _____

PREPARER'S CERTIFICATE:

KNOW ALL MEN BY THESE PRESENTS:

THAT, I, Mitchell S. Pillar do here□□certi□□that I prepared this plat □ro□ an actual and accurate surve□o□the land and that the corner □onu□ents sho□n thereon □ere properl□ placed under □□personal supervision, in accordance □ith the su□division re□ulations o□ the Cit□o□Celina, Te□as.

_____
Mitchell S. Pillar, Re□istered Pro□essional Land Surve□or
Te□as Re□istration No. 5491
H□ITT-□OLLARS, Inc.
Fir□ Re□istration No. 10025600

STATE OF TEXAS
CO□NTY OF DALLAS

Be□ore □e, the undersi□ned authori□, a Notar□Pu□lic in and □or the State o□Te□as, on this da□personall□appeared Mitchell S. Pillar, kno□n to □e to □e the person □hose na□e is su□scri□ed to the □ore□oin□instru□ent and ackno□led□ed to □e that he e□ecuted the sa□e □or the purpose and considerations therein e□pressed.

Given under □□hand and seal o□o□ice, this _____ da□o□ _____ , 2017.

Notar□Pu□lic in and □or the State o□Te□as _____

M□Co□□ission E□pires On: _____

PROPERTY LOCATION STATEMENT
This propert□is located in the e□traterritorial □risdiction o□the Cit□o□Celina, Collin Count□, Te□as.

_____ _____
Si□nature o□Ma□or Date o□approval

ATTEST:

_____ _____
Cit□Secretar□ Date

Approved □or preparation o□□inal plat □ollo□in□construction o□all pu□lic i□prove□ents (or appropriate sureties thereo□) necessar□□or the su□division sho□n on the plat.

RECOMMENDED BY: Plannin□and □onin□Co□□ission Cit□o□Celina, Te□as

_____ _____
Si□nature o□Chairperson Date o□Reco□□endation

APPROVED BY: Cit□Council Cit□o□Celina, Te□as

_____ _____
Si□nature o□Ma□or Date o□Approval

ATTEST:

_____
Cit□Secretar□

CONSTR□CTION PLAT
# LIGHT FARMS
## THE BRENHAM NEIGHBORHOOD
CONTAINING
127 RESIDENTIAL LOTS, 6 OPEN SPACES
TOTALING 26.15 ACRES
SIT□ATED IN THE
COLLIN CO□NTY SCHOOL LAND S□RVEY No. 14, ABST. No. 167
COLLIN CO□NTY, TEXAS
OWNER
LFC DE□CO □RENHAM, LLC
8401 NORTH CENTRAL EXPRESSWA□, SUITE 350, DALLAS, TX 75225
TEL. 214-292-3410 FAX. 214-292-3411
CONTACT: TONY R□GGERI


PREPARED BY:
HUITT-ZOLLARS
Huitt-□ollars, Inc. Dallas
1717 McKinney Avenue, Suite 1400, Dallas, TX 75202
Phone (214) 871-3311 Fa□(214) 871-0757


MAY, 2017 SHEET 2 OF 3

C.O. NTY RECORDING INFORMATION

CITY PROJECT N□MBER: P-2017XX-01

PROJECT N□MBER: R013905.65


DWG: I:□pro□R013905.65 - Li□ht Far□s - Brenha□ Residential Dev□10 CADD □ BIM□10.1 AutoCAD□BRENHAM□CONST PLAT.d□□ □SER: ta□□
DATE: Ma□23, 2017 11:47a□ XREFS: BRENHAM□PLAT BORDER BRENHAM-BASE BRENHAM□EXISTING LF-MASTER-BASE BRENHAM□EX CONTO□R
CAD FILE PATH: I:□pro□R013905.65 - Li□ht Far□s - Brenha□ Residential Dev□10 CADD □ BIM□10.1 AutoCAD□BRENHAM□CONST PLAT.d□□

| BLOCK A | | |
|---|---|---|
| LOT | S□ FT | ACRES |
| 1 | 5,421 | 0.12 |
| 2 | 4,440 | 0.10 |
| 3 | 4,440 | 0.10 |
| 4 | 4,440 | 0.10 |
| 5 | 4,440 | 0.10 |
| 6 | 4,440 | 0.10 |
| 7 | 4,440 | 0.10 |
| 8 | 4,440 | 0.10 |
| 9 | 4,440 | 0.10 |
| 10 | 4,440 | 0.10 |
| 11 | 4,440 | 0.10 |
| 12 | 5,997 | 0.14 |
| 13 | 5,413 | 0.12 |
| 14 | 4,400 | 0.10 |
| 15 | 4,885 | 0.11 |
| 16 | 5,347 | 0.12 |
| 17 | 7,257 | 0.17 |
| 18 | 5,926 | 0.14 |
| 19 | 4,440 | 0.10 |
| 20 | 4,440 | 0.10 |
| 21 | 4,440 | 0.10 |
| 22 | 4,440 | 0.10 |
| 23 | 4,440 | 0.10 |
| 24 | 4,440 | 0.10 |
| 25 | 4,627 | 0.11 |
| 26 | 4,827 | 0.11 |
| 27 | 4,853 | 0.11 |
| 28 | 4,656 | 0.11 |
| 29 | 5,041 | 0.12 |
| 30 | 5,242 | 0.12 |
| 31 | 4,620 | 0.11 |
| 32 | 4,820 | 0.11 |
| 33 | 4,780 | 0.11 |
| 34 | 4,800 | 0.11 |
| 5X | 3,263 | 0.07 |
| 4X | 7,200 | 0.17 |

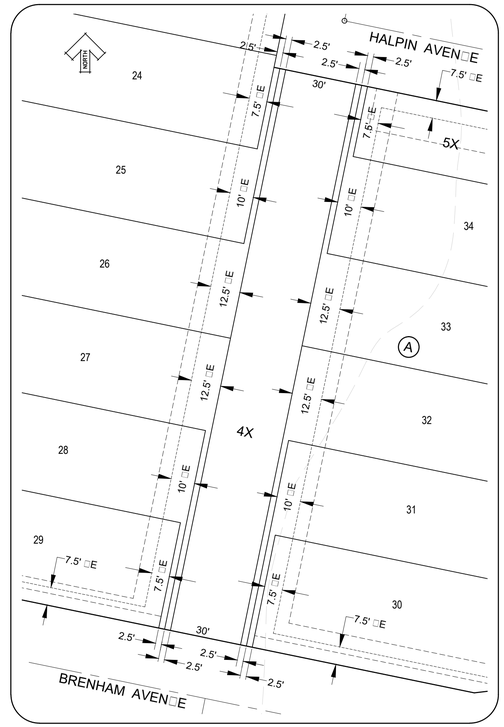
| BLOCK B | | |
|---|---|---|
| LOT | S□ FT | ACRES |
| 1 | 5,943 | 0.14 |
| 2 | 5,626 | 0.13 |
| 3 | 4,471 | 0.10 |
| 4 | 4,440 | 0.10 |
| 5 | 4,440 | 0.10 |
| 6 | 4,454 | 0.10 |
| 7 | 4,343 | 0.10 |
| 8 | 5,193 | 0.12 |
| 9 | 4,400 | 0.10 |
| 10 | 4,400 | 0.10 |
| 11 | 4,400 | 0.10 |
| 12 | 4,400 | 0.10 |
| 13 | 5,130 | 0.12 |
| 14 | 4,850 | 0.11 |
| 15 | 4,591 | 0.11 |
| 16 | 4,423 | 0.10 |
| 17 | 5,095 | 0.12 |
| 18 | 5,011 | 0.12 |
| 19 | 5,371 | 0.12 |
| 6X | 3,522 | 0.08 |

| BLOCK C | | |
|---|---|---|
| LOT | S□ FT | ACRES |
| 1 | 7,734 | 0.18 |
| 2 | 4,829 | 0.11 |
| 3 | 4,552 | 0.10 |
| 4 | 4,415 | 0.10 |
| 5 | 5,228 | 0.12 |
| 6 | 7,060 | 0.16 |
| 7 | 5,920 | 0.14 |
| 8 | 4,612 | 0.11 |
| 9 | 4,732 | 0.11 |
| 10 | 4,566 | 0.10 |
| 11 | 4,440 | 0.10 |
| 12 | 4,836 | 0.11 |
| 13 | 4,836 | 0.11 |
| 14 | 4,440 | 0.10 |
| 15 | 4,440 | 0.10 |
| 16 | 4,440 | 0.10 |
| 17 | 5,843 | 0.13 |

| BLOCK D | | |
|---|---|---|
| LOT | S□ FT | ACRES |
| 1 | 5,132 | 0.12 |
| 2 | 4,854 | 0.11 |
| 3 | 4,854 | 0.11 |
| 4 | 4,854 | 0.11 |
| 5 | 4,846 | 0.11 |
| 6 | 4,551 | 0.10 |
| 7 | 4,551 | 0.10 |
| 8 | 4,551 | 0.10 |
| 9 | 4,551 | 0.10 |
| 10 | 4,500 | 0.10 |
| 3X | 14,907 | 0.34 |

| BLOCK E | | |
|---|---|---|
| LOT | S□ FT | ACRES |
| 1 | 4,599 | 0.11 |
| 2 | 4,833 | 0.11 |
| 3 | 5,062 | 0.12 |
| 4 | 4,902 | 0.11 |
| 5 | 4,657 | 0.11 |
| 6 | 4,763 | 0.11 |
| 7 | 8,064 | 0.19 |
| 8 | 11,746 | 0.27 |
| 9 | 6,067 | 0.14 |
| 10 | 6,490 | 0.15 |
| 11 | 5,641 | 0.13 |
| 12 | 5,160 | 0.12 |
| 13 | 4,920 | 0.11 |
| 14 | 4,920 | 0.11 |
| 15 | 4,920 | 0.11 |
| 16 | 4,920 | 0.11 |
| 17 | 4,920 | 0.11 |
| 18 | 4,920 | 0.11 |
| 19 | 5,112 | 0.12 |
| 1X | 156,147 | 3.58 |

| BLOCK F | | |
|---|---|---|
| LOT | S□ FT | ACRES |
| 1 | 6,175 | 0.14 |
| 2 | 5,837 | 0.13 |
| 3 | 6,253 | 0.14 |
| 4 | 8,547 | 0.20 |
| 5 | 7,341 | 0.17 |
| 6 | 6,384 | 0.15 |
| 7 | 5,547 | 0.13 |
| 8 | 5,307 | 0.12 |
| 9 | 4,513 | 0.10 |
| 10 | 4,513 | 0.10 |
| 11 | 4,513 | 0.10 |
| 12 | 4,513 | 0.10 |
| 13 | 4,515 | 0.10 |
| 14 | 4,983 | 0.11 |
| 15 | 4,795 | 0.11 |
| 16 | 4,916 | 0.11 |
| 17 | 4,809 | 0.11 |
| 18 | 4,715 | 0.11 |
| 19 | 5,238 | 0.12 |
| 20 | 5,267 | 0.12 |
| 21 | 5,372 | 0.12 |
| 22 | 5,171 | 0.12 |
| 23 | 4,920 | 0.11 |
| 24 | 4,920 | 0.11 |
| 25 | 4,920 | 0.11 |
| 26 | 4,920 | 0.11 |
| 27 | 4,921 | 0.11 |
| 28 | 5,090 | 0.12 |
| 2X | 49,916 | 1.15 |




DETAIL 'C' (□TILITY ESMT)

SCALE: 1"=30'

CONSTR□CTION PLAT

LIGHT FARMS

**THE BRENHAM NEIGHBORHOOD**

CONTAINING

127 RESIDENTIAL LOTS, 6 OPEN SPACES

TOTALING 26.15 ACRES

SIT□ATED IN THE

COLLIN CO□NTY SCHOOL LAND S□RVEY No. 14, ABST. No. 167

COLLIN CO□NTY, TEXAS

OWNER

LFC DE□CO □RENHAM, LLC

8401 NORTH CENTRAL EXPRESSWA□, SUITE 350, DALLAS, TX 75225

TEL. 214-292-3410 FAX. 214-292-3411

CONTACT: TONY R□GGERI

PREPARED BY:

HUITT-□OLLARS Dallas

Huitt-□ollars, Inc.

1717 McKinney Avenue, Suite 1400, Dallas, TX 75202

Phone (214) 871-3311 Fa□(214) 871-0757

MAY, 2017 SHEET 3 OF 3

CO□NTY RECORDING INFORMATION

CITY PROJECT N□MBER: P-2017XX-01

PROJECT N□MBER: R013905.65

DWG: I:\pro\R013905.65 - Li□ht Far□s - Brenha□ Residential Dev\10 CADD □ BIM\10.1 AutoCAD\BRENHAM\CONST PLAT.d□□ □SER: ta□
DATE: Ma□ 22, 2017 3:59p□ XREFS: BRENHAM:PLAT BORDER BRENHAM-BASE BRENHAM:EXISTING LF-MASTER-BASE BRENHAM:EX CONTO□R

CAD FILE PATH: I:\pro\R013905.65 - Li□ht Far□s - Brenha□ Residential Dev\10 CADD □ BIM\10.1 AutoCAD\BRENHAM\CONST PLAT.d□□

**Planning & Development Services**
City of Celina, Texas

# Memorandum

| | |
|---|---|
| To: | **The Celina Planning and Zoning Commission** |
| CC: | Lance Vanzant, Interim City Manager<br>Helen-Eve Liebman, AICP, Director of Planning & Development Services |
| From: | Robyn Miga, Planner |
| Meeting Date: | June 20, 2017 |
| Re: | Light Farms Elementary School #2 Construction Plat |

---

**Action Requested:**
Consider and act upon a Construction Plat for Light Farms Elementary School #2, Bidgewater Boulevard and Montgomery Lane, being a ±15.27 acre tract of land situated in the Collin County School Land Survey No. 14, Abstract No. 167, and generally located north of Frontier Parkway, south of Light Farms Way, west of the Burlington Northern Santa Fe Railroad, and east of Dallas North Tollway, containing one (1) non-residential lot, (Light Farms Elementary #2 Construction Plat)

**Background Information:**
Staff has reviewed the proposed Construction Plat for Light Farms Elementary School #2, Bidgewater Boulevard and Montgomery Lane, and the remaining comments are minor in nature and can be addressed prior to City Council approval July 11, 2017.

**Board Review/Citizen Input:**
N/A

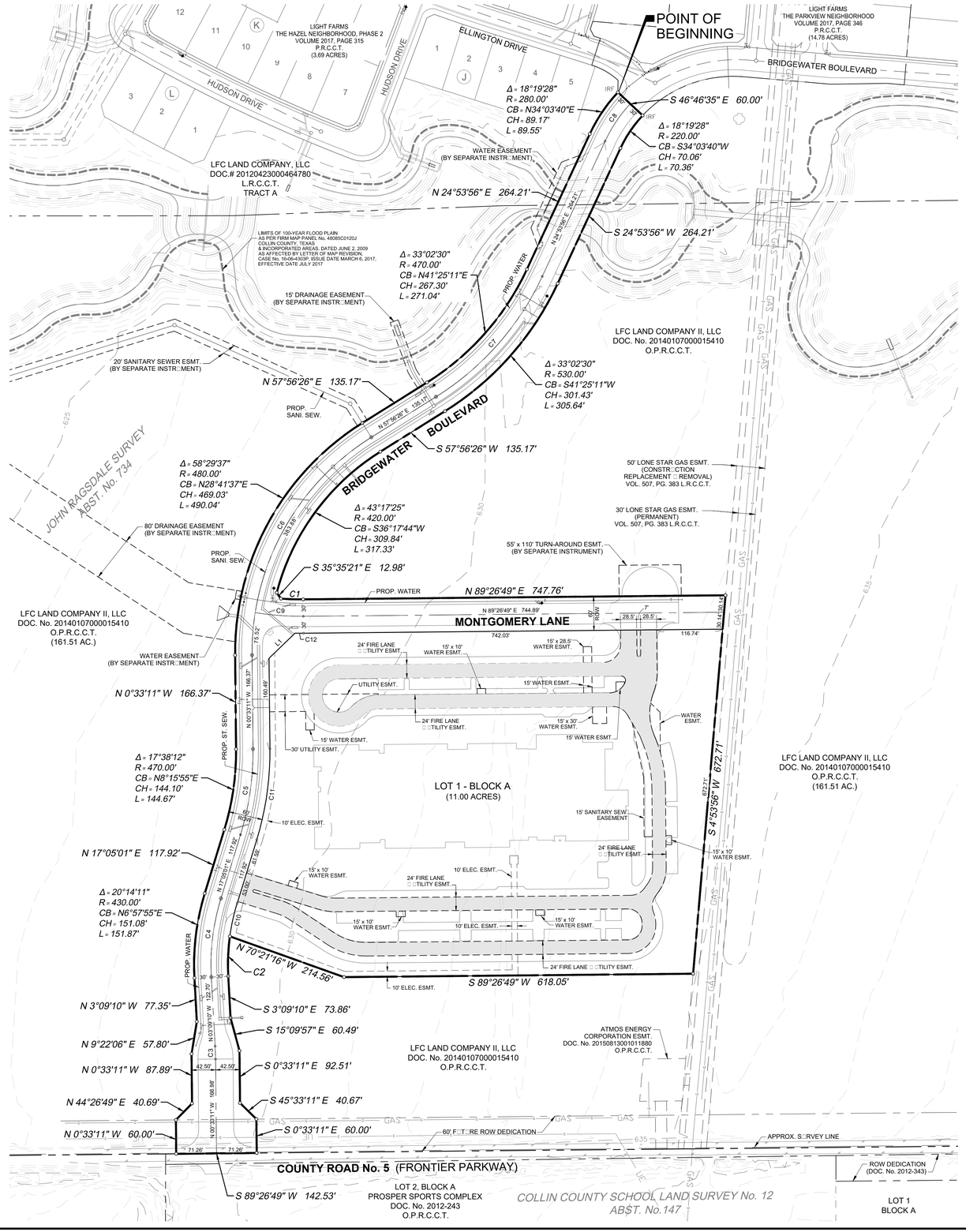
**Alternatives:**
N/A

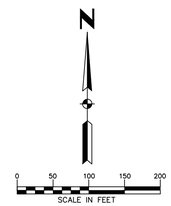
**Financial Considerations:**
N/A

**Legal Review:**
N/A

**Supporting Documents:**
Plat Exhibit

**Staff Recommendation:**
Staff recommends approval pending all comments being addressed prior to City Council.



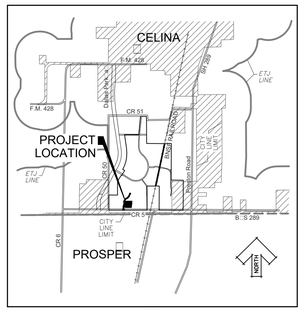




SCALE: 1"=100'

BASIS OF BEARINGS:
THE BEARINGS SHOWN ARE BASED ON N.A.D. 1983, TIED TO THE TEXAS STATE PLANE COORDINATE SYSTEM OF 1983, NORTH CENTRAL TEXAS □ONE (4202).

## LEGEND

| | |
|---|---|
| IRF | IRON ROD FO□ND |
| IRF (H□) | 5/8" IRON ROD FO□ND WITH PLASTIC CAP STAMPED "H□ITT-□OLLARS" |
| IRS | 5/8" IRON ROD SET W/ "H□ITT-□OLLARS" CAP |
| WME | WALL MAINTENANCE EASEMENT |
| □E | □TILITY EASEMENT |
| ◆ | DENOTES STREET NAME CHANGE |
| L.R.C.C.T. | LAND RECORDS, COLLIN CO□NTY, TEXAS |
| P.R.C.C.T. | PLAT RECORDS, COLLIN CO□NTY, TEXAS |
| O. P.R.C.C.T. | PLAT RECORDS, COLLIN CO□NTY, TEXAS |




VICINITY MAP

NOTES:

1. SELLING A PORTION OF THIS ADDITION BY METES AND BO□NDS IS A VIOLATION OF CITY ORDINANCE AND STATE LAW, AND IS S□BJECT TO FINES AND WITHHOLDING OF □TILITIES AND B□ILDING PERMITS.

2. ALL BO□NDARY CORNERS ARE IRON ROD SET (IRS), EXCEPT AS NOTED.

| C□RVE TABLE | | | | | |
|---|---|---|---|---|---|
| C□RVE | DELTA | RADI□S | CH BEARING | CHORD | LENGTH |
| C1 | 4°47'49" | 470.00' | S 88°09'16" E | 39.34' | 39.35' |
| C2 | 10°56'50" | 370.00' | S 2°19'15" W | 70.59' | 70.69' |
| C3 | 2°35'59" | 500.00' | N 1°51'11" W | 22.69' | 22.69' |
| C4 | 20°14'11" | 400.00' | N 6°57'55" E | 140.54' | 141.28' |
| C5 | 17°38'12" | 500.00' | N 8°15'55" E | 153.30' | 153.91' |
| C6 | 58°29'37" | 450.00' | N 28°41'37" E | 439.72' | 459.41' |
| C7 | 33°02'30" | 500.00' | N 41°25'11" E | 284.36' | 288.34' |
| C8 | 18°19'28" | 250.00' | N 34°03'40" E | 79.62' | 79.96' |
| C9 | 9°48'12" | 500.00' | S 85°39'05" E | 85.45' | 85.55' |
| C10 | 9°17'21" | 370.00' | S 12°26'20" W | 59.92' | 59.99' |
| C11 | 17°38'12" | 530.00' | S 8°15'55" W | 162.50' | 163.14' |
| C12 | 1°38'33" | 530.00' | N 89°43'55" W | 15.19' | 15.19' |

| LINE TABLE | | |
|---|---|---|
| LINE | BEARING | LENGTH |
| L1 | N 45°54'16" E | 63.83' |

CONSTR□CTION PLAT

LIGHT FARMS

**LIGHT FARMS ELEMENTARY SCHOOL No. 2 ADDITION**
**BRIDGEWATER BOULEVARD & MONTGOMERY LANE**

TOTALING 15.27 ACRES

SIT□ATED IN THE

JOHN RAGSDALE S□RVEY, ABST. No. 734

COLLIN CO□NTY, TEXAS

OWNER

LFC LAND COMPAN□, LLC
LFC LAND COMPAN□ II, LLC

8401 NORTH CENTRAL EXPRESSWA□, SUITE 350, DALLAS, TX 75225
TEL. 214-292-3410 FAX. 214-292-3411

PREPARED BY:

HUITT-ZOLLARS

Huitt-□ollars, Inc. Dallas
1717 McKinney Avenue, Suite 1400, Dallas, TX 75202
Phone (214) 871-3311 Fa□(214) 871-0757

J□NE, 2017 SHEET 1 OF 2

CO□NTY RECORDING INFORMATION

DWG: I:\pro\R013905.83 - Li□ht Far□s South□est Road\□a□and □tilit\10 CADD □ BIM\DWG\PROSPER ISD□CONST-PLAT.d□□ □SER: ta□
DATE: Jun 15, 2017 2:16p□ XREFS: PROSPER ISD_BASE LF-MASTER-BASE PROSPER ISD_BORDER LF-MASTER-□TI PROSPER ISD_EX-CONTO□R PROSPER ISD_EX-TEXT

CAD FILE PATH: I:\pro\R013905.83 - Li□ht Far□s South□est Road\□a□and □tilit\10 CADD □ BIM\DWG\PROSPER ISD□CONST-PLAT.d□□

PROJECT N□MBER: R013905.83

OWNER'S CERTIFICATE
STATE OF TEXAS
COUNT□ OF COLLIN

WHEREAS, LFC Land Company, LLC and LFC Land Company II, LLC are the owners of a tract of land situated in the John Ragsdale Survey, Abstract No. 734, Collin County, Texas and being a portion of a tract of land described as Tract A in instrument to LFC Land Company, LLC as recorded under Document Number 20120423000464780 of the Official Public Records of Collin County, Texas, and being a portion of a 161.51 acre tract of land described in instrument to LFC Land Company II, LLC as recorded under Document No. 20140107000015410 of the Official Public Records of Collin County, Texas and being more particularly described as follows□

BEGINNING at a 5/8 inch iron rod found with plastic cap stamped "Huitt-Zollars" at the intersection of the southerly right-of-way line of Ellington Drive with the northwesterly right-of-way line of □ridgewater □oulevard (a 60 foot wide right-of-way) as shown on final plat of Light Farms - The Parkview Neighborhood, an addition to Collin County, Texas as recorded in □olume 2017, Page 346 of the Plat Records, Collin County, Texas□

THENCE South 46 degrees 46 minutes 35 seconds East, along the southerly line of said Light Farms - The Parkview Neighborhood, a distance of 60.00 feet to a 5/8 inch iron rod found with plastic cap stamped "Huitt-Zollars" on the southeasterly right-of-way line of said Bridgewater Boulevard, said point being the beginning of a non-tangent curve to the left having a delta angle of 18 degrees 19 minutes 28 seconds, a radius of 220.00 feet and being subtended by a chord which bears South 34 degrees 03 minutes 40 seconds West a distance of 70.06 feet□

THENCE departing the southerly line of said Light Farms - The Parkview Neighborhood and continuing southerly along said curve to the left an arc distance of 70.36 feet to a 5/8 inch iron rod set with plastic cap stamped "Huitt-Zollars" at end of said curve□

THENCE South 24 degrees 53 minutes 56 seconds West, a distance of 264.21 feet to a 5/8 inch iron rod set with plastic cap stamped "Huitt-Zollars" at the beginning of a curve to the right having a delta angle of 33 degrees 02 minutes 30 seconds, a radius of 530.00 feet and being subtended by a chord which bears South 41 degrees 25 minutes 11 seconds West a distance of 301.43 feet□

THENCE continuing southwesterly along said curve to the right an arc distance of 305.64 feet to a 5/8 inch iron rod set with plastic cap stamped "Huitt-Zollars" at the end of said curve□

THENCE South 57 degrees 56 minutes 26 seconds West, a distance of 135.17 feet to a 5/8 inch iron rod set with plastic cap stamped "Huitt-Zollars" at the beginning of a curve to the left having a delta angle of 43 degrees 17 minutes 25 seconds, a radius of 420.00 feet and being subtended by a chord which bears South 36 degrees 17 minutes 44 seconds West a distance of 309.84 feet□

THENCE continuing southwesterly along said curve to the left an arc distance of 317.33 feet to a 5/8 inch iron rod set with plastic cap stamped "Huitt-Zollars" at the end of said curve□

THENCE South 35 degrees 35 minutes 21 seconds East, a distance of 12.98 feet to a 5/8 inch iron rod set with plastic cap stamped "Huitt-Zollars" for a corner at the beginning of a non-tangent curve to the left having a delta angle of 4 degrees 47 minutes 49 seconds, a radius of 470.00 feet and being subtended by a chord which bears South 88 degrees 09 minutes 16 seconds East a distance of 39.34 feet□

THENCE continuing easterly along said curve to the left an arc distance of 39.35 feet to a 5/8 inch iron rod set with plastic cap stamped "Huitt-Zollars" at the end of said curve□

THENCE North 89 degrees 26 minutes 49 seconds East, a distance of 747.76 feet to a 5/8 inch iron rod set with plastic cap stamped "Huitt-Zollars" for a corner on the west line of a 50 foot wide easement for construction, replacement and removal of a gas pipeline as described in instrument to Lone Star Gas Company as recorded in □olume 507, Page 383 of the Land Records of Collin County, Texas□

THENCE South 4 degrees 53 minutes 56 seconds West, along the west line of said 50 foot wide Lone Star Gas Co. easement, a distance of 672.71 feet to a 5/8 inch iron rod set with plastic cap stamped "Huitt-Zollars" for a corner□

THENCE South 89 degrees 26 minutes 49 seconds West, departing from said west line of the Lone Star Gas Co. easement, a distance of 618.05 feet to a 5/8 inch iron rod set with plastic cap stamped "Huitt-Zollars" for an angle point□

THENCE North 70 degrees 21 minutes 16 seconds West, a distance of 214.56 feet to a 5/8 inch iron rod set with plastic cap stamped "Huitt-Zollars" for a corner at the beginning of a non-tangent curve to the left having a delta angle of 10 degrees 56 minutes 50 seconds, a radius of 370.00 feet and being subtended by a chord which bears South 2 degrees 19 minutes 15 seconds West a distance of 70.59 feet□

THENCE continuing southerly along said curve to the left an arc distance of 70.69 feet to the end of said curve□

THENCE South 3 degrees 09 minutes 10 seconds East a distance of 73.86 feet to a 5/8 inch iron rod set with plastic cap stamped "Huitt-Zollars"□

THENCE South 15 degrees 09 minutes 57 seconds East a distance of 60.49 feet to a 5/8 inch iron rod set with plastic cap stamped "Huitt-Zollars"□

THENCE South 0 degrees 33 minutes 11 seconds East a distance of 92.51 feet to a 5/8 inch iron rod set with plastic cap stamped "Huitt-Zollars"□

THENCE South 45 degrees 33 minutes 11 seconds East a distance of 40.67 feet to a 5/8 inch iron rod set with plastic cap stamped "Huitt-Zollars"□

THENCE South 0 degrees 33 minutes 11 seconds East a distance of 60.00 feet to a 5/8 inch iron rod set with plastic cap stamped "Huitt-Zollars" for a corner on the south line of the aforementioned 161.51 acre tract, said point also being in the approximate center of County Road No. 5, also known as Frontier Parkway□

THENCE South 89 degrees 26 minutes 49 seconds West, continuing along the south line of said 161.51 acre tract and approximate center of County Road No. 5, a distance of 142.53 feet to a 5/8 inch iron rod set with plastic cap stamped "Huitt-Zollars" for a corner□

THENCE North 0 degrees 33 minutes 11 seconds West a distance of 60.00 feet to a 5/8 inch iron rod set with plastic cap stamped "Huitt-Zollars"□

THENCE North 44 degrees 26 minutes 49 seconds East a distance of 40.69 feet to a 5/8 inch iron rod set with plastic cap stamped "Huitt-Zollars"□

THENCE North 0 degrees 33 minutes 11 seconds West a distance of 87.89 feet to a 5/8 inch iron rod set with plastic cap stamped "Huitt-Zollars"□

THENCE North 9 degrees 22 minutes 06 seconds East a distance of 57.80 feet to a 5/8 inch iron rod set with plastic cap stamped "Huitt-Zollars"□

THENCE North 3 degrees 09 minutes 10 seconds West a distance of 77.35 feet to a 5/8 inch iron rod set with plastic cap stamped "Huitt-Zollars" at the beginning of a curve to the right having a delta angle of 20 degrees 14 minutes 11 seconds, a radius of 430.00 feet and being subtended by a chord which bears North 6 degrees 57 minutes 55 seconds East a distance of 151.08 feet□

THENCE northerly along said curve to the right an arc distance of 151.87 feet to a 5/8 inch iron rod set with plastic cap stamped "Huitt-Zollars" at the end of said curve□

THENCE North 17 degrees 05 minutes 01 second East a distance of 117.92 feet to a 5/8 inch iron rod set with plastic cap stamped "Huitt-Zollars" at the beginning of a curve to the left having a delta angle of 17 degrees 38 minutes 12 seconds, a radius of 470.00 feet and being subtended by a chord which bears North 8 degrees 15 minutes 55 seconds East a distance of 144.10 feet□

THENCE northerly along said curve to the left an arc distance of 144.67 feet to a 5/8 inch iron rod set with plastic cap stamped "Huitt-Zollars" at the end of said curve□

THENCE North 0 degrees 33 minutes 11 seconds West a distance of 166.37 feet to a 5/8 inch iron rod set with plastic cap stamped "Huitt-Zollars" at the beginning of a curve to the right having a delta angle of 58 degrees 29 minutes 37 seconds, a radius of 480.00 feet and being subtended by a chord which bears North 28 degrees 41 minutes 37 seconds East a distance of 469.03 feet□

THENCE northeasterly along said curve to the right an arc distance of 490.04 feet to a 5/8 inch iron rod set with plastic cap stamped "Huitt-Zollars" at the end of said curve□

THENCE North 57 degrees 56 minutes 26 seconds East a distance of 135.17 feet to a 5/8 inch iron rod set with plastic cap stamped "Huitt-Zollars" at the beginning of a curve to the left having a delta angle of 33 degrees 02 minutes 30 seconds, a radius of 470.00 feet and being subtended by a chord which bears North 41 degrees 25 minutes 11 seconds East a distance of 267.30 feet□

THENCE northeasterly along said curve to the left an arc distance of 271.04 feet to a 5/8 inch iron rod set with plastic cap stamped "Huitt-Zollars" at the end of said curve□

THENCE North 24 degrees 53 minutes 56 seconds East a distance of 264.21 feet to a 5/8 inch iron rod set with plastic cap stamped "Huitt-Zollars" at the beginning of a curve to the right having a delta angle of 18 degrees 19 minutes 28 seconds, a radius of 280.00 feet and being subtended by a chord which bears North 34 degrees 03 minutes 40 seconds East a distance of 89.17 feet□

THENCE northeasterly along said curve to the right an arc distance of 89.55 feet to the Point of □eginning and containing 15.27 acres of land, more or less.

NOW, THEREFORE, KNOW ALL MEN BY THESE PRESENTS:

That LFC LAND COMPANY, LLC □ LFC LAND COMPANY II, LLC actin□ herein □□and throu□h his(its) dul□authori□ed o□icer(s), does here□□adopt this plat desi□natin□ the herein a□ove descri□ed propert□ as LIGHT FARMS ELEMENTARY SCHOOL No. 2, BRIDGEWATER BO□LEVARD □ MONTGOMERY LANE, an addition □ithin the e□tra-territorial □risdiction o□the Cit□o□Celina, Te□as, and does here□□ dedicate, in □ee si□ple, to the pu□lic use □orever, the streets, ri□hts-o□a□, and other pu□lic i□prove□ents sho□n thereon. The streets and alle□s, i□an□, are dedicated □or street purposes. The ease□ents and pu□lic use areas, as sho□n, are dedicated, □or the pu□lic use □orever, □or the purposes indicated on this plat. No □uildin□s, □ences, shru□s or other i□prove□ents or □ro□ths shall □e constructed or placed upon, over or across the ease□ents as sho□n, e□cept that landscape i□prove□ents □a□□□placed in landscape ease□ents, i□approved □□the Cit□ Council o□the Cit□o□ Celina. In addition, utilit□ease□ents □a□also □e used □or the □utual use and acco□□odation o□all pu□lic utilities desirin□ to use or usin□ the sa□e unless the ease□ents li□its the use to particular utilities, said use □□pu□lic utilities □ein□su□ordinate to the pu□lic's and Cit□o□Celina's use thereo□ The Cit□o□Celina and pu□lic utilities entities shall have the ri□ht to re□ove and keep re□oved all or parts o□an□ □uildin□s, □ences, trees, shru□s or other i□prove□ents or □ro□ths □hich □a□in an□□a□ endan□er or inter□ere □ith the construction, □aintenance, or e□icienc□o□their respective s□ste□s in said ease□ents, The Cit□o□Celina and pu□lic utilit□entities shall at all ti□es have the □ull ri□ht o□ in□ress and e□ress to or □ro□ their respective ease□ents □or the purpose o□constructin□, reconstructin□, inspectin□, patrolin□, □aintainin□, readin□□eters, and addin□ to or re□ovin□all or parts o□their respective s□ste□s □ithout the necessit□at an□ti□e procurin□per□ission □ro□ an□one.

This plat approved su□ect to all plattin□ ordinances, rules, re□ulations and resolutions o□the Cit□o□Celina, Te□as,

WITNESS, □□hand, this the _____ da□o□_____ , 2017.

LFC Land Co□pan□, LLC

B□: RJM/Celina III, L.P., a Te□as Li□ited Partnership, Mana□er

B□: RJM/Celina III GP, Inc., a Te□as Li□ited Partnership, General Partner

_____
Ton□Ru□□eri, President

STATE OF TEXAS
CO□NTY OF DALLAS
Be□ore □e, the undersi□ned authorit□, a Notar□Pu□lic in and □or the State o□Te□as, on this da□personall□appeared Ton□Ru□□eri, O□ner, kno□n to □e to □e the person □hose na□e is su□scri□ed to the □ore□oin□instru□ent and ackno□led□ed to □e that he e□ecuted the sa□e □or the purpose and considerations therein e□pressed.

Given under □□hand and seal o□o□ice, this _____ da□o□_____,2017.

_____
Notar□Pu□lic in and □or the State o□Te□as

_____
M□Co□□ission E□pires On:

LFC Land Co□pan□ II, LLC

B□: RJM/Celina III, L.P., a Te□as Li□ited Partnership, Mana□er

B□: RJM/Celina III GP, Inc., a Te□as Li□ited Partnership, General Partner

_____
Ton□Ru□□eri, President

STATE OF TEXAS
CO□NTY OF DALLAS
Be□ore □e, the undersi□ned authorit□, a Notar□Pu□lic in and □or the State o□Te□as, on this da□personall□appeared Ton□Ru□□eri, O□ner, kno□n to □e to □e the person □hose na□e is su□scri□ed to the □ore□oin□instru□ent and ackno□led□ed to □e that he e□ecuted the sa□e □or the purpose and considerations therein e□pressed.

Given under □□hand and seal o□o□ice, this _____ da□o□_____,2017.

_____
Notar□Pu□lic in and □or the State o□Te□as

_____
M□Co□□ission E□pires On:

CERTIFICATE OF APPROVAL:
WITNESS, □□hand, this the _____ da□o□_____ , 2017.

B□:
Authori□ed Si□nature o□COLLIN CO□NTY M□NICIPAL □TILITY DISTRICT No. 1

_____
Keller We□ster, President

STATE OF TEXAS
CO□NTY OF DALLAS

Be□ore □e, the undersi□ned authorit□, a Notar□Pu□lic in and □or the State o□Te□as, on this da□personall□appeared Keller We□ster, kno□n to □e to □e the person □hose na□e is su□scri□ed to the □ore□oin□instru□ent and ackno□led□ed to □e that he e□ecuted the sa□e □or the purpose and considerations therein e□pressed.

Given under □□hand and seal o□o□ice, this _____da□o□_____ , 2017.

_____ _____
Notar□Pu□lic in and □or the State o□Te□as M□Co□□ission E□pires On:

KNOW ALL MEN BY THESE PRESENTS:

THAT, I, Eric J. Yahoud□do here□□certi□□that I prepared this plat □ro□ an actual and accurate surve□o□the land and that the corner □onu□ents sho□n thereon □ere properl□ placed under □□personal supervision, in accordance □ith the su□division re□ulations o□ the Cit□o□Celina, Te□as.

*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*

Eric J. Yahoud□, Re□istered Pro□essional Land Surve□or
Te□as Re□istration No. 4862
Fir□ Re□stration No. 10025600

_____
Date

STATE OF TEXAS
CO□NTY OF DALLAS

Be□ore □e, the undersi□ned authorit□, a Notar□Pu□lic in and □or the State o□Te□as, on this da□personall□appeared Eric J. Yahoud□, kno□n to □e to □e the person □hose na□e is su□scri□ed to the □ore□oin□instru□ent and ackno□led□ed to □e that he e□ecuted the sa□e □or the purpose and considerations therein e□pressed.

Given under □□hand and seal o□o□ice, this _____ da□o□_____ , 2017.

Notar□Pu□lic in and □or the State o□Te□as _____

M□Co□□ission E□pires On: _____

PROPERTY LOCATION STATEMENT
This propert□is located in the e□traterritorial □risdiction o□the Cit□o□Celina, Collin Count□, Te□as.

_____ _____
Si□nature o□Ma□or Date o□approval

ATTEST:

_____ _____
Cit□Secretar□ Date

Approved □or preparation o□□inal plat □ollo□in□ construction o□all pu□lic i□prove□ents (or appropriate sureties thereo□) necessar□□or the su□division sho□n on the plat.

RECOMMENDED BY: Plannin□and □onin□Co□□ission Cit□o□Celina, Te□as

_____ _____
Si□nature o□Chairperson Date o□Reco□□endation

APPROVED BY: Cit□Council Cit□o□Celina, Te□as

_____ _____
Si□nature o□Ma□or Date o□Approval

ATTEST:

_____ _____
Cit□Secretar□ Date

CONSTR□CTION PLAT

LIGHT FARMS

**LIGHT FARMS ELEMENTARY SCHOOL No. 2 ADDITION**
**BRIDGEWATER BOULEVARD & MONTGOMERY LANE**

TOTALING 15.27 ACRES

SIT□ATED IN THE
JOHN RAGSDALE S□RVEY, ABST. No. 734
COLLIN CO□NTY, TEXAS

OWNER
LFC LAND COMPAN□, LLC
LFC LAND COMPAN□ II, LLC
8401 NORTH CENTRAL EXPRESSWA□, SUITE 350, DALLAS, TX 75225
TEL. 214-292-3410 FAX. 214-292-3411

PREPARED BY:
HUITT-ZOLLARS
Huitt-□ollars, Inc. Dallas
1717 McKinney Avenue, Suite 1400, Dallas, TX 75202
Phone (214) 871-3311 Fa□:(214) 871-0757

J□NE, 2017 SHEET 2 o□ 2

CO□NTY RECORDING INFORMATION

DWG: I:\pro\R013905.83 - Li□ht Far□s South□est Road□a□and □tilit\10 CADD □BIM\DWG\PROSPER ISD□CONST-PLAT.d□□ □SER: ta□
DATE: Jun 15, 2017 4:03p□ XREFS: PROSPER ISD□BASE LF-MASTER-BASE PROSPER ISD□BORDER LF-MASTER-□TI PROSPER ISD□EX-CONTO□R PROSPER ISD□□TILITY

CAD FILE PATH: I:\pro\R013905.83 - Li□ht Far□s South□est Road□a□and □tilit\10 CADD □BIM\DWG\PROSPER ISD□CONST-PLAT.d□□

PROJECT N□MBER: R013905.83

**Planning & Development Services**
City of Celina, Texas

# Memorandum

| | |
|---|---|
| To: | **The Celina Planning and Zoning Commission** |
| CC: | Lance Vanzant, Interim City Manager |
| From: | Alan Fourmentin, Director of Public Works |
| Meeting Date: | June 20, 2017 |
| Re: | Subdivision Ordinance Variance Request for use of material other than concrete for street construction. |

---

**Action Requested:**
Consider and act upon a request for a Subdivision Ordinance Variance from Martin Marietta and Austin Bridge and Road to Section 10.03.122(g) Streets & Section 10.03.126(f)(1) Streets, to allow the current roadway to be constructed with methods and materials other than those required by city ordinance. This project is located at County Road 53 from Preston Road to County Road 1117.

**Background Information:**
The Subdivision Ordinance includes specific regulations for granting a variance:

Section 10.03.008 Variances and appeals

(a) These rules and regulations are the standard requirements of the City. Suspension of any of these rules and regulations may be granted by the city council upon a good and sufficient showing by the owner that there are special circumstances or conditions affecting the property in question, or that enforcement of the provisions of this article will deprive the applicant of a substantial property right and that such suspension, if granted, will not be materially detrimental to the public welfare or injurious to other property or property rights in the vicinity. Each and every application for variance shall be decided solely and entirely on its own merits and the disposition of any prior or pending application for variance shall not be allowed to enter into or affect any decision on the application in question. Pecuniary interests standing alone shall not be justification for the granting of a variance.

(b) The owner of any tract of land aggrieved by the decision made under these regulations by any administrator or official of the City shall first apply to the Planning and Zoning Commission for relief from such administrative decision. Any aggrieved party having any interest in the matter may appeal the ruling by the Planning and Zoning Commission regarding the decision to the City Council.

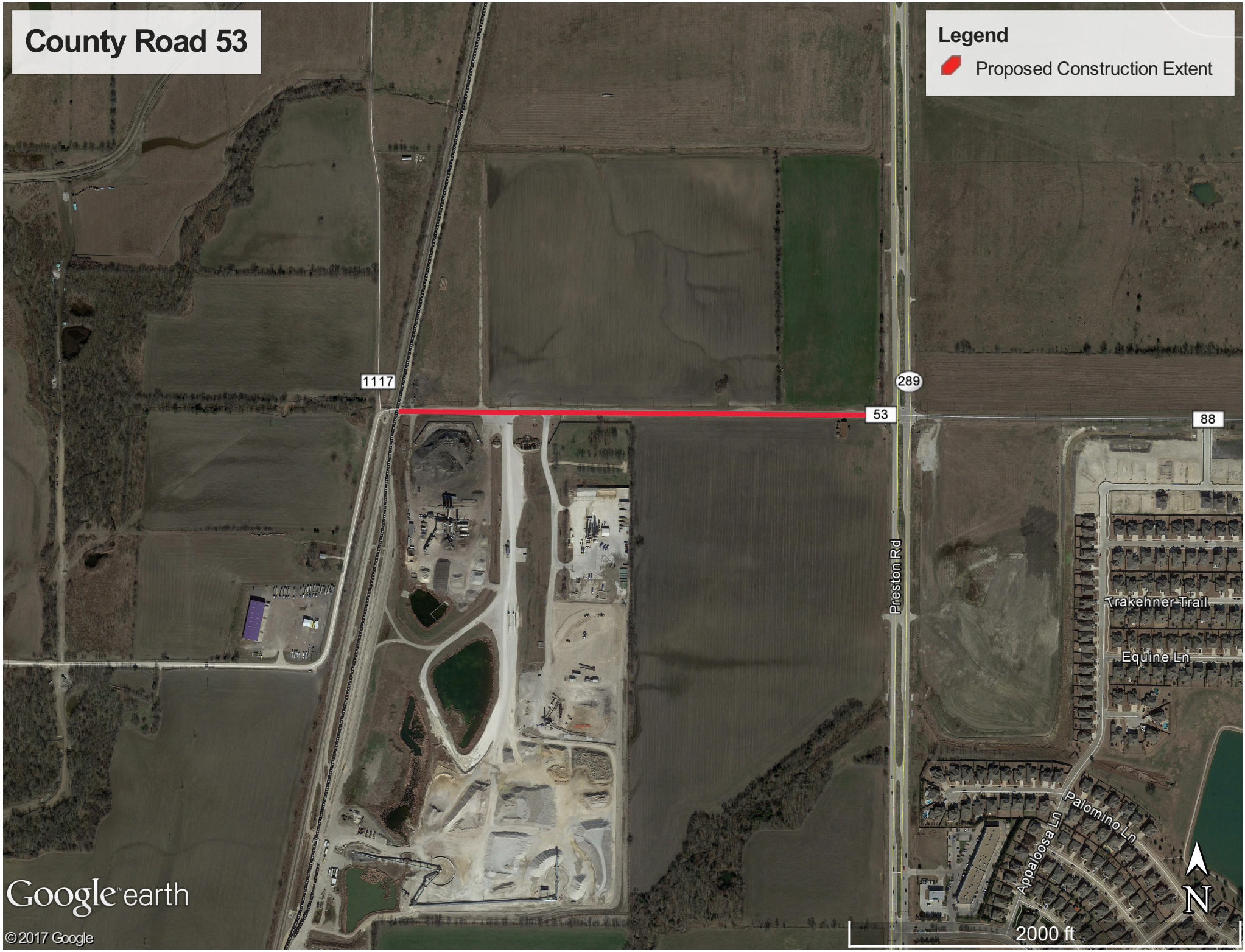
**Variance Requested:**
The applicant has submitted a request to allow the construction of County Road 53 with a “Crack and Seat” method, cement treated base and hot mix asphalt concrete versus a minimum of eight-inch reinforced concrete, six-inches of concrete curb, and applicable drainage infrastructure.

The opinion of probable construction cost for standard design criteria is $1,897,114.75 with a completion timeline of 36 weeks.
The opinion of probable construction cost for proposed methods and materials is $744,500.86 with a completion timeline of 8 weeks. Martin Marietta and Austin Bridge and Road will provide professional services, materials, construction of the roadway, and maintenance for a period of five years.
The maintenance responsibilities of this road belong to the City. Martin Marietta, and Austin Bridge and Road are voluntarily rehabilitating the road at their cost.

**Legal Review:**
N/A

**Supporting Documents:**
- Location Map
- Research Report (p. 41)
- Opinion of Probable Construction Cost

**Staff Recommendation:**
Staff recommends approval of the variance request providing staff approval of construction plans designed for projected five year traffic counts.


County Road 53
Legend
Proposed Construction Extent
1117
53
289
88
Preston Rd
Trakehner Trail
Equine Ln
Appaloosa Ln
Palomino Ln
N
2000 ft
Google earth
© 2017 Google

**Technical Report Documentation Page**

| | | |
|---|---|---|
| 1. Report No.<br>FHWA/TX-06/0-4517-3 | 2. Government Accession No. | 3. Recipient's Catalog No. |
| 4. Title and Subtitle<br>METHODS OF REDUCING JOINT REFLECTION CRACKING: FIELD PERFORMANCE STUDIES | | 5. Report Date<br>November 2005<br>Resubmitted: February 2006<br>6. Performing Organization Code |
| 7. Author(s)<br>Christopher Von Holdt and Tom Scullion | | 8. Performing Organization Report No.<br>Report 0-4517-3 |
| 9. Performing Organization Name and Address<br>Texas Transportation Institute<br>The Texas A&M University System<br>College Station, Texas 77843-3135 | | 10. Work Unit No. (TRAIS)<br>11. Contract or Grant No.<br>Project 0-4517 |
| 12. Sponsoring Agency Name and Address<br>Texas Department of Transportation<br>Research and Technology Implementation Office<br>P. O. Box 5080<br>Austin, Texas 78763-5080 | | 13. Type of Report and Period Covered<br>Technical Report:<br>September 2004-August 2005<br>14. Sponsoring Agency Code |

15. Supplementary Notes

Project performed in cooperation with the Texas Department of Transportation and the Federal Highway Administration.

Project Title: Develop Statewide Recommendations for Application of PCC Joint Reflective Cracking Rehabilitation Strategies Considering Lufkin District Experience

URL:http://tti.tamu.edu/documents/0-4517-3.pdf

16. Abstract

Selecting rehabilitation options for Jointed Concrete Pavements (JCP's) continues to be one of the most challenging tasks for pavement engineers. In project 0-4517, the performance of numerous treatments was investigated. Reports 0-4517-1 and 0-4517-3 identified treatments that are performing well and those that are not. Report 0-4517-2 proposed a field investigation plan for testing future candidate projects that combines visual inspections with nondestructive testing (NDT). A sequenced approach is proposed for NDT evaluation that includes Ground Penetrating Radar (GPR) and deflection testing and in some instances Dynamic Cone Penetrometer (DCP) testing. Deflections can be taken with either the Falling Weight Defelctometer (FWD) or Rolling Dynamic Deflectometer (RDD).

Three treatments were found to be performing well. For JCPs without major failures, the use of an asphalt overlay should be considered. Good agreement was found between field reflection cracking performance and the results from laboratory testing with TTI's overlay tester. Future overlay of JCPs should follow the overlay tester criteria proposed in this report. For sections with moderate levels of deterioration, with adequate support and no trapped moisture the use of rubblization is a good alternative. The rubblized concrete was found to provide a more uniform support than Crack and Seat. For those sections that are not candidates for rubblization because of poor slab support, then a flexible base overlay appears to be a good alternative. The flexible base overlays on US 59 in Lufkin and US 83 in Childress are performing very well.

| | |
|---|---|
| 17. Key Words<br>Jointed Concrete Pavement, JCP, Crack Retarding Layers, Reflection Cracking, Rubblization, Flexible Base Overlays | 18. Distribution Statement<br>No restrictions. This document is available to the public through NTIS:<br>National Technical Information Service<br>Springfield, Virginia 22161<br>http://www.ntis.gov |

| | | | |
|---|---|---|---|
| 19. Security Classif.(of this report)<br>Unclassified | 20. Security Classif.(of this page)<br>Unclassified | 21. No. of Pages<br>76 | 22. Price |

**Form DOT F 1700.7 (8-72)** **Reproduction of completed page authorized**

# METHODS OF REDUCING JOINT REFLECTION CRACKING: FIELD PERFORMANCE STUDIES

by

Christopher Von Holdt
Graduate Assistant Research
Texas Transportation Institute

and

Tom Scullion, P.E.
Research Engineer
Texas Transportation Institute

Report 0-4517-3
Project 0-4517
Project Title: Develop Statewide Recommendations for Application of PCC Joint Reflective Cracking Rehabilitation Strategies Considering Lufkin District Experience

Performed in cooperation with the
Texas Department of Transportation
and the
Federal Highway Administration

November 2005
Resubmitted: February 2006

TEXAS TRANSPORTATION INSTITUTE
The Texas A&M University System
College Station, Texas 77843-3135

# DISCLAIMER

The contents of this report reflect the views of the authors, who are responsible for the facts and the accuracy of the data presented herein. The contents do not necessarily reflect the official view or policies of the Texas Department of Transportation (TxDOT) or the Federal Highway Administration (FHWA). This report does not constitute a standard, specification, or regulation. The engineer in charge was Tom Scullion, P.E. (Texas, #62683).

There was no invention or discovery conceived or first actually reduced to practice in the course of or under this contract, including any art, method, process, machine, manufacture, design or composition of matter, or any new useful improvement thereof, or any variety of plant, which is or may be patentable under the patent laws of the United States of America or any foreign country.

# ACKNOWLEDGMENTS

This project was made possible by funding from the Texas Department of Transportation in cooperation with the Federal Highway Administration. The authors thank the many personnel who contributed to the coordination and accomplishment of the work presented herein. Special thanks are extended to Dr. Dar-Hao Chen, P.E., and Mr. Charles Gaskin, P.E., for serving as the project director and project coordinator, respectively. This project was funded by Research Management Committee 1 (RMC1) in TxDOT's research program. The assistance and direction of the project steering committee is acknowledged. Many TxDOT district personnel made valuable contributions to this effort; the support from Mr. Maurice Pittman, P.E., of the Dallas Southwest Area Office; Mr. Gary Moonshower, P.E., of the Dallas Southeast Area Office; and Mr. Marty Smith, P.E., of the Childress District is acknowledged.

# TABLE OF CONTENTS

**Page**


List of Figures ..... viii

List of Tables ..... x

Chapter 1. Introduction ..... 1

Chapter 2. Evaluation of Grid Products ..... 3

Loop 12, Dallas District (Contact: Maurice Pittman) ..... 3

SH 183, Dallas District (Contact: Maurice Pittman) ..... 7

US 175, Dallas District (Contact: Gary Moonshower) ..... 11

IH 35E, Dallas District (Contact: Maurice Pittman) ..... 14

Summary of Findings of the Glasgrid® Products ..... 16

Chapter 3. Crack Retarding Overlay ..... 17

US 175, Dallas District (Contact: Gary Moonshower) ..... 17

Chapter 4. Thin Crumb Rubber HMA Overlay ..... 23

SH 114 Frontage Roads, Dallas District (Contact: Maurice Pittman) ..... 23

Chapter 5. Evaluation of the Rehabilitation Options Used on US 83 in the Childress District ..... 31

Performance Evaluations of HMA Overlays ..... 32

Resistance of Asphalt Stabilized Base to Cracking ..... 34

The Use of Thick Flexible Base Overlays ..... 35

Crack and Seat of Jointed Concrete Pavements ..... 41

Rubblization of Jointed Concrete Pavements ..... 43

Chapter 6. Conclusions and Recommendations ..... 49

References ..... 51

Appendix A: Modulus 6 Results for Crack and Seat Sections ..... 53

Appendix B: Modulus 6 Results for the Rubblized Section ..... 61

# LIST OF FIGURES

**Figure** **Page**


1. Typical Section on Loop 12 ....4
2. Photograph of Distresses on Loop 12 ....4
3. GPR Data Collected on Loop 12 ....5
4. Photographs of a Trench at a Transverse Crack on Loop 12 ....6
5. Photographs of a Trench at a Failure on Loop 12 ....6
6. Typical Section on SH 183 ....7
7. GPR Data Collected on SH 183 ....8
8. Photograph of a Trench on a Good Section on SH 183 ....9
9. Photograph of a Well-Bonded Grid on SH 183 ....9
10. Photograph of an Extracted Grid on SH 183 ....10
11. Photograph of Construction on US 175 and Typical Section ....11
12. Photograph of a Transverse Crack on US 175 ....12
13. GPR Data Collected on Westbound US 175 ....12
14. Photograph of a Trench at a Transverse Crack on US 175 ....13
15. Typical Section on IH 35E ....14
16. GPR Data Collected on IH 35E ....15
17. Photograph of a Trench on IH 35E ....15
18. Typical Section on US 175 ....18
19. GPR Data Collected on Eastbound US 175 ....18
20. TTI's Overlay Tester ....19
21. Strata Overlay Tester Results ....20
22. Type C HMA Overlay Tester Results ....20
23. Hamburg Wheel Test ....21
24. Hamburg Wheel Test Results for the US 175 Material ....22
25. Typical Section on SH 114 ....24
26. Photographs of Shoving and Transverse Cracks on SH 114 ....24
27. GPR Data Collected on SH 114 ....25
28. TTI's Overlay Test ....25

## LIST OF FIGURES (Continued)

**Figure** **Page**


29. Crumb Rubber Overlay Test Results ....26
30. Hamburg Wheel Test of Crumb Rubber ....27
31. Hamburg Wheel Test Results on Crumb Rubber ....28
32. US 83 Sections That Were Investigated ....31
33. US 83 HMA Specimens Cracked in the Overlay Tester ....33
34. US 83 Stabilized Base Specimens Cracked in the Overlay Tester ....34
35. Flexible Base Overlay Section on US 83 ....35
36. FWD Analysis for Flexible Base Section ....36
37. GPR Data on US 83, Thick Flexible Base ....37
38. Dielectrics of Flexible Base Overlay on US 83 ....38
39. Tube Suction Test Dielectric Results ....39
40. Unconfined Compressive Strength of Base ....40
41. Distribution of Modulus of Cracked Layer ....43
42. Structure on US 83 ....44
43. GPR Data on US 83, Rubblized Section ....44
44. Dielectrics of a Rubblized Section on US 83 ....45
45. Distributions of Modulus of the Rubblized Layer ....47

# LIST OF TABLES

**Table** **Page**

1. Summary of HMA Overlay Sections ..... 33
2. Summary of Asphalt Stabilized Base Section ..... 34
3. Classification of Base Materials Based on the Tube Suction Test ..... 38
4. Summary of Crack and Seat Sections ..... 42
5. Summary of Layer Strength Properties for the Rubblized Section ..... 45

# CHAPTER 1
# INTRODUCTION

Project 0-4517 was established to develop statewide guidelines on how to select rehabilitation options for jointed concrete pavement (JCP). The objectives are well summarized in the project statement. An extract is presented below:

*"Reflective cracking continues to be a major problem in the rehabilitation of jointed concrete pavements. A study is proposed to summarize the performance of the results obtained on the Lufkin experiment and to determine how applicable these results are statewide. The proposed investigation will focus on why a particular approach worked well and others did not and to identify the lessons that can be learned for use on future projects. This will involve post-mortem studies on the Lufkin project, together with evaluations of similar type treatments in different areas of the state. The objective is to develop statewide methods for rehabilitating jointed concrete pavements to avoid joint reflective cracking."*

This report covers the activities in Year 3 of this project. Two earlier reports have been submitted to TxDOT. Report 0-4517-1 entitled "Performance Report on Jointed Concrete Pavement Repair Strategies in Texas" (Scullion and Von Holdt, 2004) summarized the findings from the Lufkin experiment and also surveyed the performance of several additional treatments around the state. In Lufkin, it was shown that the best performing strategies were either those with large stone (Arkansas) mixes or flexible base overlays. Crack and Seat techniques did not perform well in the Lufkin experiment due to the weak base layer and the inability to effectively seat the broken concrete. Variable performances were also found from three rubblization projects; slab fracturing techniques can work well, but they are not appropriate for all cases. In other studies, it was found that grids placed between asphalt layers did not perform well primarily because of layer debonding problems.

Report 0-4517-2 entitled "Using Rolling Deflectometer and Ground Penetrating Radar Technologies for Full Coverage Testing of Jointed Concrete Pavements" (Scullion, 2005) presented a field testing plan for jointed concrete pavements. Key components of the plan are

the extensive use of advanced nondestructive testing equipment available in Texas. The use of Ground Penetrating Radar (GPR) is recommended to measure the thickness of cover over JCP and to identify pockets of sub-slab trapped moisture. Deflection techniques are also required to measure both load transfer efficiency and center slab strength. The use of either the Rolling Dynamic Deflectometer (RDD)or the Falling Weight Deflectometer (FWD) was recommended.

In the first two years of this project, numerous additional test sections where districts had used innovative techniques to rehabilitate jointed concrete pavements were also identified. To complete the evaluation of treatments used in Texas, a 1-year extension was given to Project 0-4517 to include the evaluation of the following experimental sections:

1) Experimental Section on US 83 in Childress

US 83 runs the entire length of the Childress District. This roadway is largely an old jointed concrete pavement, which over the past 10 years has been largely rehabilitated. The Childress District has employed a whole range of rehabilitation approaches, including rubblization, crack and seat, various types of asphalt overlays, flexible base overlays, use of fabrics, etc. In this evaluation, the performance of each will be monitored. As a minimum, this will include visual condition data, FWD data, and GPR data. If performance problems are encountered, a forensic study will be initiated to identify the cause of the problem. District design, lab, and construction staff will be interviewed to document their experiences with each treatment.

2) Experimental Section on US 175

In 2003, the Dallas District rehabilitated a 3-mile section of jointed concrete on US 175 just south of the IH 635 loop. Two propriety treatments were used; Strata® (Koch Materials) and the GlasGrid® product (Bay Mills) were placed beneath a thin hot mix surface layer. The performance of these sections will be determined and the district's construction experiences documented. Testing will include GPR, field coring, and laboratory testing.

This Year 3 report contains an evaluation of both of these experimental sections.

# CHAPTER 2
# EVALUATION OF GRID PRODUCTS

In Report 0-4517-1, construction and early pavement performance problems were documented with grid products. These are summarized in the following paragraph taken from the Report 0-4517-1:

> *"Several construction problems and failures shortly after construction were found around the state. In all cases, the grid was placed on a thin Hot Mix Asphalt (HMA) level-up layer, and the observed problems were related to debonding of the two layers of HMA. The cause of debonding was attributed to several factors including a) the small openings in the grid (about 0.25 inch) preventing intrusion of aggregates (particularly a problem with coarse TxDOT surfacing mixes such as Coarse Matrix High Binder (CMHB) or Stone Matrix Asphalt (SMA), b) rainfall during construction, c) moisture problems with the self-adhesive glue used on the grid, or d) inadequate surface thickness."*

However, in these studies, it was commented that no evaluations were made of the numerous grid projects that have been placed in the Dallas District from 2001 to 2004. Several of these projects were thought to be performing well. Whereas many of the reported problems were found with a grid with small openings, the Dallas District has used grids with the larger grid opening (up to 1-inch).

The performance of the sections from the Dallas District are described in the remainder of this chapter.

## LOOP 12, DALLAS DISTRICT (CONTACT: MAURICE PITTMAN)

A 2-mile section of Loop 12 between Shady Brook Lane and Lawther Drive was rehabilitated using the ½-inch GlasGrid product (8501). The section is three lanes per direction, and both directions were rehabilitated. The existing pavement was a 10-inch thick jointed concrete pavement.

A 2-ft wide membrane material was placed over the joints as part of the preparation for an overlay. The membrane was placed as a barrier for horizontal movement between the slab below and the layers above. A ¾-inch Type D hot mix asphalt level-up course was then applied. This was followed by a continuous layer of the grid, which was not tacked. The grid was overlaid with 2-inches of Type C HMA with polymer and was opened to traffic in July 2002. A typical pavement section is shown in Figure 1 below.

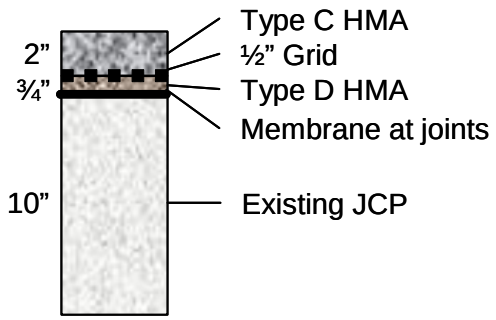



**Figure 1. Typical Section on Loop 12.**

The performance of this section was evaluated in June 2005, at an age of 3 years. A windshield visual survey revealed numerous transverse cracks and failures. A detailed visual inspection of 2500-ft of the eastbound section revealed 23 transverse cracks and 3 failures. Photographs of the transverse crack and failure distresses found on the section are shown in Figure 2 below.

**Figure 2. Photograph of Distresses on Loop 12.**

A GPR survey of the outside wheel path of the slow and middle lanes was conducted. The data show high reflections within the HMA layers at the level of the grid. For sections with grid products, this radar pattern has in the past indicated areas of debonding. The pattern was found over most of the section length of all surveyed lanes in both directions. Typical GPR data are shown in Figure 3 below.

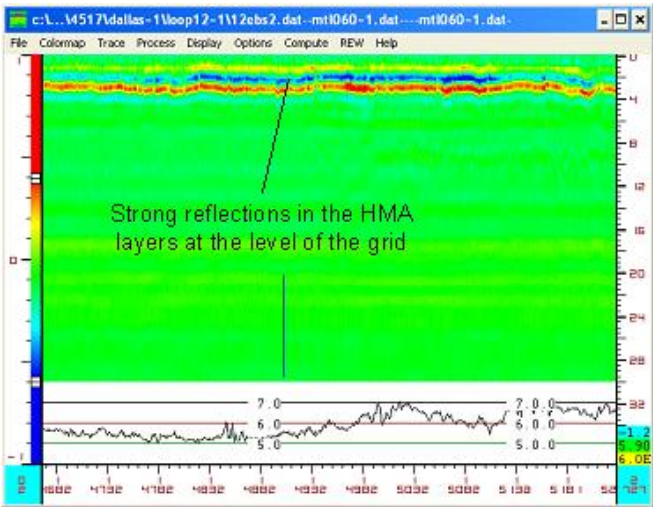



**Figure 3. GPR Data Collected on Loop 12.**

To gain a better understanding of the factors contributing to the development of the distresses, three trenches were evaluated on this section. The trenches were cut at a transverse crack, a failure, and on a section with no visible distress.

The trench with the reflection crack revealed that the surface course was poorly bonded to the grid and the underlying level-up course. The grid easily separated from the surface course when researchers lifted it out. The grid was torn at the crack, poorly bonded to the level-up course, and very weak. It could easily be torn apart by hand. Photographs of the trenching are shown in Figure 4.

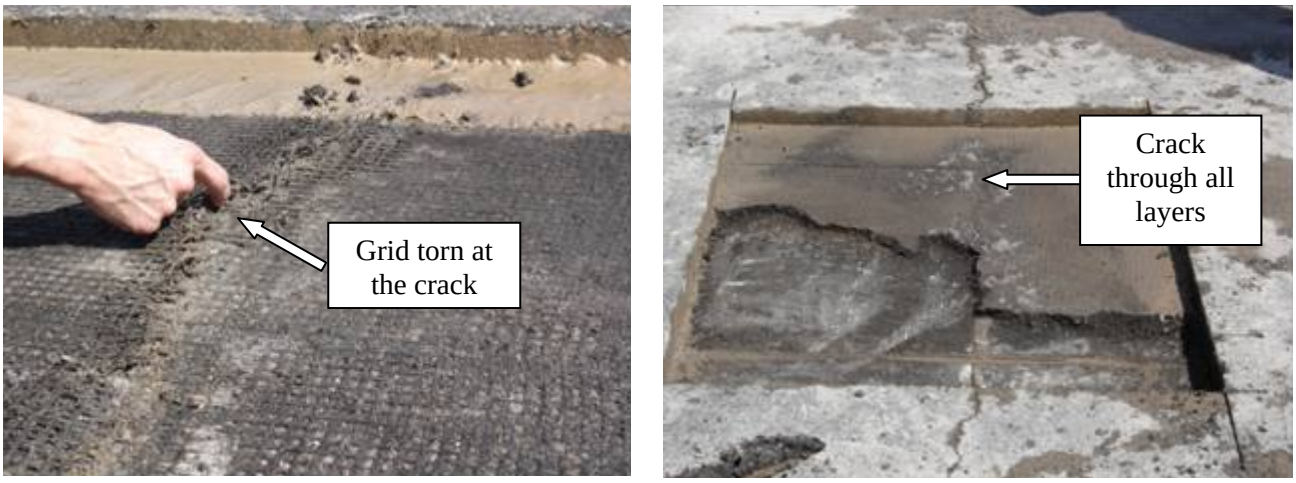



**Figure 4. Photographs of a Trench at a Transverse Crack on Loop 12.**

The trench with the failure revealed poor bonding between the grid and the HMA layers. The grid was severely deteriorated and could easily be torn apart by hand. The level-up layer was severely deteriorated and not well bonded to the underlying membrane over the joint. The membrane was intact and saturated with moisture. The failure did not occur at the joint, but at the edge of the membrane about 1½ ft from the joint where some cold patching seems to have been placed prior to the overlay. The mechanism of how this failure developed is still unclear, but the merits of the membrane at the joint have been questioned by the area office involved on this project. Photographs of the trenching are shown in Figure 5 below.

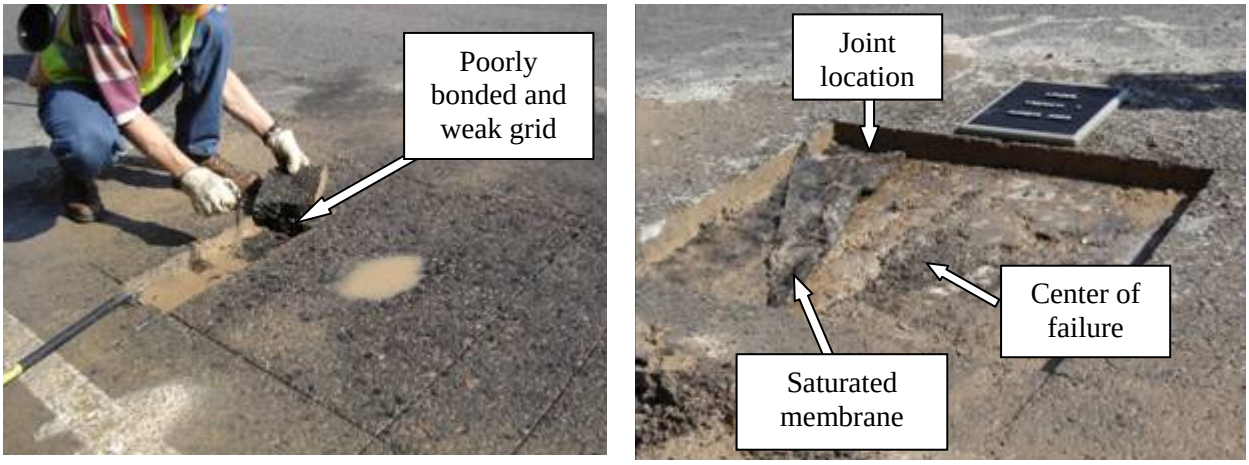



**Figure 5. Photographs of a Trench at a Failure on Loop 12.**

The trench on the section with no visible distress showed the same debonding and weak grid as seen at the trenches with the distresses.

Based on the radar data collected on this section and the findings from the trenching, it is apparent that the debonding of the asphalt layers at the grid is widespread on Loop 12 and the strength of the grid has deteriorated over the past 3 years. The grid was not highly effective in retarding the reflection of cracks through the HMA layers from the joints in the concrete pavement below.

**SH 183, DALLAS DISTRICT (CONTACT: MAURICE PITTMAN)**

A 4-mile section of the heavily trafficked SH 183 between Loop 12 and SH 161 was rehabilitated using the ½-inch GlasGrid product (8501). The 1-inch GlasGrid product (8511) was used on a 1000-ft section of the westbound outer lane at the start of the section on the Loop 12 end. The section is three lanes per direction, and both directions were rehabilitated. The existing pavement was a 9-inch thick jointed concrete pavement.

A 2-ft wide membrane material was placed over the joints as part of the preparation for the overlay to limit the transfer of horizontal movement from the slab below to the layers above. A ¾-inch Type D HMA level-up course was applied, followed by a continuous layer of the ½-inch opening grid, which was not tacked. The grid was overlaid with 2 inches of Type C HMA with latex. The section was opened to traffic in September 2002. A typical pavement section is shown in Figure 6.

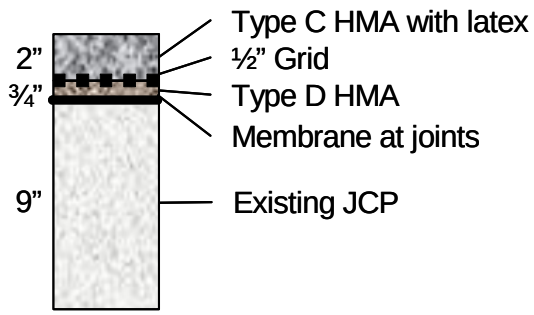



**Figure 6. Typical Section on SH 183.**

The performance of this section was evaluated in June 2005, at an age of 3 years. A windshield visual survey did not reveal any major distresses along the section. A detailed visual inspection of 1200-ft of the eastbound section revealed no distresses in the travel lanes. Some transverse cracks were noted in the shoulder, but these did not extend through to the travel lanes.

A GPR survey of the outside wheel path showed patterns of high reflections in the HMA layers, which may be associated with debonding. The GPR data from this section is shown in Figure 7.

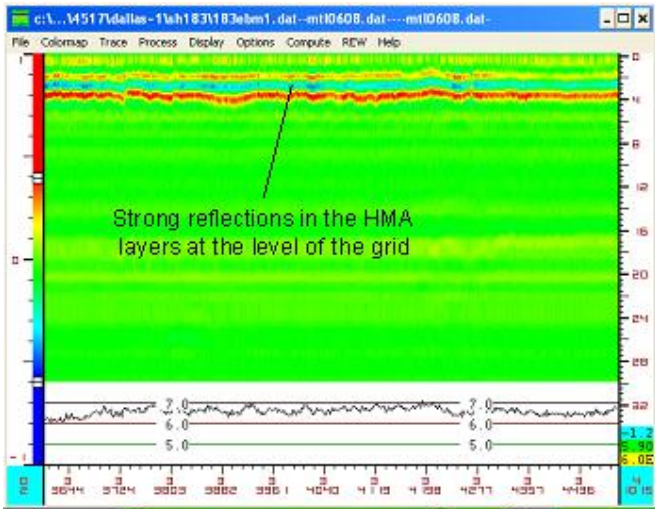



**Figure 7. GPR Data Collected on SH 183.**

A trench was cut on the section with the ½-inch GlasGrid product (8501) with no distresses to evaluate the bonding between the layers. The trench was cut in the middle of the lane and not in the wheel path. The trench revealed poor bonding between the grid and both the surface and level-up layers. This condition can be seen in Figure 8. The grid could be torn apart by hand, but not very easily.

**Figure 8. Photograph of a Trench on a Good Section on SH 183.**

Two trenches were cut in the section with the 1-inch GlasGrid product (8511); one at a location without a transverse crack and another at a location with a transverse crack. The trench at the location without the transverse crack revealed good bonding between the asphalt layers. The upper asphalt layer could not be easily lifted out from the trench due to the bond with the lower layers. The grid was firmly stuck to the level-up layer below. With a steady pull, the grid could be removed with tearing, and it dislodged some aggregate from the level-up layer. The bonding of the grid to the HMA layers was good and the condition of the grid was fairly good. A photograph of the grid is shown in Figure 9.

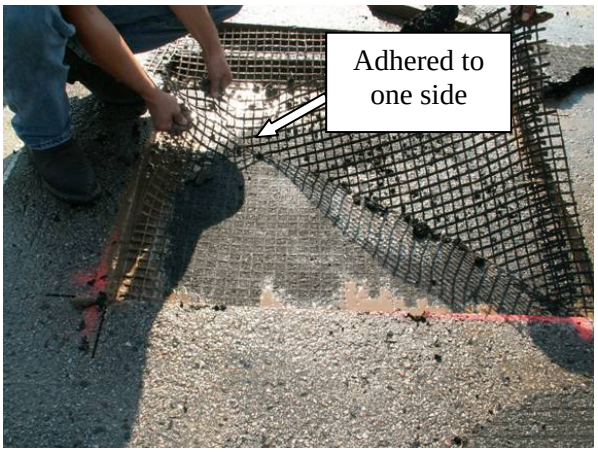



**Figure 9. Photograph of a Well-Bonded Grid on SH 183.**

The second trench, at the transverse crack, revealed a grid that was poorly bonded to the upper HMA, but adhered to the level-up layer. The condition of the grid appeared to be fairly good out of the wheel path, but poor within the wheel path area. This may indicate that the grid is deteriorating as a result of traffic loading. In this trench, the grid was not severed at the location of the crack. This may indicate that the crack can propagate through the grid without the grid actually severing. A photograph of the grid is shown in Figure 10.

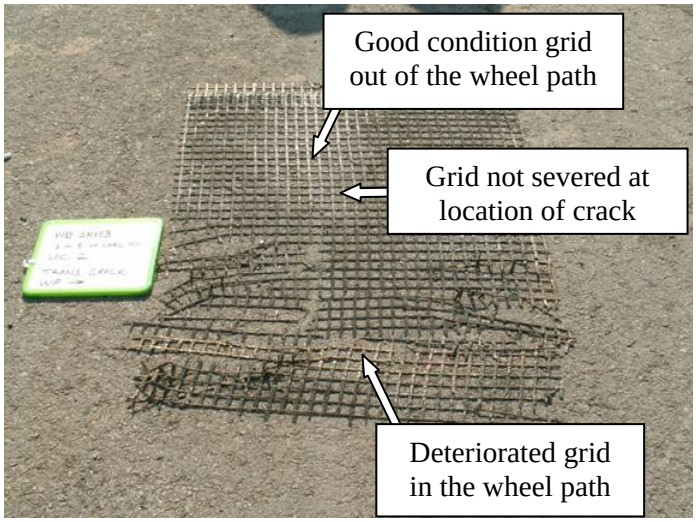



**Figure 10. Photograph of an Extracted Grid on SH 183.**

Based on the radar data collected on this section and the findings from the trenching, it appears that the debonding of the layers at the grid is widespread on SH 183. It also appears as if the grid may deteriorate quicker under the action of traffic loading. This section was performing well after 3 years, with few distresses.

**US 175, DALLAS DISTRICT (CONTACT: GARY MOONSHOWER)**

A 2½-mile section of US 175 was overlaid with HMA and the 1-inch GlasGrid product (8511). The section includes both lanes of the westbound direction between Seagoville Road and Woody Road. This was an old 8-inch thick jointed concrete pavement of over 40 years old that had performed reasonably well in the past.

The existing HMA surface was planed down and a 1-inch Type D HMA layer was placed as a level-up layer. This was followed by 10-ft wide continuous strips of the grid that was tacked to the level-up layer. The grid was overlaid with a 2-inch Type C HMA layer. This section was completed in October 2003. A photograph of construction and a typical section are shown in Figure 11.

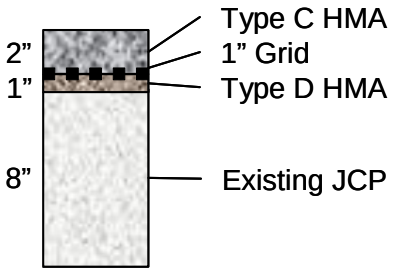



**Figure 11. Photograph of Construction on US 175 and Typical Section.**

The performance of this section was evaluated in June 2005, at an age of 2 years. A windshield visual survey revealed several transverse cracks across the full width of the pavement on one stretch of the road. A photograph of a typical distress is shown in Figure 12.

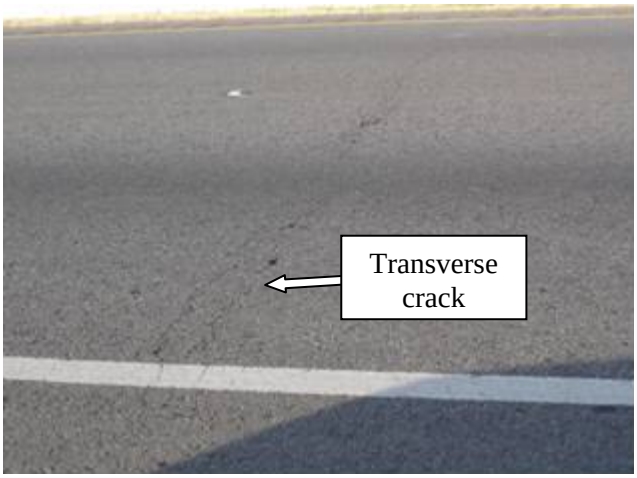



**Figure 12. Photograph of a Transverse Crack on US 175.**

A GPR survey of the outside wheel path of both lanes was conducted. The data show high reflections within the HMA layers at the level of the grid, which may indicate debonding. The pattern was found over almost the entire section length of both the outside and inside lanes. Typical GPR data are shown in Figure 13.

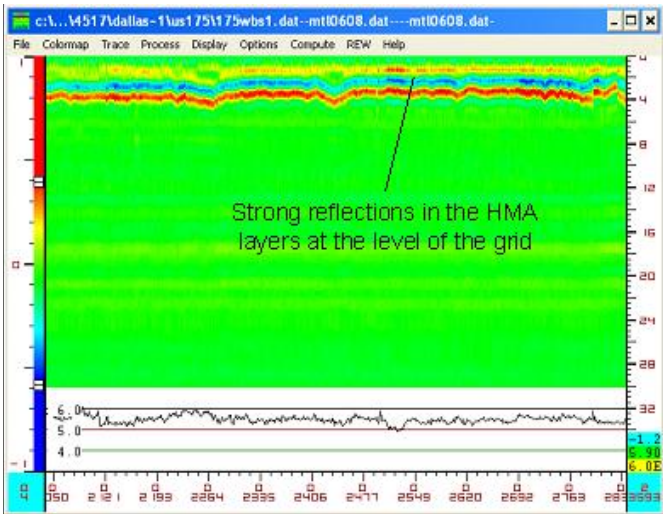



**Figure 13. GPR Data Collected on Westbound US 175.**

Two trenches were cut on the section. One trench was cut at a joint with a transverse crack and another at a joint with no transverse crack. The trench with the crack revealed that the grid was poorly bonded to the upper asphalt, but well bonded to the level-up layer, which was probably a result of the tack that was used. The grid was torn at the location of the crack. The grid was fairly strong, but could be torn apart by hand with some effort. A photograph of the trench is shown in Figure 14.

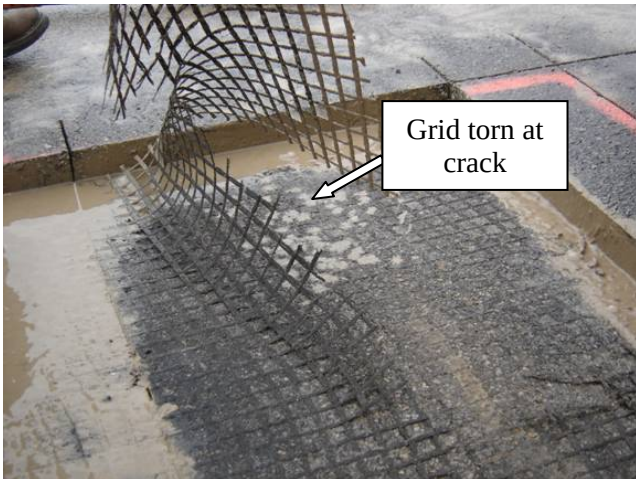



**Figure 14. Photograph of a Trench at a Transverse Crack on US 175.**

The trench at the joint with no transverse crack revealed a grid that was adhered to the level-up layer, but poorly bonded to the upper HMA layer. The grid was strong and could not be torn apart by hand. No evidence of cracking was found in the level-up layer beneath the grid.

Based on the radar data collected on this section and the findings from the trenching, it appears that the debonding of the layers at the grid is widespread on US 175. The bonding to the level-up layer appeared to be good where the tack coat was placed, but the bonding to the upper HMA layer was poor. The grid was torn through at the location of the transverse crack, indicating that the grid was not strong enough to withstand the stresses at the location of the crack. The grid was also easily torn apart, which indicates that it had deteriorated over time.

**IH 35E, DALLAS DISTRICT (CONTACT: MAURICE PITTMAN)**

A 4-mile section of IH 35E was overlaid with HMA and the 1-inch GlasGrid product (8511). The heavily trafficked section includes all lanes of both directions of IH 35E between Loop 12 and IH 635. The underlying pavement is an 8-inch continuously reinforced concrete pavement (CRCP).

The pavement consists of a ¾-inch Type D HMA level-up layer followed by the 1-inch GlasGrid product (8511) that was tacked to the level-up layer. The grid was overlaid with a 2-inch Type C HMA with polymer modified penetration grade binder. This section was completed in early 2005. A typical pavement section is shown in Figure 15.

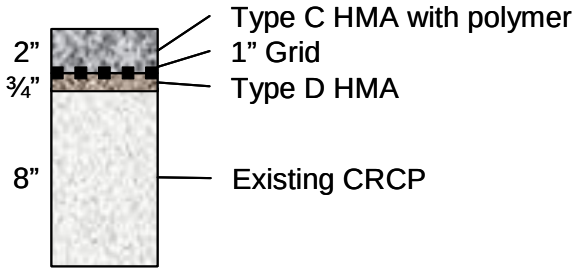



**Figure 15. Typical Section on IH 35E.**

The performance of this section was evaluated in June 2005, so the pavement was less than 1 year old. A windshield visual survey revealed no distresses.

A GPR survey of the outside wheel path of both lanes was conducted. The data show high reflections within the HMA layers at the level of the grid, which may indicate debonding. The pattern was found over almost the entire section length of both the outside and inside lanes. Typical GPR data are shown in Figure 16.

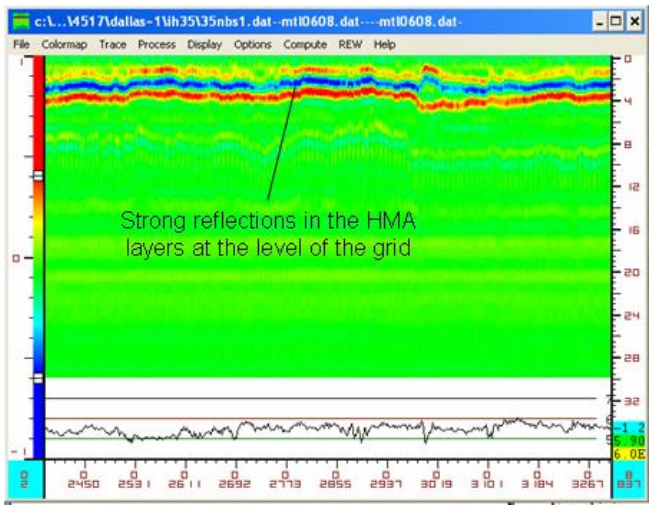



**Figure 16. GPR Data Collected on IH 35E.**

Two trenches were cut on this section. Both were at locations with no distresses. Both trenches revealed poor bonding to the upper HMA layer, but good bonding to the level-up layer. The good bonding may be a result of the tack coat that was used. The grid was in good condition and strong. A photograph of the well-bonded grid is shown in Figure 17.

**Figure 17. Photograph of a Trench on IH 35E.**

Based on the radar data collected on this section and the findings from the trenching, it appears that the debonding of the layers at the grid is widespread on IH 35E. The bonding to the level-up appeared to be good where the tack coat was placed, but the bonding to the upper HMA layer was poor. The grid was in good condition.

## SUMMARY OF FINDINGS OF THE GLASGRID® PRODUCTS

The evaluation of the five road sections with GlasGrid products produced several findings, which are discussed below.

Several sections rehabilitated with the GlasGrid products had transverse cracks in the early life of the pavement. These transverse cracks reflected through from the underlying joints of the jointed concrete pavements. Some sections cracked as early as 2 years and 3 years after placement of the grid. The GlasGrid products did not prove to be highly effective in retarding the development of reflection cracks on old jointed concrete pavements.

The sections all appear to have widespread debonding at the level of the grid in the HMA layers. When a tack coat was used on the underlying HMA layer, the bond between the 1-inch grid and the underlying layer improved significantly. No tack coat was used on sections with the ½-inch grid, and no tack coat was used between the grid and the upper HMA layer. Debonding between the layers is a concern for future pavement performance. If the pavement starts to crack, moisture may penetrate the pavement and collect within the debonded area. This moisture penetration may lead to the accelerated deterioration of the pavement.

The GlasGrid products seem to deteriorate in strength under the action of traffic. The greatest deterioration appeared in the wheel path. Several of the grids had deteriorated to such a degree that they could easily be torn apart by hand. The lowered strength of the deteriorated grid may reduce its ability to retard the propagation of reflection cracks.

# CHAPTER 3
# CRACK RETARDING OVERLAYS

With regard to crack retarding layers, Report 0-4517-1 had the following conclusions about the use of crack retarding products such as Strata.

- The performance to date has been good; however, the oldest section is less than 2 years old so long-term monitoring is recommended.
- The Strata product performed very well in the laboratory in the Texas Transportation Institute (TTI)'s overlay tester with regard to resistance to reflection cracking. Tests were run at both 77 and 50 °F with excellent results.
- The product does not have good rut resistance, which raised concerns about driving on this layer during construction in hot weather.

However, these conclusions were based largely on the performance of a single section of the product on a single highway in Houston. Since that time, the product has been used in several other areas in Texas. Of particular interest is its use on a section of US 175. In one direction, the Glasgrid product described in Chapter 2 was used, and in the other, the Strata product was used. The performance of this section is described below.

## US 175, DALLAS DISTRICT (CONTACT: GARY MOONSHOWER)

A 2½-mile section of US 175 was overlaid with a 1-inch layer of the Strata product with 3-inches of HMA above it. The section includes both lanes of the eastbound direction between Seagoville Road and Woody Road. This was an old 8-inch thick jointed concrete pavement of over 40 years old that had performed reasonably well in the past.

The existing HMA surface was planed down and a 1-inch Type D HMA layer was placed as a level-up layer. This was followed by the 1-inch layer of Strata and then 3-inches of Type C HMA as a surface course. This section was completed in October 2003. A typical pavement section is shown in Figure 18.

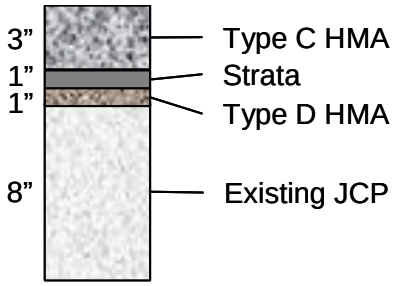



**Figure 18. Typical Section on US 175.**

The performance of this section was evaluated in June 2005, at an age of 2 years. A windshield visual survey revealed no sign of transverse cracks or other distresses on the pavement.

A GPR survey of the outside wheel path of both lanes was conducted. The data show strong reflections at the Strata layer, which is expected due to the difference in material types. Inconsistent surface thickness, which indicates some construction problems, is the only problem noted from the GPR data. Typical GPR data are shown in Figure 19.

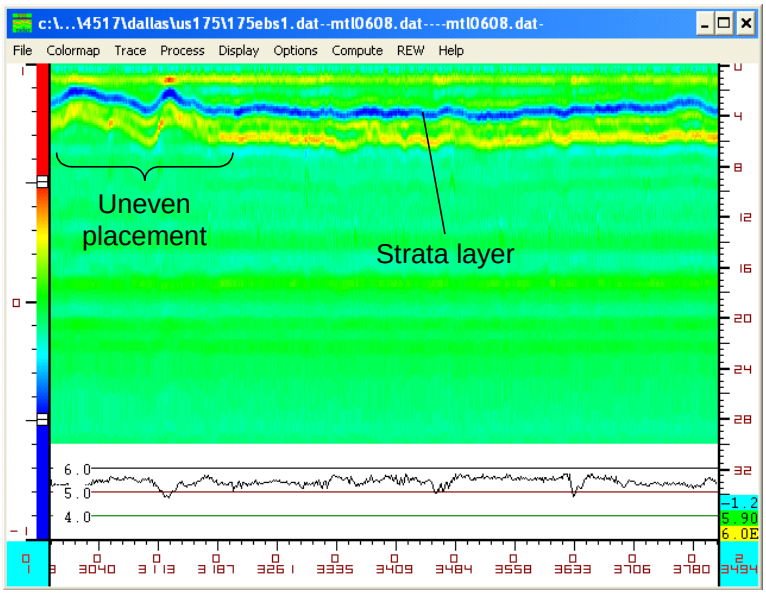



**Figure 19. GPR Data Collected on Eastbound US 175.**

Cores were taken on this section for laboratory testing. TTI's overlay tester (Zhou and Scullion, 2004) was used to evaluate the resistance of the mix to reflection cracking, and the Hamburg Wheel Test was used to evaluate the resistance of the mix to rutting. TTI's overlay tester is shown in Figure 20.

**Figure 20. TTI's Overlay Tester.**

The Strata layer and the Type C HMA surface course were tested separately using the overlay tester. The following criteria were used for the test:

- specimen failure criterion: $\frac{tensile\,load}{initial\,tensile\,load\,(2^{nd}\,cycle)} < 0.2$;
- design criteria for crack resistant materials: cycles > 750; and
- design criteria for Type C and D HMA mixes: cycles > 300.

The Strata performed well on the test and passed the design criteria for crack resistant materials by exceeding 750 cycles of the test. The results of the test are shown in Figure 21. The yellow line in the figure shows the failure load level based on the criteria given above.

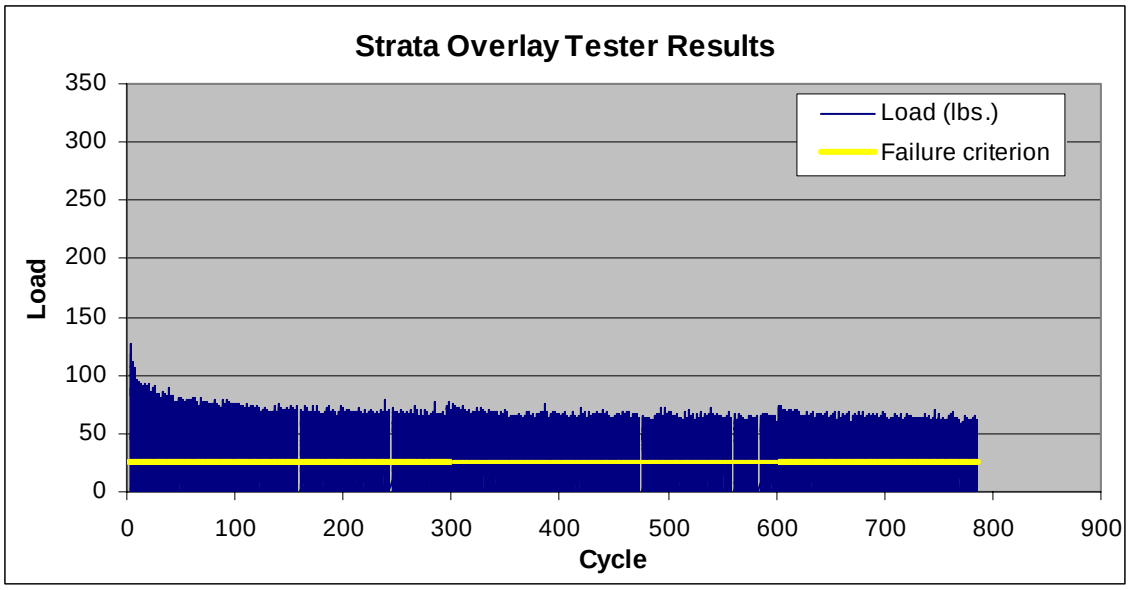



**Figure 21. Strata Overlay Tester Results.**

The Type C HMA mix did not pass the design criteria for Types C and D mixes. Failure occurred at 169 cycles, which is below the design criterion of 300 cycles for this type of mix. The results of the test are shown in Figure 22.

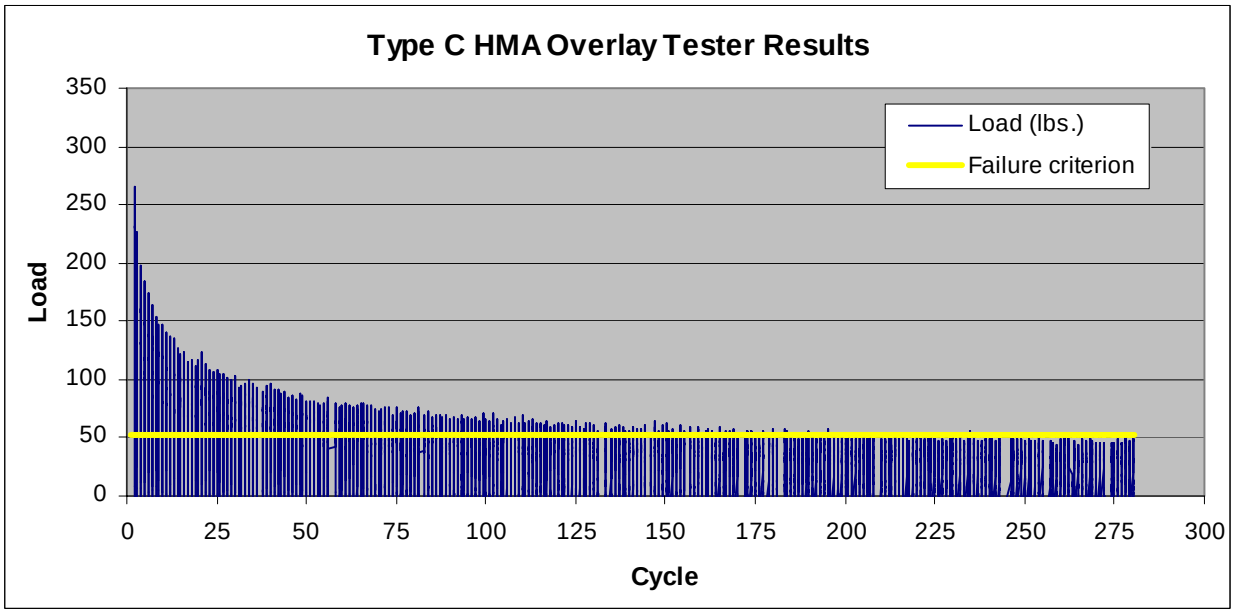



**Figure 22. Type C HMA Overlay Tester Results.**

The Strata and Type C HMA combination were tested in the Hamburg Wheel Test to evaluate the resistance of the combination of materials to rutting. The Hamburg Wheel Test is shown in Figure 23.

**Figure 23. Hamburg Wheel Test.**

A 2½-inch specimen was prepared with 1-inch of Strata at the bottom and 1.5 inches of Type C HMA at the top. The actual pavement has 3-inches of Type C HMA above the Strata layer. The wheel was applied directly to the Type C HMA. The following criteria were used for the test:

- specimen failure criterion: rut depth > 12½-mm (½-inch); and
- design criteria for overlays: passes > 20,000.

The Strata and Type C HMA combination performed well on the test and passed the design criteria by not failing within 20,000 passes. The final rut depth was 7-mm after 20,000 passes. The results of the test are shown in Figure 24.

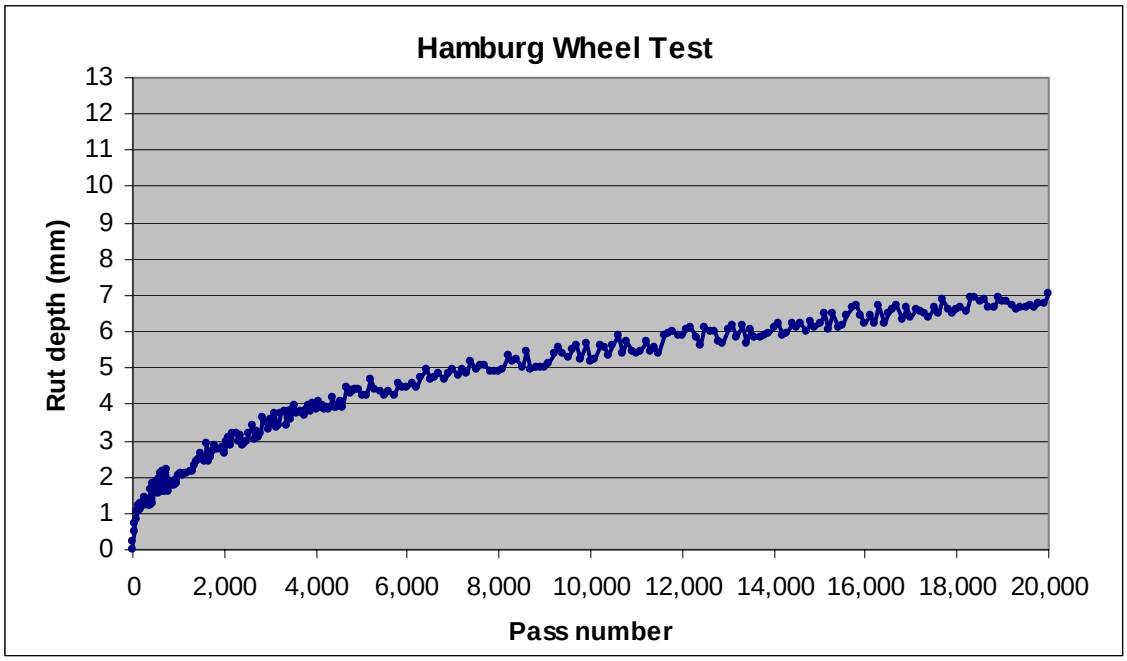



**Figure 24. Hamburg Wheel Test Results for the US 175 Material.**

**Summary of Findings for the Strata Product**

Based on the field investigation and testing conducted on the Strata section of US 175, this section is currently performing well and is expected to continue performing well. The Strata layer shows good resistance to reflective cracking propagating from the bottom upward, and the combination of Type C HMA and Strata shows good resistance to rutting.

The Strata product appears to be capable of restricting the development of reflective cracking in jointed concrete pavement overlays. However, the cost implications of using these materials for jointed concrete overlays should also be considered.

# CHAPTER 4
# THIN CRUMB RUBBER HMA OVERLAY

The Strata product described in Chapter 3 was not the only crack retarding asphalt layer evaluated in Report 0-4517-1. A crumb rubber modified mix was placed on an experimental section on US 96 near Lumberton in the Beaumont District. Although not a JCP (the existing section has a cement-treated base), this experiment gave the researcher the opportunity to compare the performance of different treatments to retard reflection cracking. The following three overlay test sections were constructed in the early 1990s: a) crumb rubber modified asphalt overlay, b) GlasGrid with asphalt overlay and c) a control section with standard Type C overlay. The condition of the section was monitored by Dr. Dar-Hao Chen from TxDOT. Based on discussion with Jack Moser, the area engineer, the conclusions after 8 years in service were the following:

- The crumb rubber section was performing best, and after 8 years the section showed very few reflection cracks.
- With regard to reflection cracking, the GlasGrid section was performing about the same as the traditional asphalt overlay.

During the monitoring of the test sections in Dallas, Maurice Pittman, P.E., asked the research team to include a section of SH 114 in the evaluation. This section had a thin layer of crumb rubber hot mix placed directly over jointed concrete pavement. The evaluation results are described below.

## SH 114 FRONTAGE ROADS, DALLAS DISTRICT (CONTACT: MAURICE PITTMAN)

A 3-mile section of frontage roads on SH 114 between Loop 12 and Spur 348 was overlaid with a 1-inch layer of crumb rubber HMA. An AC-10 binder was used with a binder content of 7.8 percent by weight of the mix and a crumb rubber content of 16 percent by weight of the binder content. The sections have two lanes per direction with curbs and gutters, and both directions were rehabilitated. The existing pavement has several long sections of jointed concrete pavement. In other areas, the jointed concrete pavement was removed and full-depth

asphalt pavement was used. The concrete surface was planed down by 1-inch prior to laying the 1-inch crumb rubber HMA layer. The section was opened to traffic in November 2003. A typical pavement section is shown in Figure 25.

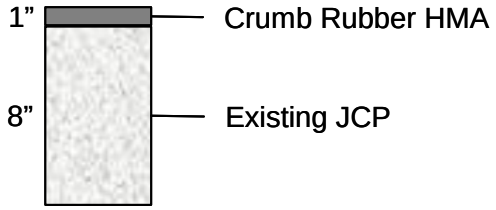



**Figure 25. Typical Section on SH 114.**

The performance of this section was evaluated in June 2005, at an age of 2 years. A windshield visual survey revealed isolated cases of shoving in braking areas and fairly widespread transverse cracks on the sections with concrete underneath. Photographs of the distresses found on the section are shown in Figure 26.

**Figure 26. Photographs of Shoving and Transverse Cracks on SH 114.**

The transverse cracks were very narrow and were closed in the wheel paths where the binder had resealed the cracks. The cracks did not have any effect on the riding quality of the pavement. It should be borne in mind that the investigation was conducted during the summer, and the cracks may widen in the winter.

A GPR survey of the outside wheel path of both lanes was conducted. The data clearly show the consistent thickness of the crumb rubber layer on the concrete. No major moisture problems were noted in the pavement structure. Typical GPR data are shown in Figure 27.

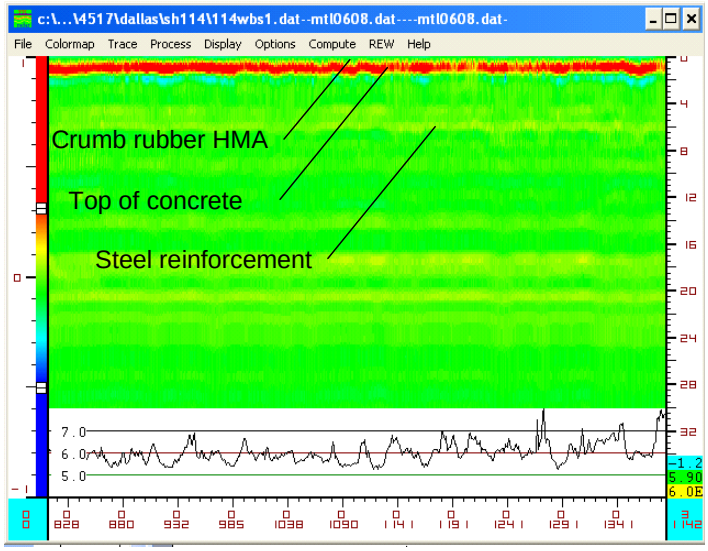



**Figure 27. GPR Data Collected on SH 114.**

Cores for laboratory testing were taken at an isolated thick surface location identified from the radar data. TTI's overlay tester was used to evaluate the resistance of the mix to reflection cracking, and the Hamburg Wheel Test was used to evaluate the resistance of the mix to rutting. Photographs of the core and test are shown in Figure 28.

**Figure 28. TTI's Overlay Test.**

The following criteria were used for the test:

- specimen failure criterion: $\frac{tensile\,load}{initial\,tensile\,load\,(2^{nd}\,cycle)} < 0.2$;
- design criteria for crack resistant materials: cycles > 750; and
- design criteria for Types C and D HMA mixes: cycles > 200.

The crumb rubber performed well on the overlay test and passed the design criteria for crack resistant materials by exceeding 750 cycles of the test. The results of the test are shown in Figure 29.

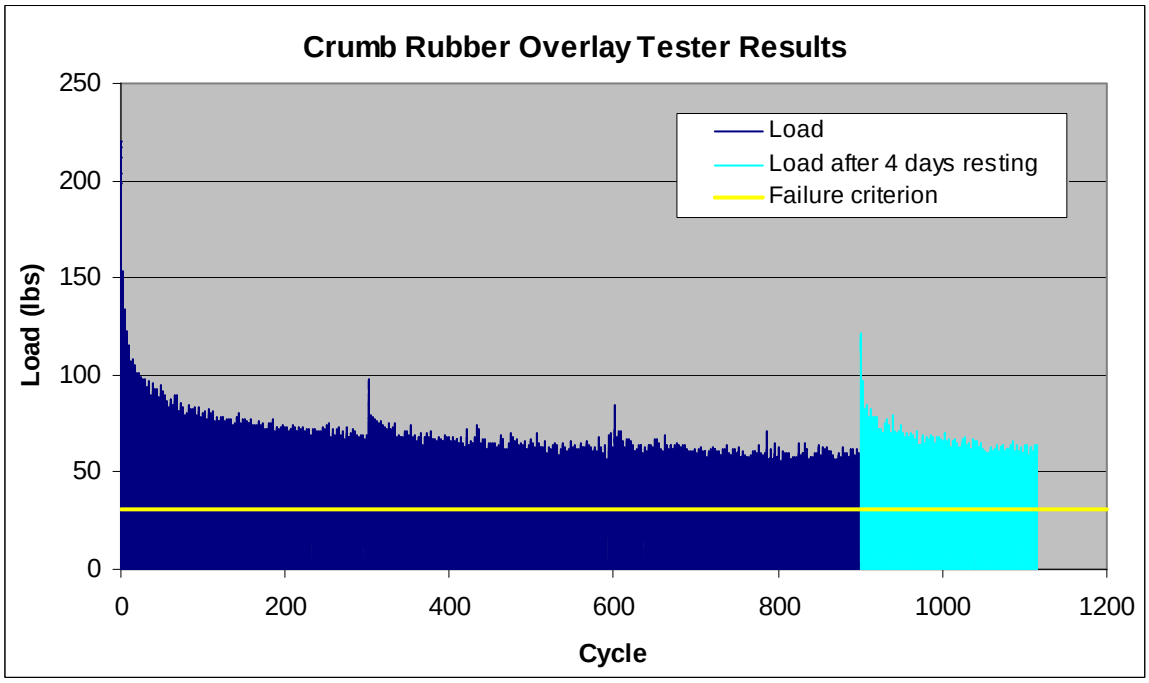



**Figure 29. Crumb Rubber Overlay Test Results.**

Since it was suspected that some healing of the crumb rubber layer may have been taking place in the field, it was decided to retest the sample after completion of the usual test. The sample was retested 4 days after the initial test. The secondary test showed a noticeable increase in the resistance to the strain in the secondary test when compared to the state of the sample at the end of the first test. This may be evidence of healing of the sample, but further investigation will be needed to provide conclusive proof of healing.

The crumb rubber was tested in the Hamburg Wheel Test to evaluate resistance to rutting. The Hamburg Wheel Test is shown in Figure 30.

**Figure 30. Hamburg Wheel Test of Crumb Rubber.**

The following criteria were used for the test:

- specimen failure criterion: rut depth > 12½-mm (½-inch); and
- design criteria for overlays: passes > 10,000.

The crumb rubber performed very poorly on the Hamburg test. The sample was approaching failure within 2000 passes. The binder used in this sample was AC-10, which is judged to be equivalent to the current PG 64-22, which has a Hamburg requirement of 10,000 passes. The results of the test are shown in Figure 31.

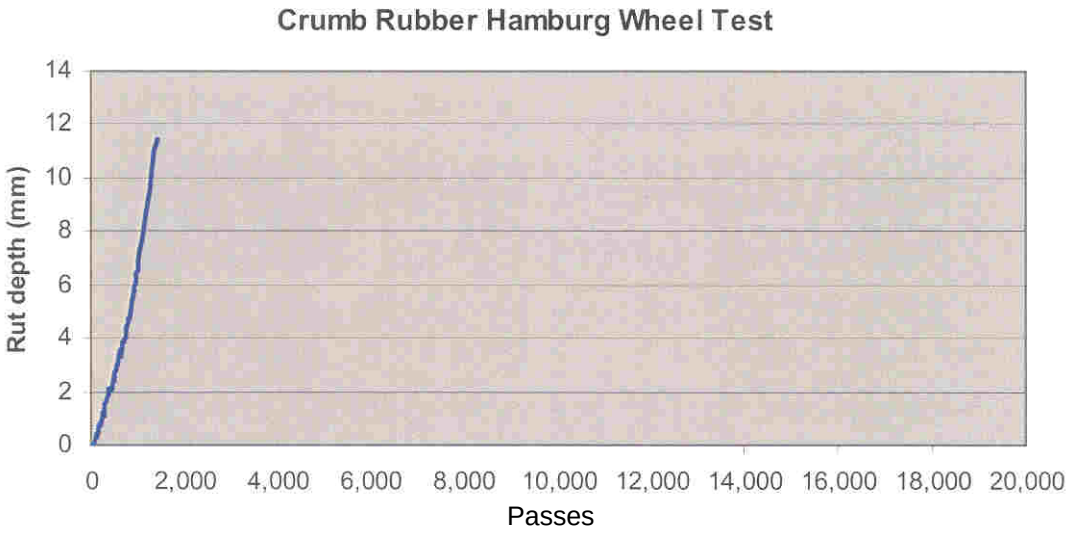



**Figure 31. Hamburg Wheel Test Results on Crumb Rubber.**

The results show that the crumb rubber layer is very susceptible to rutting and permanent deformation. No severe rutting was noted in the field, but the traffic on the frontage road is very light and of low volume. The frontage roads provide access to office complexes off SH 114. Some evidence of permanent deformation was noted in the braking areas on the frontage roads, but this was not widespread.

The overlay tester results show a high resistance to transverse cracks formed from the expansion and contraction of concrete slabs beneath the surface layer. However, widespread transverse cracks were noted in the field. The occurrence of these cracks may be the result of several factors. Firstly, some of the underlying concrete sections consisted of 60-ft jointed reinforced concrete slabs. The expansion and contraction of these long slabs result in large joint movements. The strain levels at the joints of these large slabs may exceed the strain levels used in the overlay tester. This may explain why the test did not fail, but the pavement layer failed in the field. Secondly, the crumb rubber layer was very thin at a thickness of 1-inch. The thin layer is susceptible to cracking by vertical shear stress at joints where load transfer is less than perfect. The crumb rubber layer may, therefore, be cracking by another mode than that tested using the overlay tester. No load transfer measurements were made on any of the joints on SH 114.

Based on the field investigation and laboratory testing of the thin crumb rubber layer, it is expected that rutting and permanent deformation will continue to develop on SH 114. The rate of development will depend primarily on the traffic loading. If the traffic mix and volume remain at current levels, the thin crumb rubber layer may provide reasonable service for several years. The transverse cracks that have developed on SH 114 are fairly tight and do not negatively affect the riding quality of the road. These cracks are expected to have little effect on the performance of the road over the next few years.

The ability to lay a thin asphalt overlay on concrete pavements with curb and gutter restrictions is very attractive, but due to the expected susceptibility of the mix to rutting, it is not recommended for use on heavily trafficked roads. Thin surface overlays of this type are attractive and alternative mix designs should be sought that can provide resistance to cracking and rutting on heavily trafficked roads.

**Conclusions and Recommendations from the SH 114 Evaluation**

It is difficult to draw conclusions from this project. The traffic loadings are very light, and joint condition was not measured prior to the application of the thin surfacing. In general, the district is happy with the performance of this thin overlay. As far as the Hamburg and overlay tester criteria, the following conclusions are made:

- The mix performance in the Hamburg test was very poor, but the material has not shown major rutting in the field. Some localized wash-boarding was observed in braking areas. However, the traffic loadings are very low so that it is difficult to generalize and make any recommendations on how the Hamburg criteria should be modified. TxDOT has on-going studies on the feasibility of using Hamburg criteria for crumb rubber modified mixes.
- The mix did very well in the overlay tester but exhibited reflection cracking in the field. Again, it is difficult to generalize as no load transfer measurements were made. The cracks themselves are minor and not currently a cause for concern. However, the one issue that should be considered is the slab length of 60-ft. The current overlay tester opening criteria of 25-mils is based on a 15-ft slab experiencing a 30 °F drop in temperature. With the longer slabs, either the opening criteria should be increased or the test temperature lowered to make the test more severe.

# CHAPTER 5

# EVALUATION OF THE REHABILITATION OPTIONS USED ON US 83 IN THE CHILDRESS DISTRICT

The Childress District has approximately 150 miles of US 83 passing through the district. This road was constructed in the 1940s as a 9-6-9 jointed plain concrete pavement (JPCP). In the past 10 years, the district has been rehabilitating sections along this highway. The district has used several treatment types, including HMA overlays, stabilized base overlays, flexible base overlays, crack and seat, and rubblization. The sections that were investigated in this report are shown in Figure 32.

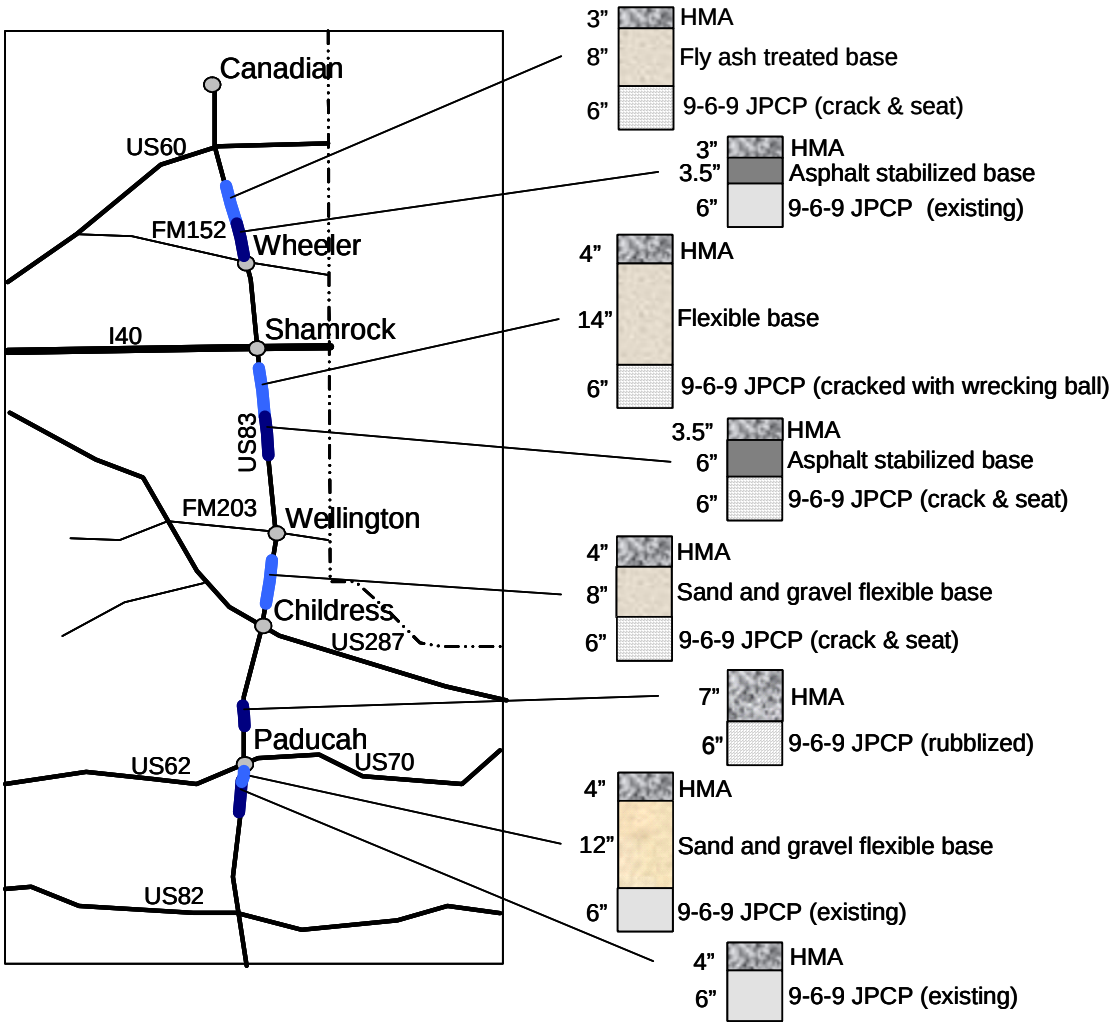



**Figure 32. US 83 Sections That Were Investigated.**

On US 83, the traffic levels are fairly low with average daily traffic (ADT) in the 1000 to 1500 vehicles per day range. The 20-year design loads are typically less than 1 million equivalent single axle loads. The Childress District in general has good subgrade support conditions with typically sandy/silty well-draining material. Rainfall amounts are low to moderate averaging 15 to 20 inches per year. In the northern counties, the section experiences freeze-thaw cycling in winter.

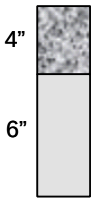
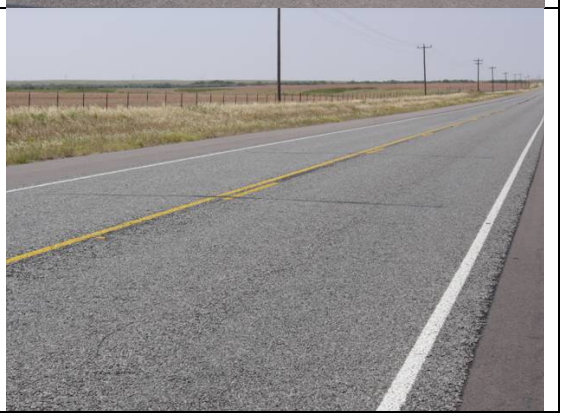
In order to gain an understanding of the effectiveness of the different treatment types used on US 83, each of the rehabilitated sections was visually inspected and tested with both GPR and FWD data. In some cases, samples of the surface or base layers were taken and returned to TTI for lab testing. Results from these investigations are described below.

## PERFORMANCE EVALUATIONS OF HMA OVERLAYS

HMA cores were collected from two sections to evaluate the resistance of HMA surface courses placed directly on JCP. The overlays were 2 and 5 years old at the time of testing and both experienced substantial reflection cracking. The first section was between County Roads F and H in Wheeler County, and the second section was between Salt Creek Bridge and County Road 240 in Cottle County. A summary of the sections is provided in Table 1.

The HMA cores were tested for resistance to cracking using the overlay tester (Zhou and Scullion, 2004). Recent work has recommended design criteria for dense-graded mixes. For mixes to perform well at retarding reflection cracking, it has been proposed that they should withstand 300 cycles in this test. The test conditions are test temperature (70 °F) and test opening 0.025 inch. Photographs of the cracked specimens and test results for the mixes from these two projects are shown in Figure 33.

**Table 1. Summary of HMA Overlay Sections.**

| Section | Surface Age | Performance | Photo |
|---|---|---|---|
| | 5 years | Very widespread longitudinal and transverse reflection cracks | |
|  | 2 years | Widespread transverse reflection cracks |  |

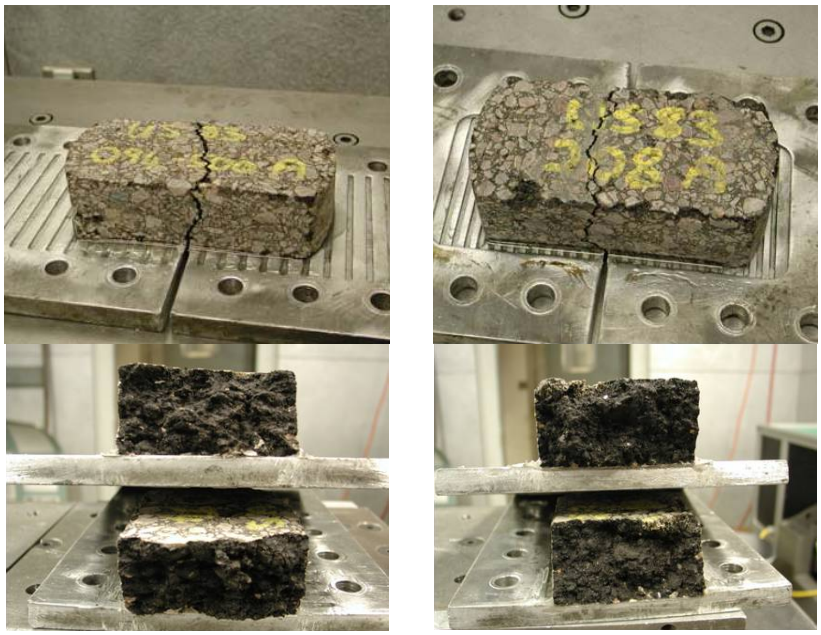


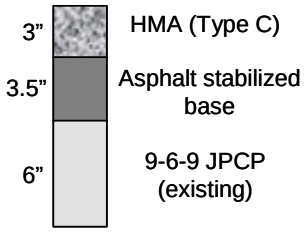
**Figure 33. US 83 HMA Specimens Cracked in the Overlay Tester.**

The specimens failed within 10 cycles of the overlay tester, which is far below the tentative design criterion of 300 cycles for Types C and D mixes. This early failure indicates that the asphalt mixes that were used on US 83 are susceptible to reflection cracking. A visual inspection of the crack surfaces of these mixes indicated that the mixes were dry and that the asphalt surface was dull.

## RESISTANCE OF ASPHALT STABILIZED BASE TO CRACKING

Asphalt stabilized base cores were collected from the section between County Roads F and H in Wheeler County. This is the same section as described above for the HMA surface course evaluation. A summary of the section is provided in Table 2.

**Table 2. Summary of Asphalt Stabilized Base Section.**

| Section | Surface Age | Performance | Photo |
|---|---|---|---|
|  | 5 years | Very widespread longitudinal and transverse reflection cracks | |

The stabilized base cores were also tested for resistance to cracking using the overlay tester (Zhou and Scullion, 2004). Photographs of the specimen are shown in Figure 34.

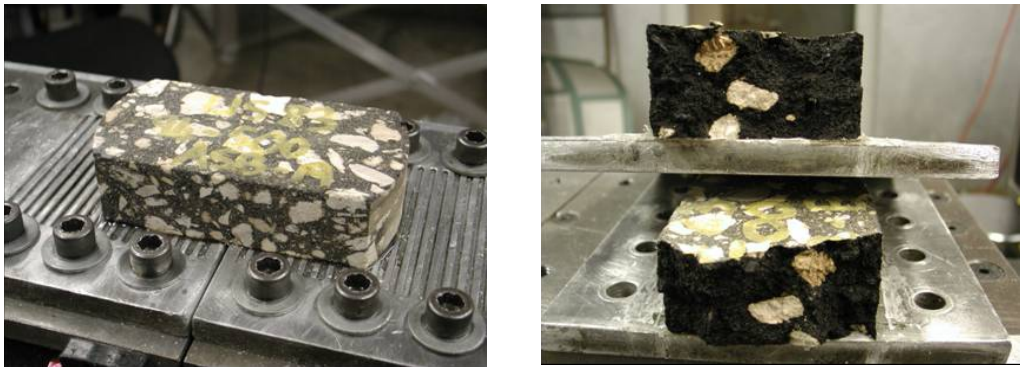


**Figure 34. US 83 Stabilized Base Specimens Cracked in the Overlay Tester.**

The specimens failed within 10 cycles of the overlay tester. This indicates that the asphalt stabilized base also has a poor resistance to reflection cracking.

## THE USE OF THICK FLEXIBLE BASE OVERLAYS

In Report 0-4517-1, it was found that the best performing section on the Lufkin project was the use of untreated gravel base and a thin asphalt surfacing placed directly over the jointed concrete pavement. In 1963, a similar rehabilitation strategy was used on a short section of US 83 just south of Paducah. A ¾-mile jointed concrete pavement section was overlaid with 12-inches of flexible base (sand and gravel) and a 2-inch HMA surface course. This section has provided 40+ years of excellent service with no transverse cracks reflecting through from the bottom layers and no other major distresses. Adjacent sections, where the jointed concrete was overlaid with HMA, have experienced reflection cracking problems. A 2-inch HMA overlay and surface seal was applied to the entire road section in 2003, so no distresses were visible on the surface at the time of evaluation. However, the ride was excellent and maintenance forces had mentioned that the base overlay section had little distress at the time of overlay. A typical pavement section and a photograph of the base retrieved are shown in Figure 35 below.

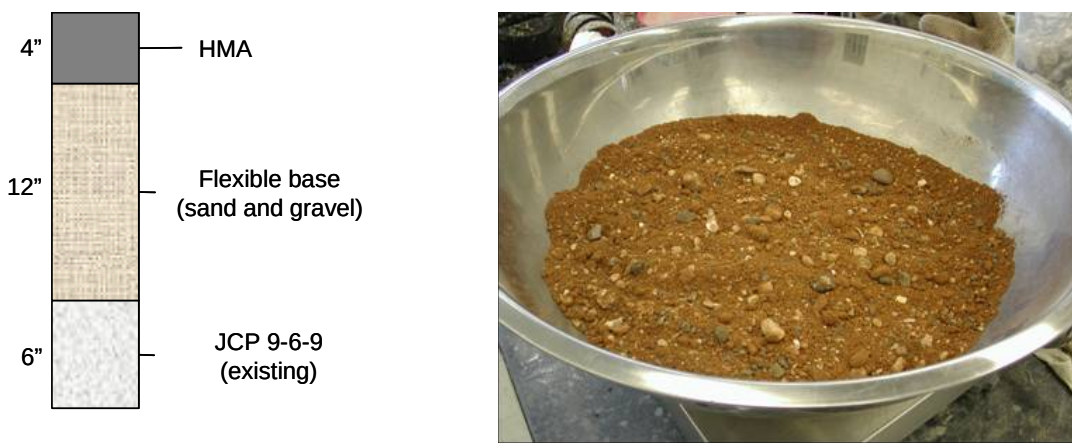



**Figure 35. Flexible Base Overlay Section on US 83.**

A FWD survey was conducted on this section, and the results are shown in Figure 36. The backcalculated moduli values for the flexible base are low, at around 20 ksi. It must be recalled that the base is well-confined as it is resting on a concrete slab, so the average values are fairly low.

TTI MODULUS ANALYSIS SYSTEM (SUMMARY REPORT) (Version 6.0)

District:
County :
Highway/Road:

| | Thickness(in) | MODULI RANGE(psi) Minimum | Maximum | Poisson Ratio Values |
|---|---|---|---|---|
| Pavement: | 4.00 | 700,000 | 1,240,000 | H1: v = 0.35 |
| Base: | 12.00 | 10,000 | 150,000 | H2: v = 0.35 |
| Subbase: | 6.00 | 100,000 | 2,000,000 | H3: v = 0.25 |
| Subgrade: | 212.97(by DB) | 20,000 | | H4: v = 0.40 |

| Station | Load (lbs) | Measured Deflection (mils): R1 | R2 | R3 | R4 | R5 | R6 | R7 | Calculated Moduli values (ksi): SURF(E1) | BASE(E2) | SUBB(E3) | SUBG(E4) | Absolute ERR/Sens | Dpth to Bedrock |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.000 | 10,423 | 16.14 | 10.48 | 5.67 | 3.55 | 3.29 | 1.72 | 1.43 | 1165.3 | 16.9 | 1102.9 | 15.2 | 6.89 | 300.0 |
| 120.000 | 10,069 | 15.48 | 8.51 | 3.75 | 2.30 | 1.81 | 1.38 | 1.17 | 721.6 | 17.9 | 2000.0 | 22.9 | 2.72 | 163.1 * |
| 240.000 | 9,994 | 20.46 | 11.52 | 4.48 | 2.38 | 1.78 | 1.44 | 1.27 | 700.0 | 10.0 | 2000.0 | 22.8 | 4.51 | 78.8 * |
| 360.000 | 10,483 | 16.04 | 9.43 | 4.78 | 2.76 | 2.06 | 1.50 | 1.22 | 864.4 | 20.7 | 203.0 | 20.6 | 1.59 | 164.3 |
| 480.000 | 10,880 | 16.41 | 9.86 | 4.86 | 3.28 | 2.33 | 1.78 | 1.48 | 887.8 | 19.2 | 1295.6 | 18.1 | 1.41 | 300.0 |
| 600.000 | 10,574 | 19.68 | 11.55 | 5.45 | 3.35 | 2.30 | 1.64 | 1.26 | 751.3 | 14.0 | 673.0 | 18.1 | 1.18 | 293.3 |
| 720.000 | 9,521 | 21.29 | 12.95 | 6.52 | 3.80 | 2.33 | 1.54 | 1.16 | 831.8 | 10.0 | 188.1 | 15.9 | 2.79 | 140.0 * |
| 840.000 | 10,510 | 21.21 | 12.42 | 5.67 | 3.30 | 1.99 | 1.31 | 1.18 | 819.2 | 10.4 | 619.6 | 20.3 | 3.22 | 131.8 |
| 1520.000 | 10,153 | 12.65 | 6.61 | 2.98 | 2.00 | 1.46 | 1.16 | 0.99 | 750.7 | 25.6 | 1998.5 | 27.5 | 1.62 | 206.5 * |
| 1640.000 | 10,308 | 11.01 | 6.99 | 4.08 | 2.74 | 1.99 | 1.52 | 1.26 | 1240.0 | 37.7 | 461.6 | 19.8 | 1.23 | 300.0 * |
| 1760.000 | 10,129 | 16.93 | 10.38 | 5.24 | 3.33 | 2.43 | 1.76 | 1.33 | 860.1 | 17.7 | 514.1 | 16.6 | 1.02 | 300.0 |
| 1880.000 | 10,467 | 14.46 | 8.71 | 4.38 | 2.79 | 1.97 | 1.46 | 1.37 | 1010.8 | 21.4 | 649.5 | 20.8 | 0.51 | 300.0 |
| 2000.000 | 10,669 | 15.48 | 9.95 | 5.22 | 2.95 | 2.23 | 1.64 | 1.32 | 1219.0 | 17.7 | 473.1 | 19.3 | 2.42 | 143.3 |
| 2120.000 | 10,590 | 15.54 | 9.97 | 5.02 | 3.00 | 2.08 | 1.50 | 1.09 | 1212.4 | 17.1 | 383.3 | 20.2 | 0.89 | 217.1 |
| 2240.000 | 10,598 | 17.06 | 10.86 | 5.58 | 3.39 | 2.28 | 1.67 | 1.26 | 1116.2 | 15.5 | 420.1 | 18.1 | 0.55 | 242.2 |
| 2360.000 | 10,304 | 15.35 | 9.00 | 4.41 | 2.88 | 1.97 | 1.44 | 1.19 | 872.1 | 20.1 | 614.6 | 20.3 | 1.33 | 300.0 |
| 2480.000 | 10,304 | 18.75 | 11.38 | 5.71 | 3.47 | 2.36 | 1.74 | 1.39 | 821.3 | 15.9 | 208.8 | 17.0 | 0.37 | 256.6 |
| 2600.000 | 10,343 | 17.04 | 10.35 | 5.13 | 3.29 | 2.23 | 1.62 | 1.29 | 855.6 | 19.0 | 188.9 | 18.2 | 1.24 | 259.6 |
| 2720.000 | 10,475 | 17.23 | 10.21 | 4.84 | 3.00 | 2.08 | 1.58 | 1.24 | 780.0 | 19.1 | 184.9 | 19.8 | 1.25 | 300.0 |
| 2840.000 | 10,308 | 19.35 | 12.28 | 6.04 | 3.44 | 2.26 | 1.70 | 1.41 | 1029.1 | 10.3 | 1233.4 | 17.8 | 0.89 | 149.1 |
| Mean: | | 16.88 | 10.17 | 4.99 | 3.05 | 2.16 | 1.56 | 1.27 | 925.4 | 17.8 | 770.7 | 19.5 | 1.88 | 235.0 |
| Std. Dev: | | 2.68 | 1.67 | 0.83 | 0.46 | 0.36 | 0.16 | 0.12 | 178.0 | 6.3 | 623.4 | 2.8 | 1.57 | 96.8 |
| Var Coeff(%): | | 15.87 | 16.40 | 16.60 | 15.05 | 16.48 | 10.40 | 9.44 | 19.2 | 35.2 | 80.9 | 14.4 | 83.33 | 45.2 |

**Figure 36. FWD Analysis for Flexible Base Section.**

A GPR survey of the outside wheel path of both directions was conducted. Details of GPR data analysis can be found elsewhere (Scullion and Chen, 1999). The purpose of this evaluation was to check the moisture condition in the base layer. High dielectric values are associated with wet base areas. Typical GPR data for this section are shown in Figure 37.

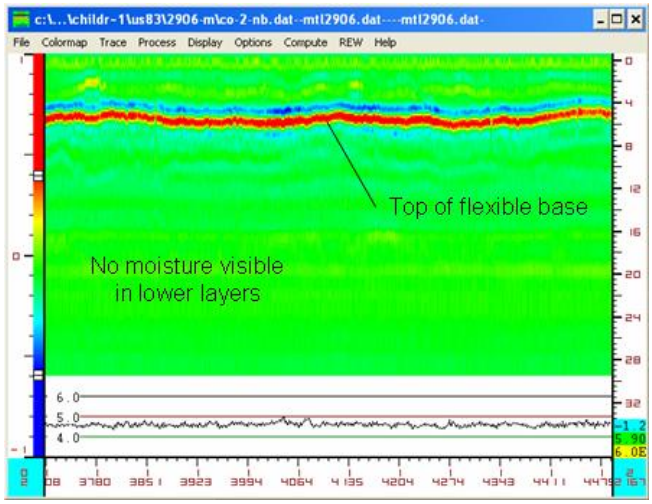



**Figure 37. GPR Data on US 83, Thick Flexible Base.**

The dielectrics of the flexible base layer for the northbound direction are shown in Figure 38. The average dielectric for this layer is in the 7 to 9 range, which is judged to be low, indicating a dry base. Experience has shown that bases with dielectrics in the 10 to 12 range indicate moderate moisture levels and values above 16 indicate wet/saturated. The base on this section is very dry.

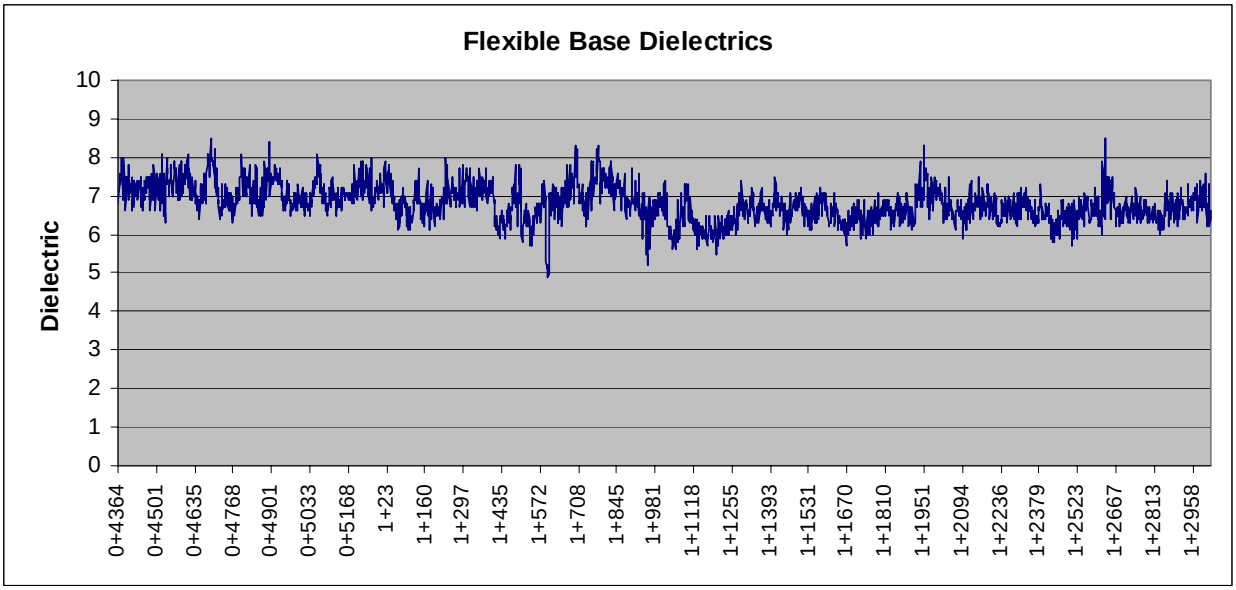



**Figure 38. Dielectrics of Flexible Base Overlay on US 83.**

The moisture susceptibility and strength of the sampled base was evaluated in the laboratory using TxDOT's tube suction test (TxDOT Method 144E). Details of the tube suction procedure can be found elsewhere (Guthrie and Scullion, 2002). The test measures the capillarity of the base compacted at optimum moisture content. The sample is compacted, dried back, and then exposed to moisture at the base of the sample for a period of 10 days. The surface dielectric is measured with a Percometer at the top of the sample, which gives an indication of the amount of unbound moisture reaching the surface of the sample. The asymptotic dielectric is used to evaluate the moisture susceptibility of the base material. Interpretation criteria for this test are shown in Table 3.

**Table 3. Classification of Base Materials Based on the Tube Suction Test.**

| Final Dielectric | Classification |
|---|---|
| <10 | **Excellent** – no moisture-related problems. |
| 10-13 | **Good** – typical of Texas Class 1 aggregate. Should perform well, except in very cold/wet climates. |
| 13-16 | **Moderate** – some concern about moisture problems. Consider chemical modification (low levels of cement or lime) if this is to be used for a high-volume roadway. |
| 16+ | **Fair-Poor** – moisture susceptible, consider for modification for all applications. |

The results of the tube suction test are shown in Figure 39.

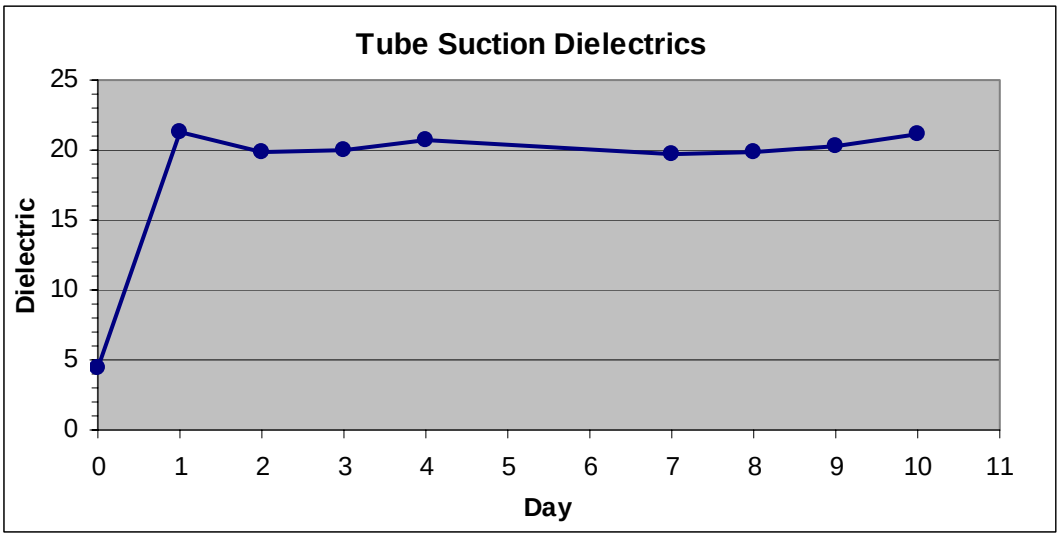



**Figure 39. Tube Suction Test Dielectric Results.**

The results of the test show a rapid increase in moisture at the surface of the sample and a high final dielectric of 20.5. The final moisture content of the base was 11 percent, which is much higher than the optimum moisture content of 4 percent. This test indicates that this base is very susceptible to moisture.

The retained strength of the soil was tested by comparing the unconfined compressive strength (UCS) after the 10-day capillary soak with the UCS of an unsoaked specimen. The results of the test are shown in Figure 40.

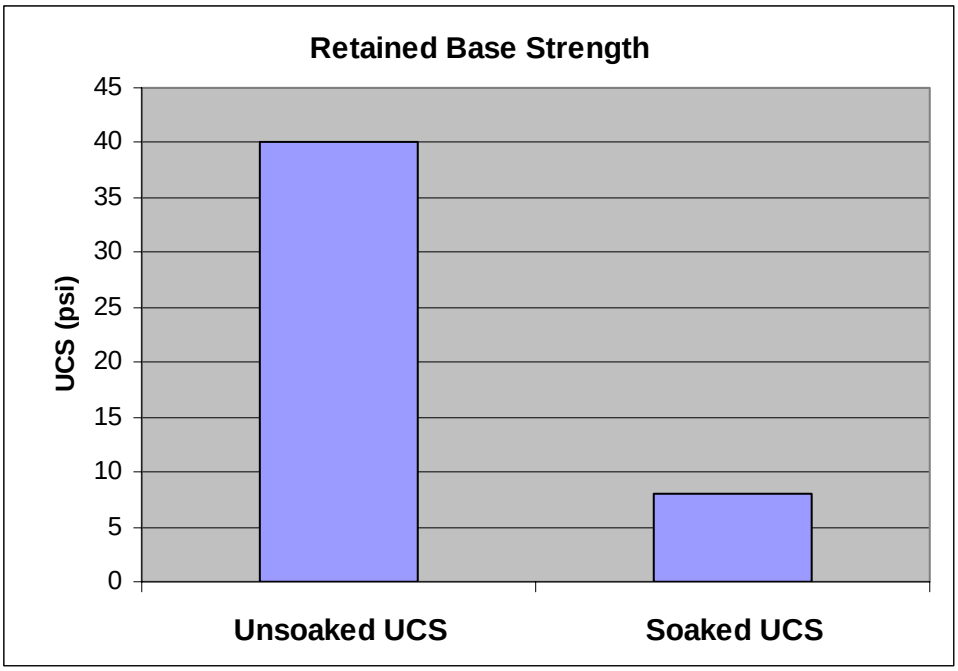



**Figure 40. Unconfined Compressive Strength of Base.**

The retained strength is, therefore only 20 percent of the unsoaked strength. This is considerably below the requirement of 75 percent retained strength. This indicates that this is a highly moisture susceptible base.

Based on the test results above, it is clear that the use of a thick flexible base can reduce the likelihood of reflection cracking from underlying concrete layers. What is somewhat surprising is that the base used on this project is of very low quality. The field results (FWD) and lab results indicate a low strength, moisture susceptible base; the District Lab Supervisor, Mr. Ron Hatcher, indicates that the base was a Texas Triaxial Class 3.4, which is very marginal. Despite this low base quality, this section has performed excellently. The good performance of this base can probably be ascribed to several factors including:

- the relatively low rainfall in this area location,
- the ability of the uncracked HMA to keep water from entering the base,
- no moisture ingress from below as the base is directly on top of concrete, and
- the low traffic levels on this section.

Based on the experience on US 59 in Lufkin and on the performance of this section, the use of thick flexible base overlays is a feasible rehabilitation option for jointed concrete pavements.

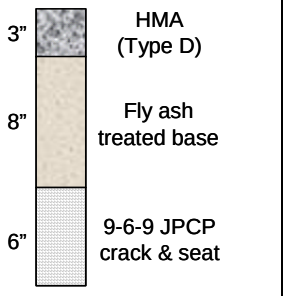
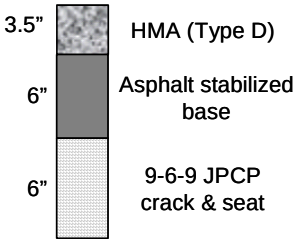
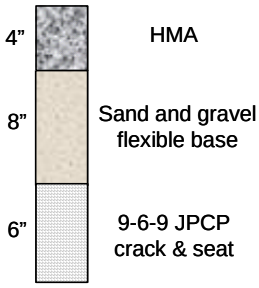
## CRACK AND SEAT OF JOINTED CONCRETE PAVEMENTS

The crack and seat procedure performed very poorly in the US 59 Lufkin experiment as reported in Report 0-4517-1. On US 59, 4 inches of HMA was placed directly over the cracked and seated concrete. From discussion with engineers in the Childress District, the placement of hot mix directly over fractured concrete is not recommended because of possible reflection cracking problems. In the Childress District, there are several projects where the existing pavement has been fractured with the crack and seat method and then overlaid with a thick base and an HMA surface course. Different bases have been used including fly ash stabilized bases, flexible bases, and asphalt stabilized bases. The crack and seat method has performed well on all projects to date. The three sections investigated were:

- Hemphill County Line to County Road C in Wheeler County,
- County Road E to FM 1439 in Collingsworth County, and
- Collingsworth County Line to Buck Creek Bridge in Childress County.

A summary of the sections is given in Table 4.

**Table 4. Summary of Crack and Seat Sections.**

| Section | Rehab Age | Performance | Photo |
|---|---|---|---|
|  | 7 years | Good condition. No structural distresses. Isolated transverse cracks, which may be related to problems with construction at the time. | |
|  | 2 years | Excellent condition with no distresses evident. | |
|  | 5 years | Excellent condition. This section had recently been overlaid as an extension to a project on an adjacent section. No structural distress was evident at the time of the overlay. | |

FWD data were collected on several crack and seat sections to obtain an estimate of the modulus value of the cracked concrete layer. MODULUS 6 software (Liu and Scullion, 2001) was used to backcalculate the layer modulus of the cracked layer. The distribution of backcalculated moduli from 123 FWD drops is shown in Figure 41.

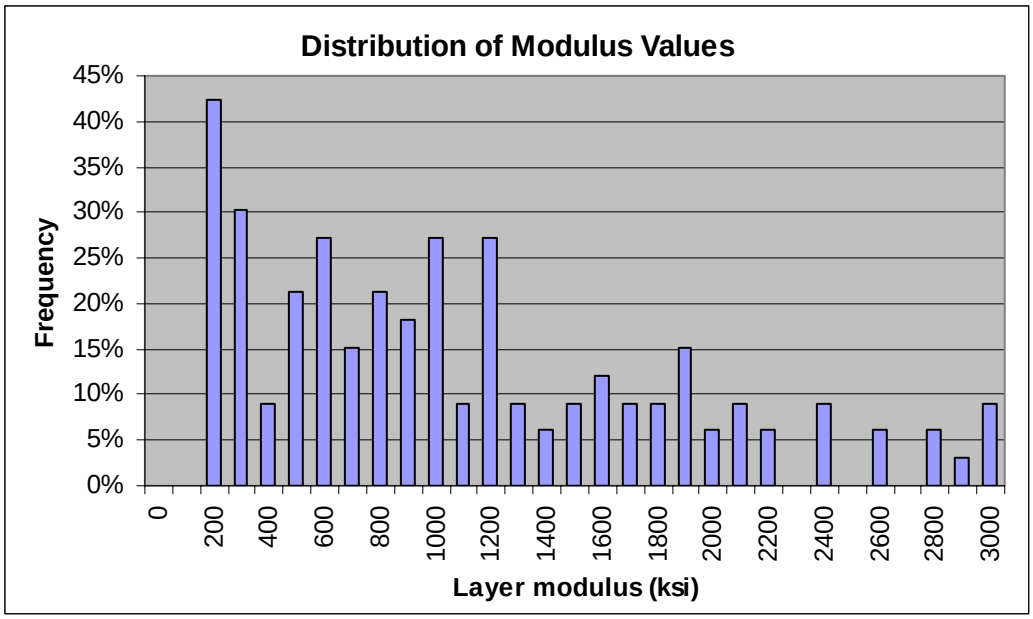



**Figure 41. Distribution of Modulus of Cracked Layer.**

From the distribution above, it is evident that the resultant modulus values of the crack and seat layer are highly variable. The values greater than 2000 ksi are suspected to be areas where the concrete has not been cracked. Over 10 percent of the tested locations had modulus values of greater than 2000 ksi. With such highly variable results, it is not possible to recommend a single modulus value for design. Further investigation may be needed to derive a design value. Detailed FWD analysis results can be found in Appendix A.

## RUBBLIZATION OF JOINTED CONCRETE PAVEMENTS

The Childress District has rubblized a section of US 83. A continuous section 0.9 mile long, from FM 3256 northward, was evaluated. This section is 2 years old and is still performing excellently. The pavement section and a photograph of the section are shown in Figure 42.

**Figure 42. Structure on US 83.**

GPR survey was conducted on this section, and no moisture was found in the rubblized layer. Typical GPR data are shown below in Figure 43.

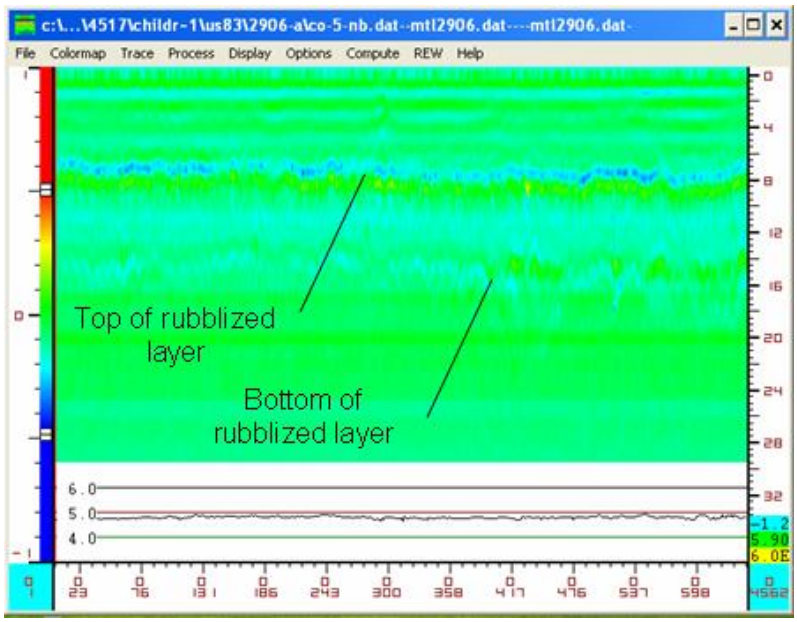



**Figure 43. GPR Data on US 83, Rubblized Section.**

The dielectric values of the rubblized layer are shown in Figure 44.

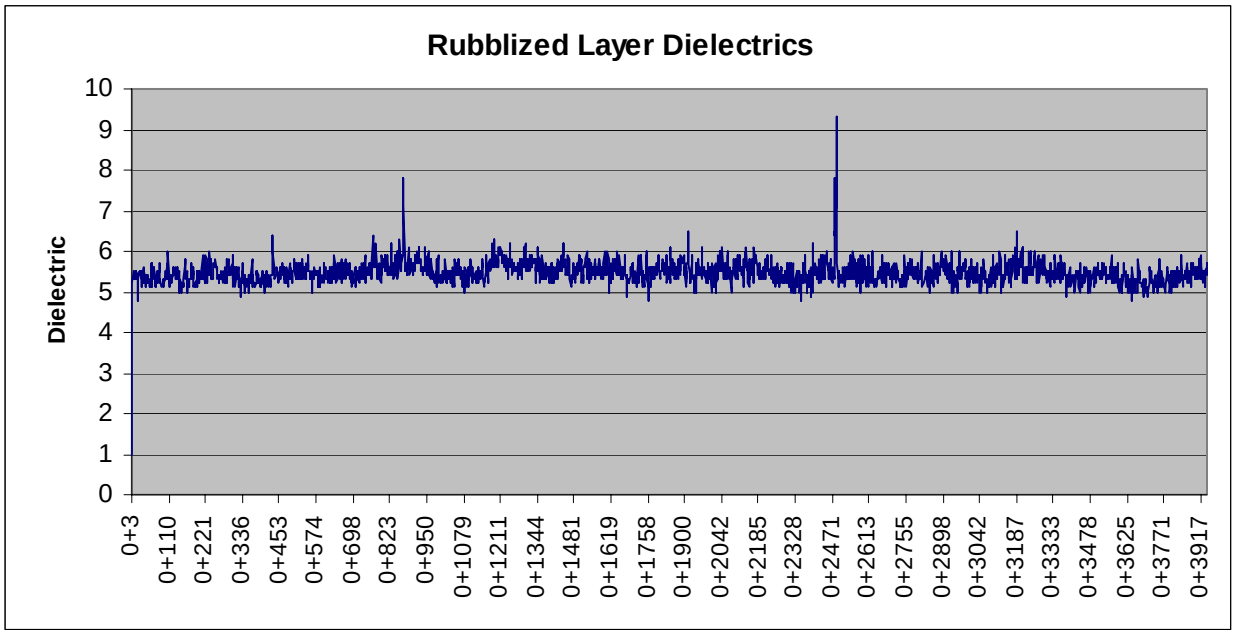



**Figure 44. Dielectrics of a Rubblized Section on US 83.**

The dielectrics show a consistent low moisture level within the rubblized section. There are two low spikes in the dielectric values, which may reflect moisture or other discontinuities in the layer.

FWD data were collected on this section to obtain an estimate of the modulus value of the rubblized layer. MODULUS 6 software was used to backcalculate the layer modulus of the layer. FWD data were collected before the rubblization project, 6 months after the rubblization, and 18 months after the rubblization. A summary of the layer strength properties is given in Table 5 (all figures are rounded). Detailed FWD results can be found in Appendix B.

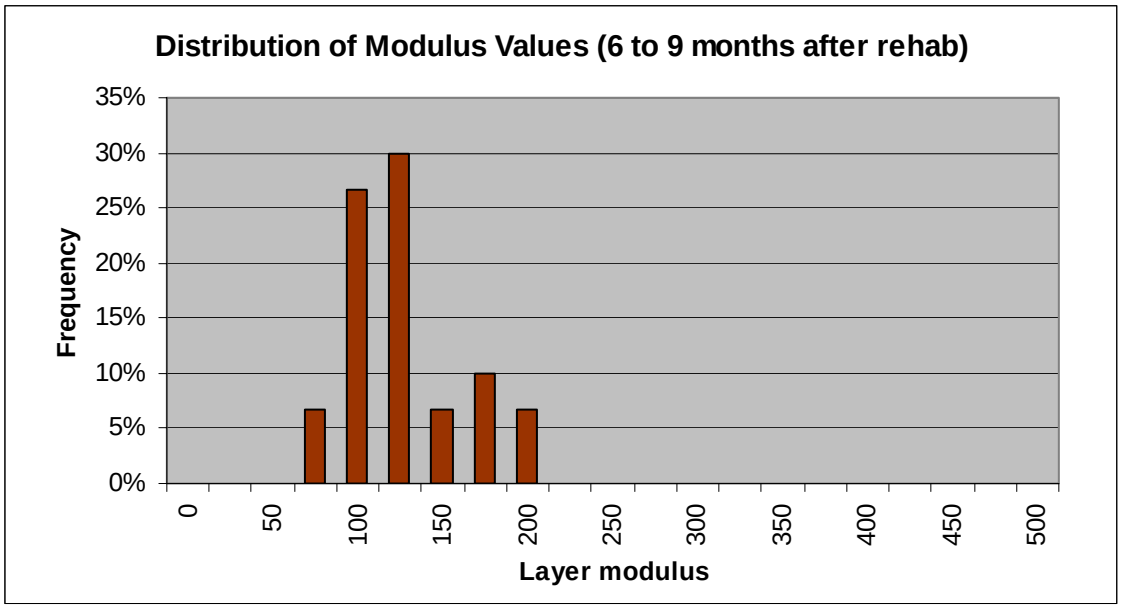
**Table 5. Summary of Layer Strength Properties for the Rubblized Section.**

| Rehabilitation Life Stage | Concrete Layer Modulus | | | Subgrade Modulus | | |
|---|---|---|---|---|---|---|
| | Mean | Std dev | Coeff of Var (%) | Mean | Std Dev | Coeff of Var (%) |
| **Prior to rubblization** | 2930 | 890 | 30 | 15 | 2 | 13 |
| **6 months after rubblization** | 115 | 35 | 30 | 12 | 1 | 10 |
| **18 months after rubblization** | 200 | 60 | 30 | 13 | 2 | 12 |

The results show that the concrete layer has increased in stiffness after the rubblization from 115 ksi to 200 ksi. The variance of the layer modulus has remained fairly constant over all stages of the rehabilitation, and the subgrade modulus has also remained fairly constant. The distributions of the modulus values soon after the rubblization and 18 months after the rubblization are shown in Figure 45.

When the rubblized concrete modulus values are compared to the crack and seat modulus distributions, it is clear that the variance of the rubblized modulus values are considerably less than the crack and seat modulus values. There are no tests with modulus values greater than 2000 ksi in the rubblized section. This indicates that the rubblization was effective in breaking up the slabs. It should be noted that the sample size of the rubblization tests is much smaller than the crack and seat tests with 30 drops and 123 drops, respectively. However, the results described above are very similar to the moduli distributions reported by Witczak and Rada (1992).

More FWD data should be collected on the rubblized monitor section on US 83. The increase in base modulus with time should be studied further; if confirmed, it could indicate that the rubblized base is "self-cementing." The Childress District is planning to use rubblization on three more projects in 2006. These projects will also be monitored in the future.



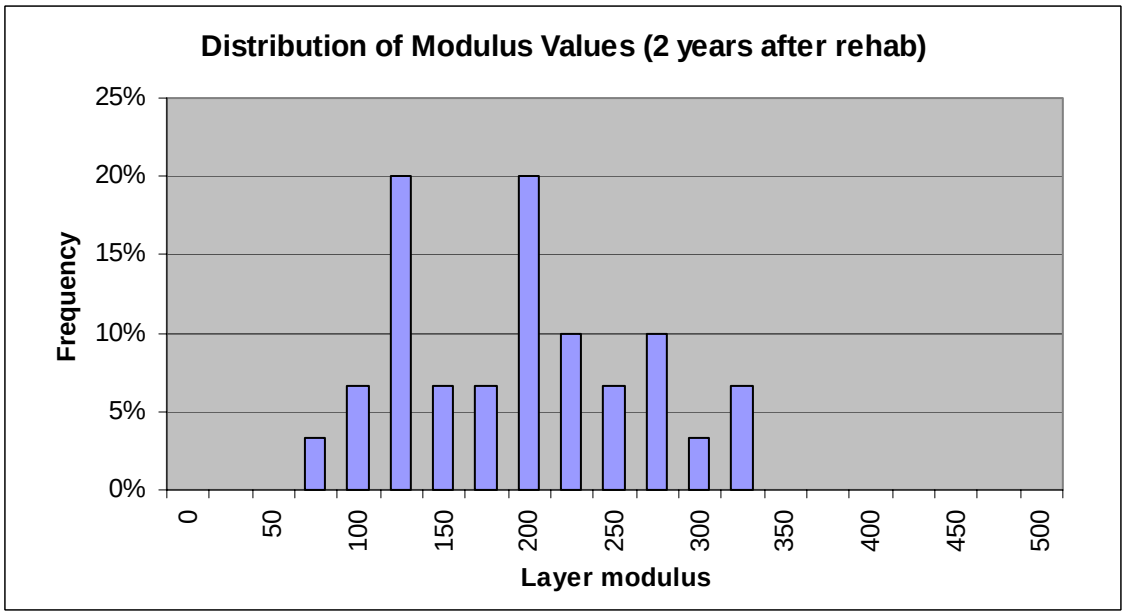




**Figure 45. Distributions of Modulus of the Rubblized Layer.**

# CHAPTER 6
# CONCLUSIONS AND RECOMMENDATIONS

Selecting rehabilitation options for jointed concrete pavements continues to be one of the most challenging tasks for pavement engineers. In Project 0-4517, the performance of numerous treatments were investigated. Reports 0-4517-1 and 0-4517-3 identified treatments that are performing well and those that are not. Report 4517-2 proposed a field investigation plan for testing future candidate projects that combines visual inspections with nondestructive testing. A sequenced approach is proposed for NDT evaluation, which includes GPR and deflection investigations and in some instances dynamic cone penetrometer (DCP) testing. Deflections can be taken with either the FWD or rolling dynamic deflectometer.

For those JCPs judged to be in good condition with few joint failures and reasonable load transfer efficiency, a hot mix asphalt overlay should be applied. As reported, several of the overlays studied such as those in Childress on US 83 are not performing well in terms of reflection cracking. The performance is well-matched to the performance of the mixes found in the laboratory with TTI's overlay tester. However, in Report 0-4517-1, good performance was reported on mixes containing modified binders in both the Houston and Beaumont Districts. The use of the overlay tester to design overlays for cracked pavements including JCPs is currently under study in Project 0-5123, "Development of an Advanced Overlay Design Procedure Incorporating both Rutting and Reflection Cracking Requirements." Until that project is complete, TxDOT should consider the following overlay test mix design criteria:

- for dense graded and performance mixes: 300 cycles to failure; and
- for crack resistant mixes: 750 cycles to failure.

For projects with JCPs with joint failures, very poor load transfer, or sections with severe reflection cracking problems, rubblization is the preferred slab fracturing technique. This is currently under more detailed study in Project 0-4687, "Rubblization and Crack and Seat as Major Rehabilitation Options for Jointed Concrete Pavements." Rubblization will only be possible if the existing slab has reasonable base support (as measured by the DCP) and if any trapped moisture can be effectively removed with retrofitted drains. Actual criteria are currently

being proposed in Project 0-4687. Based on the FWD testing performed on the section on US 83, a conservative design modulus of 110 ksi could be used for the rubblized concrete. This design modulus is about twice the value assumed for regular flexible base materials.

For JCPs in poor condition with poor subslab support, a very attractive alternative is a flexible base overlay and thin HMA surfacing. This rehabilitation has performed very well on both US 59 in Lufkin and on US 83 in Childress. This can only be used on rural sections because a thick base overlay of at least 8 inches will be required. The critical issue in this design is that the top of the base must be sealed. The use of an underseal is mandatory. The surface mix should also be a dense-graded mix. If the base overlay is to be used in an area with more than 20 inches of rain per year, then a Class 1 base should be used. For additional insurance, the base should have a dielectric value of less than 12 in the tube suction test. (The good performing base on US 59 had a dielectric of 12.5.) Until further sections have been built and monitored, this treatment is not recommended for very heavily trafficked highways such as Interstate highways. Until further data are available, this strategy should only be considered for sections with an ADT of less than 5000 vehicles per day.

In this project the use of grids within asphalt layers was not found to be a cost-effective alternative. In Report 0-4517-1, delamination problems were reported early in the life of sections, and in this project long-term benefits of grids could not be identified. If grids are to be used in the future, steps must be implemented to ensure that debonding will not occur.

The use of crack and seat of jointed concrete pavements was found to provide much more variable results than rubblization. As found in Lufkin, this treatment will not work if the slab has a weak base. In Childress (and other areas of West Texas), crack and seat appears to be working well when a base material is placed over the fractured concrete. However, as discussed above, flexible base overlays were found to work well without fracturing the slab, so the benefits of crack and seat are not clear.

# REFERENCES


1. Scullion, T., and Von Holdt, C., "Performance Report on Jointed Concrete Pavement Repair Strategies in Texas," Report 0-4517-1, Texas Transportation Institute, College Station, Texas, Jan. 2004.
2. Scullion, T., "Using Rolling Deflectometer and Ground Penetrating Radar Technologies for Full Coverage Testing of Jointed Concrete Pavements," Report 0-4517-2, Texas Transportation Institute, College Station, Texas, 2005.
3. Zhou, F., and Scullion, T., "Development of an Upgraded Overlay Tester to Characterize the Reflection Cracking Resistance of Asphalt Concrete," Report 0-4674-1, Texas Transportation Institute, College Station, Texas, Nov. 2004.
4. Scullion, T., and Chen, Y., "COLORMAP Version 2 User's Guide with Help Menus," Report 0-1702-4, Texas Transportation Institute, College Station, Texas, Nov. 1999.
5. Guthrie, W.S., and Scullion, T., "Tube Suction Test – Interim Report and Recommendations," Report 0-4114-2, Texas Transportation Institute, College Station, Texas, 2002.
6. Liu, W., and Scullion, T., "MODULUS 6 for Windows, User's Manual," Report 0-1869-3, Texas Transportation Institute, College Station, Texas, Oct. 2001.
7. Witczak, M.W., and Rada, G.R., "Nationwide Evaluation Study of Asphalt Concrete Overlays Placed on Fractured PCC Pavements," Transportation Research Record 1374, pp. 19 – 26, Washington, D.C., 1992.

# APPENDIX A

# MODULUS 6 RESULTS FOR CRACK AND SEAT SECTIONS

TTI MODULUS ANALYSIS SYSTEM (SUMMARY REPORT) (Version 6.0)

District:
County :
Highway/Road:

| | Thickness(in) | MODULI RANGE(psi) Minimum | Maximum | Poisson Ratio Values |
|---|---|---|---|---|
| Pavement: | 3.00 | 160,000 | 720,000 | H1: v = 0.35 |
| Base: | 9.00 | 30,000 | 500,000 | H2: v = 0.35 |
| Subbase: | 8.00 | 100,000 | 2,000,000 | H3: v = 0.25 |
| Subgrade: | 280.00(by DB) | 20,000 | | H4: v = 0.40 |

| Station | Load (lbs) | Measured Deflection (mils): R1 | R2 | R3 | R4 | R5 | R6 | R7 | Calculated Moduli values (ksi): SURF(E1) | BASE(E2) | SUBB(E3) | SUBG(E4) | Absolute ERR/Sens | Dpth to Bedrock |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.159 | 11,678 | 11.39 | 7.89 | 5.70 | 4.13 | 3.08 | 2.25 | 1.77 | 720.0 | 157.4 | 100.0 | 17.0 | 3.43 | 300.0 * |
| 0.297 | 10,709 | 12.81 | 8.31 | 5.37 | 4.11 | 3.15 | 2.51 | 1.81 | 720.0 | 61.9 | 390.7 | 14.4 | 4.03 | 239.4 * |
| 0.436 | 10,852 | 6.54 | 4.07 | 3.33 | 2.83 | 2.36 | 1.96 | 1.64 | 720.0 | 207.4 | 1889.6 | 18.9 | 0.33 | 300.0 * |
| 0.574 | 11,360 | 12.01 | 7.41 | 5.14 | 3.69 | 2.62 | 1.95 | 1.53 | 720.0 | 108.6 | 100.0 | 19.3 | 3.05 | 300.0 * |
| 0.712 | 10,737 | 11.55 | 7.55 | 5.32 | 4.04 | 3.16 | 2.51 | 2.04 | 720.0 | 128.0 | 116.2 | 15.5 | 1.49 | 300.0 * |
| 0.850 | 10,701 | 9.82 | 6.39 | 4.98 | 4.00 | 3.09 | 2.37 | 1.83 | 218.0 | 270.5 | 203.3 | 16.2 | 0.62 | 300.0 |
| 1.127 | 11,051 | 6.73 | 4.69 | 3.92 | 3.31 | 2.72 | 2.24 | 1.85 | 342.5 | 451.7 | 770.9 | 17.5 | 0.39 | 300.0 |
| 1.265 | 11,039 | 9.94 | 6.76 | 4.39 | 3.22 | 2.49 | 1.96 | 1.58 | 720.0 | 156.8 | 100.0 | 20.6 | 3.07 | 300.0 * |
| 1.403 | 11,666 | 6.59 | 4.76 | 4.24 | 3.67 | 3.13 | 2.63 | 2.10 | 719.7 | 413.3 | 1355.4 | 14.6 | 0.76 | 300.0 * |
| 1.542 | 10,324 | 10.57 | 6.90 | 4.26 | 3.35 | 2.72 | 2.23 | 1.87 | 720.0 | 78.5 | 495.6 | 16.5 | 4.72 | 300.0 * |
| 1.680 | 9,811 | 7.06 | 4.88 | 3.48 | 2.74 | 2.21 | 1.86 | 1.53 | 720.0 | 234.5 | 242.6 | 19.8 | 3.37 | 300.0 * |
| 1.818 | 9,855 | 5.60 | 3.85 | 2.96 | 2.40 | 1.99 | 1.67 | 1.35 | 720.0 | 291.7 | 661.0 | 21.2 | 2.31 | 300.0 * |
| 1.956 | 9,855 | 7.89 | 5.30 | 3.92 | 3.13 | 2.54 | 2.07 | 1.72 | 720.0 | 192.3 | 272.1 | 17.3 | 1.85 | 300.0 * |
| 2.095 | 9,803 | 7.37 | 5.96 | 4.65 | 3.63 | 2.74 | 2.20 | 1.78 | 720.0 | 479.3 | 102.2 | 16.0 | 1.85 | 300.0 * |
| 2.233 | 9,958 | 5.59 | 3.98 | 3.15 | 2.50 | 1.90 | 1.54 | 1.30 | 663.9 | 499.1 | 230.3 | 23.2 | 0.87 | 300.0 * |
| 2.371 | 9,926 | 9.14 | 5.79 | 3.71 | 2.80 | 2.07 | 1.66 | 1.43 | 720.0 | 99.2 | 260.4 | 20.9 | 3.62 | 300.0 * |
| 2.509 | 9,859 | 9.36 | 5.74 | 3.92 | 3.04 | 2.41 | 1.95 | 1.61 | 720.0 | 78.3 | 1039.6 | 17.1 | 4.09 | 300.0 * |
| 2.648 | 9,720 | 12.07 | 6.88 | 4.07 | 3.13 | 2.46 | 1.97 | 1.56 | 720.0 | 60.1 | 171.8 | 18.1 | 3.49 | 300.0 * |
| 2.786 | 9,688 | 11.06 | 6.26 | 4.37 | 3.41 | 2.70 | 2.15 | 1.72 | 720.0 | 59.2 | 855.6 | 15.3 | 2.17 | 300.0 * |
| Mean: | | 9.11 | 5.97 | 4.26 | 3.32 | 2.61 | 2.09 | 1.69 | 670.7 | 212.0 | 492.5 | 17.9 | 2.39 | 300.0 |
| Std. Dev: | | 2.37 | 1.36 | 0.78 | 0.53 | 0.40 | 0.30 | 0.21 | 139.7 | 149.7 | 495.5 | 2.4 | 1.38 | 16.7 |
| Var Coeff(%): | | 26.03 | 22.76 | 18.35 | 16.10 | 15.26 | 14.32 | 12.69 | 20.8 | 70.6 | 100.6 | 13.7 | 57.82 | 5.6 |

**Figure A1. Modulus 6 Results from Hemphill County Line to County Road C in Wheeler County (Southbound).**

TTI MODULUS ANALYSIS SYSTEM (SUMMARY REPORT) (Version 6.0)

District:
County :
Highway/Road:

| | Thickness(in) | MODULI RANGE(psi) Minimum | Maximum | Poisson Ratio Values |
|---|---|---|---|---|
| Pavement: | 3.00 | 160,000 | 720,000 | H1: v = 0.35 |
| Base: | 9.00 | 30,000 | 500,000 | H2: v = 0.35 |
| Subbase: | 8.00 | 100,000 | 3,000,000 | H3: v = 0.25 |
| Subgrade: | 280.00(by DB) | 20,000 | | H4: v = 0.40 |

| Station | Load (lbs) | Measured Deflection (mils): R1 | R2 | R3 | R4 | R5 | R6 | R7 | Calculated Moduli values (ksi): SURF(E1) | BASE(E2) | SUBB(E3) | SUBG(E4) | Absolute ERR/Sens | Dpth to Bedrock | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.827 | 11,182 | 10.53 | 5.15 | 3.92 | 3.06 | 2.41 | 1.93 | 1.56 | 234.3 | 113.3 | 783.4 | 23.4 | 0.78 | 300.0 | |
| 1.376 | 10,181 | 9.48 | 6.63 | 4.67 | 3.44 | 2.63 | 2.07 | 1.71 | 720.0 | 178.3 | 100.0 | 17.4 | 2.06 | 300.0 | * |
| 1.651 | 10,320 | 8.74 | 6.73 | 4.92 | 3.74 | 2.84 | 2.13 | 1.69 | 294.9 | 431.1 | 100.0 | 16.7 | 2.53 | 300.0 | * |
| 1.788 | 9,720 | 6.27 | 4.54 | 3.70 | 2.99 | 2.36 | 1.94 | 1.61 | 430.8 | 500.0 | 303.5 | 18.3 | 0.62 | 300.0 | * |
| 1.925 | 9,736 | 5.87 | 4.54 | 3.82 | 3.12 | 2.48 | 1.98 | 1.61 | 720.0 | 500.0 | 340.0 | 17.0 | 1.59 | 300.0 | * |
| 2.063 | 9,728 | 8.23 | 5.28 | 3.97 | 3.05 | 2.43 | 1.96 | 1.62 | 720.0 | 164.3 | 244.1 | 17.9 | 1.20 | 300.0 | * |
| 2.200 | 10,483 | 8.73 | 5.74 | 4.27 | 3.28 | 2.52 | 1.99 | 1.58 | 720.0 | 199.9 | 149.9 | 18.9 | 0.65 | 300.0 | * |
| 2.337 | 9,799 | 6.36 | 5.06 | 4.14 | 3.31 | 2.63 | 2.10 | 1.65 | 720.0 | 500.0 | 138.4 | 17.8 | 3.70 | 300.0 | * |
| 2.612 | 9,803 | 5.37 | 3.97 | 3.38 | 2.91 | 2.36 | 2.00 | 1.66 | 720.0 | 500.0 | 432.3 | 18.3 | 3.31 | 300.0 | * |
| 2.749 | 9,760 | 7.44 | 5.44 | 3.96 | 2.96 | 2.23 | 1.75 | 1.36 | 413.2 | 381.3 | 100.0 | 20.0 | 1.79 | 300.0 | * |
| 2.886 | 9,676 | 11.26 | 8.28 | 6.17 | 4.76 | 3.56 | 2.69 | 2.07 | 194.0 | 267.0 | 100.0 | 12.3 | 2.60 | 300.0 | * |
| 3.024 | 9,875 | 8.50 | 5.78 | 4.40 | 3.41 | 2.65 | 2.13 | 1.67 | 720.0 | 212.5 | 152.3 | 16.6 | 0.81 | 300.0 | * |
| 3.162 | 10,038 | 7.26 | 5.26 | 4.47 | 3.57 | 2.62 | 2.31 | 1.68 | 356.7 | 500.0 | 229.1 | 16.7 | 3.14 | 300.0 | * |
| 3.298 | 9,767 | 8.55 | 5.23 | 3.79 | 3.00 | 2.38 | 1.90 | 1.55 | 202.8 | 224.3 | 241.8 | 20.3 | 2.02 | 300.0 | |
| Mean: | | 8.04 | 5.55 | 4.26 | 3.33 | 2.58 | 2.06 | 1.64 | 511.9 | 333.7 | 243.9 | 18.0 | 1.91 | 300.0 | |
| Std. Dev: | | 1.73 | 1.09 | 0.69 | 0.48 | 0.32 | 0.22 | 0.15 | 226.0 | 152.0 | 186.2 | 2.4 | 1.03 | 0.0 | |
| Var Coeff(%): | | 21.50 | 19.57 | 16.13 | 14.49 | 12.56 | 10.83 | 9.14 | 44.2 | 45.6 | 76.3 | 13.6 | 54.05 | 0.0 | |

**Figure A2. Modulus 6 Results from Hemphill County Line to County Road C in Wheeler County (Northbound).**

TTI MODULUS ANALYSIS SYSTEM (SUMMARY REPORT) (Version 6.0)

District:
County :
Highway/Road:

| | Thickness(in) | MODULI RANGE(psi) Minimum | Maximum | Poisson Ratio Values |
|---|---|---|---|---|
| Pavement: | 10.50 | 340,000 | 1,040,000 | H1: v = 0.35 |
| Base: | 8.00 | 100,000 | 3,000,000 | H2: v = 0.25 |
| Subbase: | 0.00 | | | H3: v = 0.00 |
| Subgrade: | 127.68(by DB) | 20,000 | | H4: v = 0.40 |

| Station | Load (lbs) | Measured Deflection (mils): R1 | R2 | R3 | R4 | R5 | R6 | R7 | Calculated Moduli values (ksi): SURF(E1) | BASE(E2) | SUBB(E3) | SUBG(E4) | Absolute ERR/Sens | Dpth to Bedrock | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.387 | 10,050 | 5.27 | 4.22 | 3.67 | 3.04 | 2.44 | 1.92 | 1.49 | 914.3 | 621.6 | 0.0 | 11.8 | 0.78 | 125.1 | |
| 0.426 | 9,835 | 5.26 | 4.19 | 3.46 | 2.94 | 2.11 | 1.88 | 1.38 | 814.8 | 533.3 | 0.0 | 12.9 | 2.96 | 132.6 | |
| 0.465 | 9,930 | 5.56 | 4.33 | 3.82 | 3.28 | 2.77 | 2.24 | 1.80 | 582.1 | 1768.3 | 0.0 | 9.1 | 0.37 | 144.7 | |
| 0.503 | 9,926 | 5.16 | 4.19 | 3.67 | 3.15 | 2.63 | 2.06 | 1.78 | 893.2 | 951.4 | 0.0 | 10.2 | 1.00 | 157.5 | |
| 0.581 | 9,843 | 5.68 | 3.87 | 3.09 | 2.48 | 1.94 | 1.51 | 1.17 | 394.8 | 986.2 | 0.0 | 16.7 | 1.04 | 122.9 | |
| 0.620 | 9,744 | 5.76 | 4.29 | 3.68 | 3.08 | 2.48 | 2.00 | 1.60 | 492.6 | 1197.8 | 0.0 | 11.1 | 0.34 | 146.4 | |
| 0.659 | 9,903 | 4.52 | 3.56 | 3.03 | 2.55 | 2.09 | 1.70 | 1.37 | 805.2 | 1179.7 | 0.0 | 13.0 | 0.45 | 141.5 | |
| 0.698 | 9,847 | 5.46 | 4.22 | 3.68 | 3.09 | 2.58 | 2.11 | 1.74 | 583.1 | 1458.8 | 0.0 | 10.0 | 0.34 | 181.2 | |
| 0.736 | 9,855 | 4.90 | 4.12 | 3.56 | 2.98 | 2.42 | 1.95 | 1.56 | 1040.0 | 727.3 | 0.0 | 11.3 | 0.83 | 144.4 | * |
| 0.775 | 9,922 | 5.39 | 4.19 | 3.61 | 2.97 | 2.45 | 2.01 | 1.66 | 632.2 | 1087.3 | 0.0 | 11.1 | 0.77 | 189.4 | |
| 0.814 | 9,843 | 4.95 | 3.86 | 3.37 | 2.87 | 2.36 | 1.94 | 1.57 | 678.6 | 1500.3 | 0.0 | 10.8 | 0.30 | 147.9 | |
| 0.853 | 9,918 | 6.15 | 4.88 | 4.04 | 3.26 | 2.57 | 2.05 | 1.61 | 700.8 | 423.7 | 0.0 | 11.6 | 0.66 | 141.7 | |
| 0.892 | 9,918 | 4.77 | 4.07 | 3.63 | 3.01 | 2.48 | 2.02 | 1.59 | 1040.0 | 1014.0 | 0.0 | 10.4 | 1.58 | 134.7 | * |
| 0.930 | 10,042 | 6.22 | 4.69 | 3.98 | 3.30 | 2.63 | 2.00 | 1.61 | 533.5 | 705.7 | 0.0 | 11.5 | 0.88 | 139.9 | |
| 1.008 | 9,914 | 6.19 | 4.56 | 3.87 | 3.27 | 2.68 | 2.20 | 1.77 | 417.2 | 1624.5 | 0.0 | 10.2 | 0.78 | 150.4 | |
| 1.047 | 9,970 | 4.83 | 3.80 | 3.30 | 2.76 | 2.31 | 1.87 | 1.56 | 745.7 | 1306.7 | 0.0 | 11.5 | 0.33 | 300.0 | |
| 1.087 | 9,910 | 5.27 | 4.16 | 3.71 | 2.98 | 2.37 | 2.03 | 1.54 | 779.2 | 812.5 | 0.0 | 11.2 | 2.02 | 300.0 | |
| 1.163 | 9,883 | 4.69 | 3.52 | 2.99 | 2.49 | 2.02 | 1.64 | 1.33 | 607.5 | 1527.0 | 0.0 | 13.7 | 0.54 | 149.5 | |
| 1.202 | 9,847 | 4.41 | 3.61 | 3.16 | 2.68 | 2.23 | 1.81 | 1.48 | 1038.5 | 1146.8 | 0.0 | 11.7 | 0.23 | 156.6 | * |
| 1.241 | 9,875 | 4.48 | 3.61 | 3.12 | 2.59 | 2.14 | 1.79 | 1.44 | 901.1 | 1156.8 | 0.0 | 12.2 | 0.94 | 145.1 | |
| 1.280 | 10,193 | 5.00 | 3.71 | 3.21 | 2.70 | 2.18 | 1.78 | 1.38 | 574.4 | 1705.1 | 0.0 | 12.9 | 0.47 | 116.9 | |
| 1.319 | 10,105 | 4.77 | 3.84 | 3.39 | 2.85 | 2.32 | 1.93 | 1.57 | 892.6 | 1159.0 | 0.0 | 11.3 | 0.73 | 156.4 | |
| 1.474 | 10,105 | 4.71 | 3.94 | 3.51 | 2.94 | 2.40 | 1.97 | 1.62 | 1040.0 | 1049.1 | 0.0 | 11.0 | 1.18 | 173.5 | * |
| 1.513 | 9,811 | 4.06 | 3.48 | 2.99 | 2.51 | 2.05 | 1.67 | 1.37 | 1040.0 | 1245.7 | 0.0 | 12.5 | 1.68 | 160.4 | * |
| Mean: | | 5.14 | 4.04 | 3.48 | 2.91 | 2.36 | 1.92 | 1.54 | 755.9 | 1120.4 | 0.0 | 11.6 | 0.88 | 146.2 | |
| Std. Dev: | | 0.58 | 0.37 | 0.31 | 0.26 | 0.23 | 0.18 | 0.16 | 208.1 | 365.2 | 0.0 | 1.5 | 0.64 | 27.3 | |
| Var Coeff(%): | | 11.28 | 9.18 | 9.04 | 9.02 | 9.61 | 9.15 | 10.16 | 27.5 | 32.6 | 0.0 | 13.0 | 72.14 | 18.7 | |

**Figure A3. Modulus 6 Results from County Road E to County Road G in Collingsworth County (Southbound).**

TTI MODULUS ANALYSIS SYSTEM (SUMMARY REPORT) (Version 6.0)

District:
County :
Highway/Road:

| | Thickness(in) | MODULI RANGE(psi) Minimum | Maximum | Poisson Ratio Values |
|---|---|---|---|---|
| Pavement: | 10.50 | 340,000 | 1,040,000 | H1: v = 0.35 |
| Base: | 8.00 | 100,000 | 3,000,000 | H2: v = 0.25 |
| Subbase: | 0.00 | | | H3: v = 0.00 |
| Subgrade: | 117.71(by DB) | 20,000 | | H4: v = 0.40 |

| Station | Load (lbs) | Measured Deflection (mils): R1 | R2 | R3 | R4 | R5 | R6 | R7 | Calculated Moduli values (ksi): SURF(E1) | BASE(E2) | SUBB(E3) | SUBG(E4) | Absolute ERR/Sens | Dpth to Bedrock |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.191 | 10,101 | 4.87 | 4.11 | 3.38 | 2.89 | 2.40 | 1.92 | 1.38 | 1040.0 | 817.0 | 0.0 | 11.2 | 1.08 | 90.1 * |
| 0.256 | 10,061 | 4.89 | 3.98 | 3.45 | 3.10 | 2.23 | 1.96 | 1.54 | 1040.0 | 815.6 | 0.0 | 11.1 | 2.80 | 119.3 * |
| 0.320 | 9,823 | 4.37 | 3.67 | 3.04 | 2.46 | 1.95 | 1.58 | 1.21 | 1040.0 | 647.7 | 0.0 | 14.3 | 1.63 | 115.7 * |
| 0.384 | 10,053 | 5.09 | 4.01 | 3.52 | 3.02 | 2.49 | 2.07 | 1.69 | 737.9 | 1617.1 | 0.0 | 10.0 | 0.41 | 155.9 |
| 0.449 | 10,065 | 5.65 | 4.16 | 3.61 | 3.04 | 2.47 | 2.01 | 1.60 | 504.9 | 1737.7 | 0.0 | 10.9 | 0.38 | 138.4 |
| 0.513 | 9,930 | 5.26 | 3.91 | 3.35 | 2.79 | 2.20 | 1.76 | 1.33 | 589.4 | 1141.2 | 0.0 | 12.7 | 0.61 | 108.8 |
| 0.578 | 9,819 | 4.88 | 3.65 | 3.17 | 2.66 | 2.16 | 1.77 | 1.42 | 598.5 | 1815.7 | 0.0 | 12.1 | 0.45 | 141.1 |
| 0.642 | 9,883 | 4.69 | 3.66 | 3.21 | 2.72 | 2.19 | 1.83 | 1.39 | 783.2 | 1458.9 | 0.0 | 11.5 | 0.85 | 107.5 |
| 0.706 | 9,815 | 5.68 | 4.93 | 4.30 | 3.65 | 2.94 | 2.36 | 1.81 | 1040.0 | 532.4 | 0.0 | 8.7 | 1.29 | 120.3 * |
| 0.771 | 9,771 | 5.48 | 4.49 | 3.93 | 3.37 | 2.82 | 2.28 | 1.85 | 866.9 | 963.3 | 0.0 | 8.6 | 0.33 | 156.9 |
| 0.835 | 10,097 | 4.83 | 3.83 | 3.35 | 2.84 | 2.31 | 1.91 | 1.59 | 852.5 | 1265.2 | 0.0 | 11.2 | 0.60 | 182.9 |
| 0.900 | 9,934 | 4.79 | 3.67 | 3.25 | 2.80 | 2.29 | 1.89 | 1.52 | 680.1 | 2121.9 | 0.0 | 10.8 | 0.53 | 137.1 |
| 0.964 | 10,026 | 5.67 | 4.34 | 3.74 | 3.15 | 2.57 | 2.15 | 1.74 | 565.5 | 1514.1 | 0.0 | 10.2 | 0.79 | 155.5 |
| 1.530 | 10,069 | 4.58 | 3.43 | 2.87 | 2.33 | 1.81 | 1.42 | 1.08 | 746.0 | 866.4 | 0.0 | 16.5 | 0.52 | 110.0 |
| 1.579 | 9,990 | 6.06 | 4.69 | 3.72 | 2.99 | 2.39 | 1.93 | 1.57 | 584.5 | 584.2 | 0.0 | 12.5 | 1.97 | 173.3 |
| 1.625 | 10,081 | 6.26 | 4.96 | 4.31 | 3.68 | 3.03 | 2.49 | 2.00 | 620.7 | 1128.2 | 0.0 | 8.5 | 0.25 | 150.8 |
| 1.672 | 9,986 | 5.31 | 4.37 | 3.76 | 3.18 | 2.63 | 2.14 | 1.72 | 903.1 | 890.1 | 0.0 | 9.7 | 0.25 | 147.7 |
| 1.721 | 10,018 | 5.15 | 4.12 | 3.67 | 3.13 | 2.61 | 2.16 | 1.74 | 793.0 | 1500.9 | 0.0 | 9.3 | 0.38 | 146.8 |
| 1.767 | 10,010 | 6.08 | 4.81 | 4.20 | 3.55 | 2.86 | 2.34 | 1.81 | 644.0 | 990.2 | 0.0 | 9.1 | 0.61 | 124.3 |
| 1.814 | 10,053 | 5.59 | 4.84 | 4.23 | 3.54 | 2.85 | 2.31 | 1.82 | 1040.0 | 566.7 | 0.0 | 9.2 | 1.31 | 138.9 * |
| 1.862 | 9,998 | 6.23 | 5.54 | 4.89 | 4.18 | 3.43 | 2.81 | 2.19 | 1040.0 | 584.2 | 0.0 | 7.0 | 1.34 | 132.4 * |
| 1.909 | 10,081 | 5.77 | 4.81 | 4.28 | 3.65 | 3.02 | 2.47 | 1.98 | 1026.2 | 751.0 | 0.0 | 8.1 | 0.56 | 149.6 |
| 1.956 | 9,934 | 8.55 | 7.34 | 6.08 | 4.86 | 3.69 | 2.82 | 2.06 | 994.8 | 100.0 | 0.0 | 8.2 | 0.80 | 117.1 * |
| 2.004 | 10,014 | 5.72 | 4.84 | 4.07 | 3.39 | 2.84 | 2.19 | 1.78 | 1040.0 | 506.7 | 0.0 | 9.7 | 1.02 | 153.4 * |
| 2.051 | 9,914 | 5.93 | 5.05 | 4.42 | 3.74 | 3.03 | 2.43 | 1.92 | 1040.0 | 553.2 | 0.0 | 8.3 | 0.92 | 141.0 * |
| 2.098 | 9,934 | 7.09 | 6.06 | 5.08 | 4.16 | 3.28 | 2.49 | 1.98 | 1040.0 | 219.7 | 0.0 | 8.8 | 0.80 | 152.9 * |
| 2.146 | 9,934 | 5.60 | 4.73 | 4.14 | 3.52 | 2.91 | 2.38 | 1.88 | 1040.0 | 726.1 | 0.0 | 8.4 | 0.32 | 136.6 * |
| 2.193 | 9,966 | 5.04 | 3.95 | 3.48 | 2.98 | 2.48 | 2.10 | 1.67 | 687.3 | 2059.1 | 0.0 | 9.7 | 0.58 | 132.6 |
| Mean: | | 5.54 | 4.50 | 3.88 | 3.26 | 2.64 | 2.14 | 1.69 | 842.1 | 1016.9 | 0.0 | 10.2 | 0.83 | 136.2 |
| Std. Dev: | | 0.85 | 0.83 | 0.69 | 0.56 | 0.44 | 0.33 | 0.27 | 192.2 | 536.4 | 0.0 | 2.1 | 0.58 | 22.1 |
| Var Coeff(%): | | 15.32 | 18.55 | 17.89 | 17.10 | 16.80 | 15.61 | 15.72 | 22.8 | 52.7 | 0.0 | 20.2 | 69.27 | 16.2 |

**Figure A4. Modulus 6 Results from FM 1036 to FM 1439 in Collingsworth County (Southbound).**

TTI MODULUS ANALYSIS SYSTEM (SUMMARY REPORT) (Version 6.0)

District:
County :
Highway/Road:

| | Thickness(in) | MODULI RANGE(psi) Minimum | Maximum | Poisson Ratio Values |
|---|---|---|---|---|
| Pavement: | 5.00 | 160,000 | 720,000 | H1: v = 0.35 |
| Base: | 8.00 | 10,000 | 150,000 | H2: v = 0.35 |
| Subbase: | 8.00 | 100,000 | 3,000,000 | H3: v = 0.25 |
| Subgrade: | 121.03(by DB) | 20,000 | | H4: v = 0.40 |

| Station | Load (lbs) | Measured Deflection (mils): R1 | R2 | R3 | R4 | R5 | R6 | R7 | Calculated Moduli values (ksi): SURF(E1) | BASE(E2) | SUBB(E3) | SUBG(E4) | Absolute ERR/Sens | Dpth to Bedrock |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.120 | 10,371 | 6.29 | 3.98 | 3.33 | 2.77 | 2.16 | 1.75 | 1.36 | 720.0 | 150.0 | 868.1 | 13.5 | 4.26 | 102.6 * |
| 0.234 | 9,907 | 10.13 | 6.09 | 4.39 | 3.54 | 2.82 | 2.32 | 1.93 | 499.7 | 45.1 | 2535.3 | 8.9 | 0.94 | 210.6 |
| 0.384 | 10,006 | 10.54 | 6.12 | 4.60 | 3.87 | 3.06 | 2.59 | 2.04 | 349.6 | 56.5 | 2753.0 | 8.2 | 0.96 | 300.0 |
| 0.534 | 10,014 | 8.00 | 5.02 | 4.09 | 3.45 | 2.77 | 2.20 | 1.80 | 336.9 | 148.8 | 1430.1 | 9.5 | 0.36 | 152.7 |
| 0.682 | 9,875 | 11.04 | 6.57 | 4.86 | 3.93 | 3.15 | 2.55 | 2.03 | 378.4 | 50.6 | 1862.6 | 8.3 | 0.65 | 136.3 |
| 0.831 | 9,859 | 9.75 | 6.34 | 4.80 | 3.89 | 3.11 | 2.44 | 1.91 | 452.3 | 82.5 | 755.7 | 8.5 | 0.25 | 121.4 |
| 0.982 | 9,875 | 9.97 | 6.38 | 4.85 | 3.91 | 3.11 | 2.59 | 2.04 | 449.9 | 71.2 | 1131.5 | 8.1 | 1.10 | 127.6 |
| 1.131 | 10,089 | 9.30 | 5.38 | 3.79 | 2.98 | 2.36 | 1.97 | 1.52 | 517.9 | 47.8 | 2832.8 | 11.3 | 1.65 | 108.5 |
| 1.280 | 9,676 | 11.17 | 6.93 | 4.78 | 3.60 | 2.74 | 2.12 | 1.74 | 453.6 | 50.6 | 477.4 | 10.4 | 0.74 | 160.6 |
| 1.430 | 9,601 | 15.70 | 8.17 | 4.65 | 3.33 | 2.49 | 1.98 | 1.62 | 326.1 | 16.6 | 1805.2 | 11.4 | 2.04 | 191.2 |
| 1.580 | 10,002 | 9.59 | 5.92 | 4.16 | 3.31 | 2.57 | 2.04 | 1.56 | 610.3 | 45.7 | 1927.4 | 10.3 | 0.54 | 105.1 |
| 1.730 | 9,895 | 10.68 | 6.62 | 4.91 | 3.98 | 3.12 | 2.40 | 1.80 | 349.5 | 75.5 | 690.0 | 9.1 | 0.46 | 101.3 |
| 1.880 | 9,605 | 11.94 | 6.80 | 5.04 | 3.97 | 3.07 | 2.44 | 1.90 | 258.8 | 58.2 | 902.9 | 9.0 | 0.77 | 126.6 |
| 2.029 | 9,914 | 9.80 | 5.98 | 4.30 | 3.50 | 2.80 | 2.32 | 1.91 | 551.2 | 44.5 | 2955.1 | 8.7 | 0.85 | 174.4 |
| 2.178 | 9,672 | 12.07 | 7.15 | 5.09 | 3.96 | 3.02 | 2.31 | 1.79 | 327.0 | 51.7 | 625.2 | 9.4 | 0.18 | 122.9 |
| 2.328 | 9,930 | 9.38 | 6.50 | 5.22 | 4.35 | 3.31 | 2.75 | 2.17 | 412.2 | 150.0 | 429.8 | 7.9 | 1.25 | 300.0 * |
| 2.478 | 9,803 | 9.35 | 5.86 | 4.74 | 3.89 | 3.11 | 2.57 | 2.08 | 323.3 | 107.2 | 1223.3 | 8.1 | 0.79 | 155.3 |
| 2.627 | 9,942 | 9.48 | 5.89 | 4.25 | 3.34 | 2.61 | 2.06 | 1.65 | 489.5 | 67.0 | 906.9 | 10.7 | 0.60 | 140.3 |
| 2.777 | 10,014 | 9.47 | 6.34 | 4.85 | 3.75 | 2.85 | 2.26 | 1.77 | 471.1 | 117.0 | 283.7 | 10.2 | 0.92 | 129.6 |
| 2.926 | 9,871 | 8.04 | 4.70 | 3.55 | 2.74 | 2.05 | 1.63 | 1.32 | 327.4 | 130.2 | 573.4 | 14.6 | 1.12 | 151.9 |
| Mean: | | 10.08 | 6.14 | 4.51 | 3.60 | 2.81 | 2.26 | 1.80 | 430.2 | 78.3 | 1348.5 | 9.8 | 1.02 | 142.0 |
| Std. Dev: | | 1.88 | 0.91 | 0.52 | 0.43 | 0.35 | 0.30 | 0.24 | 114.2 | 40.8 | 867.9 | 1.8 | 0.88 | 37.7 |
| Var Coeff(%): | | 18.67 | 14.80 | 11.51 | 11.94 | 12.41 | 13.06 | 13.11 | 26.5 | 52.1 | 64.4 | 18.5 | 86.63 | 26.6 |

**Figure A5. Modulus 6 Results from Collingsworth County Line to Buck Creek Bridge in Childress County (Southbound).**

TTI MODULUS ANALYSIS SYSTEM (SUMMARY REPORT) (Version 6.0)

District:
County :
Highway/Road:

| | Thickness(in) | MODULI RANGE(psi) Minimum | Maximum | Poisson Ratio Values |
|---|---|---|---|---|
| Pavement: | 5.00 | 160,000 | 720,000 | H1: v = 0.35 |
| Base: | 8.00 | 10,000 | 150,000 | H2: v = 0.35 |
| Subbase: | 8.00 | 100,000 | 3,000,000 | H3: v = 0.25 |
| Subgrade: | 106.80(by DB) | 20,000 | | H4: v = 0.40 |

| Station | Load (lbs) | Measured Deflection (mils): R1 | R2 | R3 | R4 | R5 | R6 | R7 | Calculated Moduli values (ksi): SURF(E1) | BASE(E2) | SUBB(E3) | SUBG(E4) | Absolute ERR/Sens | Dpth to Bedrock |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.271 | 9,791 | 10.75 | 6.30 | 4.39 | 3.39 | 2.60 | 2.09 | 1.70 | 465.6 | 39.6 | 1809.9 | 9.3 | 1.38 | 168.0 |
| 0.421 | 9,803 | 13.10 | 7.20 | 5.52 | 4.44 | 3.21 | 2.45 | 1.94 | 160.0 | 81.9 | 520.6 | 8.5 | 1.03 | 142.4 * |
| 0.571 | 9,799 | 10.15 | 5.78 | 4.52 | 3.87 | 3.14 | 2.68 | 2.11 | 268.1 | 74.2 | 3000.0 | 6.9 | 1.24 | 115.3 * |
| 0.722 | 9,748 | 13.01 | 6.87 | 5.56 | 4.59 | 3.63 | 2.98 | 2.34 | 160.0 | 66.1 | 2019.8 | 6.5 | 0.98 | 133.0 * |
| 0.872 | 9,811 | 8.81 | 5.24 | 3.99 | 3.22 | 2.51 | 1.99 | 1.50 | 341.9 | 95.9 | 1162.6 | 10.0 | 0.53 | 99.6 |
| 1.023 | 9,903 | 8.66 | 5.06 | 4.03 | 3.33 | 2.63 | 2.09 | 1.71 | 289.1 | 112.6 | 1671.6 | 9.3 | 0.29 | 159.9 |
| 1.173 | 9,767 | 11.46 | 6.07 | 4.82 | 4.01 | 3.07 | 2.63 | 2.02 | 191.9 | 70.0 | 2361.0 | 7.6 | 1.62 | 300.0 |
| 1.324 | 9,835 | 11.10 | 6.41 | 4.33 | 3.44 | 2.66 | 2.11 | 1.65 | 454.6 | 35.1 | 2318.3 | 9.1 | 0.66 | 117.9 |
| 1.474 | 9,815 | 9.72 | 5.52 | 4.17 | 3.31 | 2.45 | 1.82 | 1.44 | 200.5 | 138.1 | 438.1 | 11.6 | 0.53 | 111.5 |
| 1.625 | 9,867 | 9.04 | 5.81 | 4.41 | 3.54 | 2.78 | 2.21 | 1.71 | 505.2 | 81.2 | 987.4 | 8.4 | 0.42 | 113.4 |
| 1.776 | 9,656 | 10.87 | 6.77 | 4.57 | 3.44 | 2.53 | 2.09 | 1.63 | 720.0 | 24.8 | 2532.8 | 8.8 | 2.30 | 181.9 * |
| 1.926 | 9,887 | 10.20 | 6.13 | 4.39 | 3.44 | 2.64 | 2.06 | 1.63 | 417.9 | 59.2 | 997.5 | 9.6 | 0.47 | 130.9 |
| 2.077 | 9,728 | 10.99 | 6.57 | 4.65 | 3.64 | 2.87 | 2.33 | 1.79 | 464.7 | 39.1 | 2049.4 | 8.0 | 1.28 | 113.7 |
| 2.227 | 9,859 | 11.31 | 6.36 | 4.62 | 3.80 | 2.96 | 2.37 | 1.88 | 313.5 | 49.3 | 2102.7 | 8.2 | 0.57 | 127.5 |
| 2.378 | 9,760 | 9.96 | 5.67 | 4.37 | 3.65 | 2.94 | 2.35 | 1.87 | 286.1 | 72.3 | 2357.8 | 7.9 | 0.26 | 127.1 |
| 2.528 | 9,807 | 9.06 | 4.91 | 3.85 | 3.23 | 2.55 | 2.07 | 1.63 | 257.5 | 88.5 | 2776.1 | 9.4 | 0.56 | 114.6 |
| 2.679 | 9,708 | 10.81 | 6.12 | 4.65 | 3.80 | 3.04 | 2.41 | 1.93 | 275.9 | 62.7 | 1897.7 | 7.9 | 0.34 | 141.1 |
| 2.980 | 9,847 | 7.95 | 3.76 | 2.54 | 2.19 | 1.82 | 1.51 | 1.26 | 253.5 | 90.6 | 3000.0 | 15.8 | 4.88 | 300.0 * |
| Mean: | | 10.39 | 5.92 | 4.41 | 3.57 | 2.78 | 2.24 | 1.76 | 334.8 | 71.2 | 1889.1 | 9.0 | 1.07 | 127.8 |
| Std. Dev: | | 1.40 | 0.82 | 0.65 | 0.52 | 0.39 | 0.34 | 0.26 | 145.1 | 28.6 | 787.9 | 2.1 | 1.09 | 31.5 |
| Var Coeff(%): | | 13.49 | 13.90 | 14.67 | 14.47 | 13.97 | 15.04 | 14.47 | 43.3 | 40.2 | 41.7 | 22.7 | 101.93 | 24.6 |

**Figure A6. Modulus 6 Results from Collingsworth County Line to Buck Creek Bridge in Childress County (Northbound).**

# APPENDIX B

# MODULUS 6 RESULTS FOR THE RUBBLIZED SECTION

TTI MODULUS ANALYSIS SYSTEM (SUMMARY REPORT) (Version 6.0)

District:
County :
Highway/Road:

| | Thickness(in) | MODULI RANGE(psi) Minimum | Maximum | Poisson Ratio Values |
|---|---|---|---|---|
| Pavement: | 3.00 | 20,000 | 460,000 | H1: v = 0.35 |
| Base: | 8.00 | 1,500,000 | 5,000,000 | H2: v = 0.20 |
| Subbase: | 0.00 | | | H3: v = 0.00 |
| Subgrade: | 265.26(by DB) | 15,000 | | H4: v = 0.40 |

| Station | Load (lbs) | Measured Deflection (mils): R1 | R2 | R3 | R4 | R5 | R6 | R7 | Calculated Moduli values (ksi): SURF(E1) | BASE(E2) | SUBB(E3) | SUBG(E4) | Absolute ERR/Sens | Dpth to Bedrock |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1.000 | 10,117 | 7.31 | 6.39 | 5.57 | 4.62 | 3.55 | 2.82 | 2.12 | 460.0 | 3456.8 | 0.0 | 13.1 | 1.57 | 300.0 * |
| 2.000 | 10,085 | 6.98 | 5.43 | 5.30 | 4.33 | 3.42 | 2.48 | 1.85 | 267.3 | 4836.8 | 0.0 | 13.9 | 4.39 | 300.0 |
| 3.000 | 10,014 | 7.04 | 5.99 | 5.13 | 4.18 | 3.26 | 2.54 | 1.92 | 459.2 | 3154.9 | 0.0 | 14.6 | 0.74 | 300.0 * |
| 4.000 | 9,942 | 8.44 | 6.56 | 6.00 | 4.77 | 3.55 | 2.75 | 2.07 | 208.0 | 2952.0 | 0.0 | 13.3 | 2.91 | 300.0 |
| 5.000 | 9,815 | 7.44 | 6.13 | 5.17 | 4.12 | 3.30 | 2.35 | 1.57 | 333.1 | 2659.1 | 0.0 | 15.0 | 1.64 | 181.2 |
| 6.000 | 9,958 | 7.89 | 5.81 | 5.20 | 3.98 | 2.84 | 2.08 | 1.54 | 187.6 | 2340.9 | 0.0 | 17.2 | 3.60 | 283.6 |
| 7.000 | 10,061 | 6.92 | 5.44 | 4.45 | 3.53 | 2.75 | 2.09 | 1.62 | 228.0 | 3111.1 | 0.0 | 18.2 | 0.18 | 300.0 |
| 8.000 | 10,010 | 7.20 | 5.91 | 4.93 | 3.77 | 2.81 | 2.03 | 1.49 | 460.0 | 1862.1 | 0.0 | 17.6 | 1.72 | 267.6 * |
| 9.000 | 9,907 | 7.70 | 4.91 | 4.75 | 3.66 | 2.65 | 2.00 | 1.50 | 100.7 | 3795.6 | 0.0 | 18.3 | 4.85 | 300.0 |
| 11.000 | 9,962 | 6.40 | 5.66 | 5.02 | 4.12 | 3.08 | 2.43 | 1.82 | 460.0 | 3888.4 | 0.0 | 14.7 | 2.92 | 300.0 * |
| 12.000 | 9,883 | 8.04 | 6.86 | 5.89 | 4.65 | 3.34 | 2.37 | 1.74 | 460.0 | 1719.3 | 0.0 | 14.4 | 3.74 | 253.3 * |
| 13.000 | 9,954 | 8.53 | 6.56 | 6.14 | 5.09 | 3.89 | 2.93 | 2.11 | 183.9 | 3717.4 | 0.0 | 12.0 | 3.30 | 241.5 |
| 14.000 | 9,958 | 6.92 | 6.11 | 5.35 | 4.40 | 3.41 | 2.59 | 1.86 | 460.0 | 3439.2 | 0.0 | 13.8 | 2.11 | 237.6 * |
| 15.000 | 9,930 | 6.64 | 5.69 | 4.93 | 4.05 | 3.19 | 2.42 | 1.77 | 460.0 | 3583.0 | 0.0 | 14.8 | 1.29 | 262.4 * |
| 16.000 | 9,871 | 6.98 | 5.50 | 4.50 | 3.54 | 2.67 | 2.01 | 1.52 | 252.9 | 2608.3 | 0.0 | 18.4 | 0.50 | 300.0 |
| 17.000 | 9,803 | 8.06 | 6.58 | 5.60 | 4.63 | 3.61 | 2.82 | 2.13 | 242.3 | 3221.4 | 0.0 | 13.0 | 0.61 | 300.0 |
| 18.000 | 9,907 | 9.08 | 6.91 | 5.58 | 4.37 | 3.25 | 2.42 | 1.80 | 156.8 | 1951.0 | 0.0 | 15.2 | 0.55 | 291.0 |
| 19.000 | 9,855 | 8.46 | 6.53 | 5.15 | 4.09 | 2.99 | 2.17 | 1.47 | 193.3 | 1858.0 | 0.0 | 16.5 | 1.13 | 188.3 |
| 20.000 | 9,835 | 9.33 | 7.09 | 5.25 | 4.04 | 2.80 | 1.93 | 1.23 | 129.4 | 1500.0 | 0.0 | 17.2 | 2.99 | 161.1 * |
| Mean: | | 7.65 | 6.11 | 5.26 | 4.21 | 3.18 | 2.38 | 1.74 | 300.1 | 2929.2 | 0.0 | 15.3 | 2.14 | 276.3 |
| Std. Dev: | | 0.84 | 0.59 | 0.46 | 0.42 | 0.36 | 0.31 | 0.26 | 134.8 | 892.5 | 0.0 | 2.0 | 1.42 | 57.4 |
| Var Coeff(%): | | 10.93 | 9.68 | 8.80 | 10.10 | 11.24 | 13.05 | 14.79 | 44.9 | 30.5 | 0.0 | 13.0 | 66.21 | 21.6 |

**Figure B1. Modulus 6 Results from the Rubblized Section before Rubblization.**

TTI MODULUS ANALYSIS SYSTEM (SUMMARY REPORT) (Version 6.0)

District:
County :
Highway/Road:

| | Thickness(in) | MODULI RANGE(psi) Minimum | Maximum | Poisson Ratio Values |
|---|---|---|---|---|
| Pavement: | 8.00 | 160,000 | 720,000 | H1: v = 0.35 |
| Base: | 8.00 | 30,000 | 300,000 | H2: v = 0.35 |
| Subbase: | 0.00 | | | H3: v = 0.00 |
| Subgrade: | 121.01(by DB) | 15,000 | | H4: v = 0.40 |

| Station | Load (lbs) | Measured Deflection (mils): R1 | R2 | R3 | R4 | R5 | R6 | R7 | Calculated Moduli values (ksi): SURF(E1) | BASE(E2) | SUBB(E3) | SUBG(E4) | Absolute ERR/Sens | Dpth to Bedrock |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.000 | 9,577 | 10.41 | 7.90 | 5.37 | 3.84 | 2.68 | 1.91 | 1.52 | 461.9 | 108.0 | 0.0 | 12.2 | 2.19 | 121.7 |
| 120.000 | 9,541 | 10.25 | 7.64 | 5.10 | 3.57 | 2.47 | 1.74 | 1.43 | 450.0 | 98.1 | 0.0 | 13.3 | 2.27 | 115.8 |
| 240.000 | 9,589 | 9.22 | 7.09 | 4.99 | 3.59 | 2.48 | 1.77 | 1.39 | 601.4 | 114.0 | 0.0 | 13.1 | 1.52 | 120.9 |
| 360.000 | 9,501 | 10.51 | 8.23 | 5.74 | 4.22 | 3.00 | 2.20 | 1.68 | 514.5 | 117.4 | 0.0 | 10.7 | 2.32 | 140.8 |
| 480.000 | 9,505 | 10.11 | 7.90 | 5.70 | 4.29 | 3.15 | 2.34 | 1.86 | 473.8 | 178.4 | 0.0 | 10.2 | 2.08 | 149.8 |
| 600.000 | 9,470 | 10.70 | 8.33 | 5.74 | 4.20 | 3.01 | 2.23 | 1.83 | 472.9 | 120.2 | 0.0 | 10.7 | 2.80 | 149.9 |
| 720.000 | 9,481 | 10.07 | 7.71 | 5.34 | 3.90 | 2.81 | 2.11 | 1.75 | 444.6 | 150.2 | 0.0 | 11.5 | 3.00 | 161.2 |
| 840.000 | 9,497 | 9.59 | 7.40 | 5.26 | 3.91 | 2.87 | 2.19 | 1.77 | 448.9 | 198.8 | 0.0 | 11.1 | 2.96 | 179.0 |
| 960.000 | 9,485 | 10.61 | 8.16 | 5.80 | 4.31 | 3.14 | 2.31 | 1.83 | 412.0 | 167.1 | 0.0 | 10.3 | 2.17 | 143.2 |
| 10800.000 | 9,521 | 10.10 | 7.74 | 5.14 | 3.52 | 2.44 | 1.74 | 1.41 | 537.6 | 76.9 | 0.0 | 13.4 | 2.78 | 124.0 |
| 12000.000 | 9,450 | 11.96 | 8.87 | 5.78 | 3.99 | 2.80 | 2.01 | 1.65 | 362.6 | 83.3 | 0.0 | 11.7 | 3.27 | 130.0 |
| 1320.000 | 9,505 | 10.16 | 7.66 | 5.12 | 3.55 | 2.43 | 1.73 | 1.30 | 499.9 | 84.2 | 0.0 | 13.4 | 2.43 | 122.2 |
| 1440.000 | 9,382 | 11.31 | 8.36 | 5.46 | 3.86 | 2.70 | 2.25 | 1.76 | 327.5 | 126.4 | 0.0 | 11.6 | 5.85 | 152.3 |
| 1560.000 | 9,470 | 10.93 | 8.38 | 5.77 | 4.19 | 3.02 | 2.19 | 1.77 | 422.1 | 125.4 | 0.0 | 10.8 | 2.51 | 133.7 |
| 1680.000 | 9,438 | 12.06 | 9.03 | 5.94 | 4.04 | 2.80 | 2.07 | 1.69 | 388.6 | 74.1 | 0.0 | 11.5 | 3.57 | 150.2 |
| 1800.000 | 9,481 | 10.16 | 7.82 | 5.46 | 4.04 | 2.91 | 2.20 | 1.96 | 432.1 | 164.1 | 0.0 | 11.0 | 2.95 | 168.5 |
| 1920.000 | 9,477 | 10.81 | 8.20 | 5.49 | 3.84 | 2.67 | 1.93 | 1.55 | 459.1 | 87.9 | 0.0 | 12.1 | 2.78 | 132.8 |
| 2040.000 | 9,434 | 10.50 | 7.81 | 5.22 | 3.61 | 2.53 | 1.87 | 1.55 | 409.2 | 105.7 | 0.0 | 12.7 | 3.32 | 150.3 |
| 2160.000 | 9,438 | 10.22 | 7.61 | 5.04 | 3.52 | 2.44 | 1.72 | 1.43 | 439.2 | 97.0 | 0.0 | 13.3 | 2.44 | 116.1 |
| 2280.000 | 9,466 | 10.63 | 8.01 | 5.41 | 3.76 | 2.63 | 1.87 | 1.51 | 451.2 | 92.9 | 0.0 | 12.4 | 2.38 | 123.2 |
| 2400.000 | 9,402 | 10.57 | 7.89 | 5.19 | 3.64 | 2.57 | 1.91 | 1.55 | 395.9 | 109.5 | 0.0 | 12.5 | 3.69 | 152.9 |
| 2520.000 | 9,418 | 10.76 | 7.80 | 5.10 | 3.56 | 2.44 | 1.91 | 1.44 | 342.6 | 117.4 | 0.0 | 13.0 | 4.52 | 131.8 |
| 2640.000 | 9,386 | 11.35 | 8.40 | 5.37 | 3.58 | 2.40 | 1.69 | 1.38 | 434.2 | 56.1 | 0.0 | 13.3 | 2.89 | 119.5 |
| 2760.000 | 9,410 | 10.95 | 8.02 | 5.21 | 3.61 | 2.50 | 1.83 | 1.44 | 370.0 | 96.3 | 0.0 | 12.9 | 3.47 | 140.5 |
| 2880.000 | 9,442 | 9.81 | 7.15 | 4.65 | 3.23 | 2.14 | 1.73 | 1.35 | 402.3 | 112.2 | 0.0 | 14.5 | 4.96 | 107.8 |
| 3000.000 | 9,446 | 10.25 | 7.59 | 4.98 | 3.46 | 2.40 | 1.86 | 1.35 | 400.3 | 112.5 | 0.0 | 13.3 | 4.40 | 142.2 |
| Mean: | | 10.54 | 7.95 | 5.36 | 3.80 | 2.67 | 1.97 | 1.58 | 436.7 | 114.4 | 0.0 | 12.2 | 3.06 | 137.0 |
| Std. Dev: | | 0.65 | 0.46 | 0.32 | 0.29 | 0.26 | 0.21 | 0.19 | 60.2 | 33.8 | 0.0 | 1.2 | 0.98 | 16.9 |
| Var Coeff(%): | | 6.12 | 5.73 | 5.93 | 7.68 | 9.85 | 10.62 | 11.94 | 13.8 | 29.6 | 0.0 | 9.5 | 32.12 | 12.3 |

**Figure B2. Modulus 6 Results from the Rubblized Section 6 to 9 Months after Rubblization.**

TTI MODULUS ANALYSIS SYSTEM (SUMMARY REPORT) (Version 6.0)

District:
County :
Highway/Road:

| | Thickness(in) | MODULI RANGE(psi) Minimum | Maximum | Poisson Ratio Values |
|---|---|---|---|---|
| Pavement: | 8.00 | 200,000 | 750,000 | H1: v = 0.35 |
| Base: | 8.00 | 30,000 | 300,000 | H2: v = 0.35 |
| Subbase: | 0.00 | | | H3: v = 0.00 |
| Subgrade: | 132.40(by DB) | 10,000 | | H4: v = 0.40 |

| Station | Load (lbs) | Measured Deflection (mils): R1 | R2 | R3 | R4 | R5 | R6 | R7 | Calculated Moduli values (ksi): SURF(E1) | BASE(E2) | SUBB(E3) | SUBG(E4) | Absolute ERR/Sens | Dpth to Bedrock |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.000 | 10,181 | 8.58 | 7.03 | 5.43 | 4.13 | 3.10 | 2.35 | 1.81 | 750.0 | 250.1 | 0.0 | 11.5 | 1.29 | 146.9 * |
| 0.025 | 10,121 | 8.81 | 6.80 | 5.04 | 3.72 | 2.70 | 2.04 | 1.56 | 581.8 | 217.2 | 0.0 | 13.3 | 1.79 | 141.7 |
| 0.049 | 10,177 | 8.30 | 6.67 | 4.98 | 3.65 | 2.62 | 1.96 | 1.48 | 750.0 | 176.1 | 0.0 | 14.0 | 1.65 | 134.0 * |
| 0.075 | 10,085 | 8.04 | 6.41 | 5.03 | 3.87 | 2.95 | 2.30 | 1.79 | 750.0 | 300.0 | 0.0 | 12.0 | 1.38 | 151.0 * |
| 0.098 | 10,101 | 8.50 | 6.46 | 5.07 | 3.94 | 3.07 | 2.33 | 1.82 | 684.8 | 300.0 | 0.0 | 11.8 | 2.47 | 152.6 * |
| 0.124 | 9,978 | 9.47 | 7.71 | 5.96 | 4.40 | 3.30 | 2.57 | 1.88 | 750.0 | 171.4 | 0.0 | 10.7 | 1.99 | 124.4 * |
| 0.149 | 10,034 | 8.50 | 6.78 | 5.17 | 3.89 | 2.95 | 2.29 | 1.78 | 663.2 | 273.3 | 0.0 | 11.9 | 2.01 | 154.3 |
| 0.172 | 9,990 | 8.87 | 7.22 | 5.59 | 4.26 | 3.23 | 2.47 | 1.94 | 750.0 | 181.3 | 0.0 | 11.4 | 2.93 | 167.2 * |
| 0.197 | 9,978 | 8.76 | 6.91 | 5.29 | 4.00 | 3.07 | 2.35 | 1.87 | 587.1 | 291.6 | 0.0 | 11.5 | 1.74 | 181.3 |
| 0.222 | 10,034 | 8.73 | 6.76 | 4.96 | 3.58 | 2.59 | 1.98 | 1.50 | 605.1 | 191.9 | 0.0 | 13.7 | 2.31 | 137.7 |
| 0.246 | 9,986 | 8.59 | 6.57 | 4.84 | 3.59 | 2.59 | 2.13 | 1.57 | 504.4 | 272.4 | 0.0 | 13.3 | 3.49 | 183.5 |
| 0.271 | 10,014 | 9.13 | 7.20 | 5.34 | 3.91 | 2.86 | 2.17 | 1.70 | 630.3 | 187.2 | 0.0 | 12.4 | 2.00 | 167.6 |
| 0.295 | 9,907 | 8.66 | 6.69 | 4.99 | 3.69 | 2.77 | 2.13 | 1.72 | 539.3 | 260.5 | 0.0 | 12.7 | 2.25 | 188.9 |
| 0.320 | 10,018 | 8.67 | 6.91 | 5.19 | 3.87 | 2.91 | 2.27 | 1.85 | 666.6 | 239.0 | 0.0 | 12.1 | 2.37 | 216.7 |
| 0.345 | 9,879 | 9.33 | 7.52 | 5.72 | 4.28 | 3.17 | 2.43 | 1.88 | 716.2 | 186.7 | 0.0 | 11.0 | 1.67 | 156.6 |
| 0.369 | 9,922 | 8.89 | 7.05 | 5.39 | 4.03 | 2.99 | 2.26 | 1.73 | 674.1 | 217.2 | 0.0 | 11.7 | 1.31 | 145.3 |
| 0.394 | 10,093 | 8.85 | 6.96 | 5.31 | 3.87 | 2.81 | 2.05 | 1.54 | 748.6 | 168.4 | 0.0 | 12.8 | 0.84 | 134.8 * |
| 0.419 | 9,891 | 8.54 | 7.07 | 5.23 | 3.78 | 2.69 | 1.95 | 1.54 | 750.0 | 121.1 | 0.0 | 13.6 | 2.81 | 131.8 * |
| 0.443 | 9,954 | 9.05 | 7.33 | 5.45 | 3.94 | 2.85 | 2.11 | 1.63 | 750.0 | 143.3 | 0.0 | 12.5 | 1.66 | 150.2 * |
| 0.468 | 10,030 | 8.76 | 7.08 | 5.39 | 3.98 | 2.76 | 2.04 | 1.53 | 750.0 | 119.8 | 0.0 | 13.4 | 3.17 | 140.8 * |
| 0.492 | 9,716 | 9.48 | 7.31 | 5.30 | 3.77 | 2.70 | 1.97 | 1.57 | 587.0 | 132.3 | 0.0 | 13.0 | 1.64 | 138.7 |
| 0.517 | 10,042 | 7.44 | 5.74 | 4.15 | 2.95 | 2.11 | 1.54 | 1.20 | 750.0 | 178.6 | 0.0 | 17.1 | 1.71 | 129.2 * |
| 0.543 | 9,998 | 8.53 | 6.74 | 4.87 | 3.49 | 2.47 | 1.90 | 1.39 | 734.1 | 146.9 | 0.0 | 14.3 | 2.67 | 161.3 |
| 0.568 | 9,946 | 10.43 | 8.22 | 6.00 | 4.39 | 2.91 | 2.15 | 1.65 | 706.3 | 84.9 | 0.0 | 12.0 | 1.72 | 111.4 |
| 0.591 | 9,974 | 7.68 | 6.04 | 4.36 | 3.13 | 2.23 | 1.68 | 1.28 | 750.0 | 177.9 | 0.0 | 15.9 | 2.34 | 136.9 * |
| Mean: | | 8.74 | 6.93 | 5.20 | 3.84 | 2.82 | 2.14 | 1.65 | 685.2 | 199.6 | 0.0 | 12.8 | 2.05 | 148.4 |
| Std. Dev: | | 0.59 | 0.51 | 0.42 | 0.34 | 0.29 | 0.24 | 0.19 | 77.5 | 60.5 | 0.0 | 1.5 | 0.63 | 20.6 |
| Var Coeff(%): | | 6.74 | 7.34 | 7.99 | 8.90 | 10.19 | 11.16 | 11.76 | 11.3 | 30.3 | 0.0 | 11.5 | 30.91 | 13.9 |

**Figure B3. Modulus 6 Results from the Rubblized Section 2 Years after Rubblization.**

# MMM & AB&R CR 53 Repair Proposal

| | | | | Projected Cost | |
|---|---|---|---|---|---|
| **Biditem** | **Description** | **Qty** | **Unit** | **Unit Price** | **Extension** |
| 10 | STRIP/REPLACE TOPSOIL | 518.00 | CY | 9.06 | 4,693.08 |
| 20 | SEED | 4,667.00 | SY | 0.30 | 1,400.10 |
| 30 | BREAK & SEAT EXIST PAVE | 6,300.00 | SY | 2.19 | 13,797.00 |
| 40 | EXCAVATE WIDENING | 625.00 | CY | 9.83 | 6,143.75 |
| 50 | DRAINAGE | 4,200.00 | LF | 12.00 | 50,400.00 |
| 60 | 8" CRUSHED CONC BASE WIDENING | 2,800.00 | SY | 13.99 | 39,172.00 |
| 70 | 10" CEMENTED TREATED BASE | 8,167.00 | SY | 30.01 | 245,091.67 |
| 80 | PRIME AE-P | 2,042.00 | GAL | 3.77 | 7,698.34 |
| 90 | 4" TY B HMAC | 1,369.00 | TN | 52.55 | 71,940.95 |
| 100 | 2" TY C HMAC | 685.00 | TN | 57.75 | 39,558.75 |
| 110 | SHOULDER UP PAVEMENT | 1,058.00 | CY | 5.17 | 5,469.86 |
| 120 | 4" CL STRIPING | 2,100.00 | LF | 1.00 | 2,100.00 |
| | **Direct Cost** | | | | **487,465.50** |
| | Barricades & Traffic Control | | | | 4,828.00 |
| | SW3P | | | | 3,789.00 |
| | Engineering Design | | | | 50,000.00 |
| | Contingency (10% on Construction) | | | | 48,746.55 |
| | Contingency (25% on Design) | | | | 12,500.00 |
| | Inspections | | | | 15,000.00 |
| | Overhead | | | | 25,063.00 |
| | **Indirect cost** | | | | **159,926.55** |
| | **15% Margin** | | | | **97,108.81** |
| | **Total** | | | | **744,500.8575** |

**Design Schedule - 6 weeks**
**Bidding Schedule - 0 days (Austin & MM to perform work)**
**Construction Schedule - 2 weeks**
**Total Schedule - 8 weeks**

# OPCC Per City of Celina City Standards (Added 8" Flex Base)

| | | | | Projected Cost | |
|---|---|---|---|---|---|
| **Biditem** | **Description** | **Qty** | **Unit** | **Unit Price** | **Extension** |
| 1 | Bonds, Insurance & Mobilization | 1.00 | LS | 45,000.00 | 45,000.00 |
| 1 | Traffic Control | 1.00 | LS | 25,000.00 | 25,000.00 |
| 1 | Project Signs | 2.00 | EA | 1,000.00 | 2,000.00 |
| 1 | ROW Preperation | 26.00 | STA | 1,200.00 | 31,200.00 |
| 1 | Unclassified Street Excavation | 10,200.00 | CY | 9.00 | 91,800.00 |
| 1 | 8" Concrete Pavement | 7,250.00 | SY | 50.00 | 362,500.00 |
| 1 | 8" Flexbase | 7,700.00 | SY | 18.00 | 138,600.00 |
| 1 | Lime Treated Subgrade | 8,200.00 | SY | 3.00 | 24,600.00 |
| 1 | Lime (Slurry) | 150.00 | TON | 140.00 | 21,000.00 |
| 1 | Concrete Sidewalk | 1,100.00 | SY | 30.00 | 33,000.00 |
| 1 | Driveway (Concrete) | 700.00 | SY | 50.00 | 35,000.00 |
| 1 | 15" Rec Curb Inlet | 12.00 | EA | 3,500.00 | 42,000.00 |
| 1 | 4'x4' WYE Inlet | 4.00 | EA | 4,000.00 | 16,000.00 |
| 1 | Class III 18" RCP | 600.00 | LF | 60.00 | 36,000.00 |
| 1 | Class III 24" RCP | 1,000.00 | LF | 70.00 | 70,000.00 |
| 1 | Class III 36" RCP | 1,000.00 | LF | 85.00 | 85,000.00 |
| 1 | Class III 42" RCP | 250.00 | LF | 100.00 | 25,000.00 |
| 1 | 54" Steel Casing (Under RR) | 150.00 | LF | 600.00 | 90,000.00 |
| 1 | Headwall | 1.00 | EA | 12,000.00 | 12,000.00 |
| 2 | 4" CL and Curb Striping | 6,300.00 | LF | 1.50 | 9,450.00 |
| | **Direct Cost** | | | | **1,195,150.00** |
| | Barricades & Traffic Control | | | | 20,000.00 |
| | SW3P | | | | 15,000.00 |
| | Engineering Design | | | | 140,000.00 |
| | Contingency (10% on Construction) | | | | 119,515.00 |
| | Contingency (25% on Design) | | | | 35,000.00 |
| | Inspection | | | | 45,000.00 |
| | Overhead | | | | 80,000.00 |
| | **Indirect cost** | | | | **454,515.00** |
| | **15% Margin** | | | | **247,449.75** |
| | **Total** | | | | **1,897,114.7500** |

**Design Schedule - 15 weeks**
**Bidding Schedule - 6 weeks**
**Construction Schedule - 15 weeks**
**Total Schedule - 36 weeks**

**Planning & Development Services**
City of Celina, Texas

# Memorandum

| | |
|---|---|
| To: | **The Celina Planning and Zoning Commission** |
| CC: | Lance Vanzant, Interim City Manager |
| | Helen-Eve Liebman, AICP, Director of Planning & Development Services |
| From: | Ben Rodriguez, Senior Planner |
| Meeting Date: | June 20, 2017 |
| Re: | Stelzer Tract PD |

**Action Requested:**
The Planning and Zoning Commission will conduct a public hearing to consider testimony and act upon a rezoning request for a 15.47 acre tract of land from AG, Agriculture zoning district to PD, Planned Development Zoning District, with the base zoning of HI, Heavy Industrial District. The property is situated in the Collin County School Land Survey #14, Abstract 167. The property is generally located on the northeast corner of Frontier Parkway and Prairie Crossing (former CR51). (Stelzer PD)

**Background Information:**
The property owner has requested that this property be rezoned from its current zoning of AG, Agriculture, to PD, Planned Development with the base zoning of HI, Heavy Industrial. The total acreage of the area to be rezoned is approximately 15.47 acres.

The proposed PD is to facilitate the development of an office/warehouse park. Staff feels that this is an appropriate location given the constraints on this property. The property's access is limited by the adjacent Railroad Right of Way, in addition to a future elevated rail crossing that will be constructed on this site. Due to the limited access to the site staff feels that a successful retail use on this site would be challenging. Additionally, a substantial portion of the site is encumbered by floodplain which further limits the buildable area.

Due to the property's location and surrounding land uses (RV & boat storage, & railroad), the applicant has requested a reduction in masonry standards for the property. The City's code requires that non-residential structures be made of 100% masonry materials. Staff is comfortable with reduced masonry standards for the project. However, staff has requested that language be added to ensure that all facades facing or visible from Frontier Parkway or Prairie Crossing are 100% masonry, facades which face the railroad right-of-way or face internally to the development could be made of a combination of masonry and non-masonry materials, including metal.

Staff has requested that the proposed 40 foot buffer adjacent to Prairie Crossing be reduced to a 30 foot buffer measured from the future right of way with an included 4 foot landscape berm to obstruct the views between the individual buildings.

**Comprehensive Plan:**
The City's Comprehensive Plan designates this area as Suburban Moderate-High Residential (suburban mix). This land use designation encompasses the majority of land area outside the commercial core and would accommodate a range of housing types including single family detached, attached dwellings such as duplexes, and townhomes. Supporting office, retail, commercial and entertainment are considered acceptable uses. These non-residential uses are intended to support a much larger area than the immediate neighborhood and will be located at and in between intersections.

Staff feels that given its location adjacent to the railroad in addition to its frontage on a future six-lane divided thoroughfare, the proposed zoning request meets the intent of the Suburban Moderate-High Residential designation. The land uses being proposed within the PD regulations will serve not only the local residential community but also the region as a whole.

**Thoroughfare Plan:**
One of the reasons that staff feels that this use is appropriate for this given location is that this site will be situated under a future elevated bridge which is set to cross the railroad right-of-way. Given that the majority of the site will not be visible from the future elevated thoroughfare staff feels that this request is warranted.

The elevated rail crossing will require a substantial amount of property to be needed from this site to facilitate the construction of a ramped embankment. The County has estimated that it will need an additional 200 feet of right of way from the north side of Frontier Parkway to accommodate the embankment and service road. Staff has requested that the client provide notation that additional right-of-way may be needed in the future.

**Board Review/Citizen Input:**
A notice of the public hearings was published in *The Celina Record* on June 2, 2017. Notices of the public hearing have been sent to all owners of property residing within the City Limits, as indicated by the most recently approved Collin County tax rolls, who are located within 200 feet of the subject property. As of the time of packet preparation staff had received no letters in support or in opposition to the proposal.

**Supporting Documents:**
- Concept Plan
- Development Regulations
- Zoning Exhibit

**Staff Recommendation:**
Staff recommends approval of the item pending the applicant addressing staffs remaining comments prior to the item being placed on a City Council agenda.

**Exhibit C**

**Planned Development Standards**

Use and development of the subject property shall conform to the regulations of Section 14.03.004.5 “HI Heavy Industrial District”, and as amended, subject to the following conditions:

1.) The following additional uses shall be Permitted uses:

a. Mini warehouse/self-storage

b. Automobile driving school

c. Martial Arts School

d. Tool and equipment rental (no outside displays allowed in front yard or visible from public street)

e. All-terrain vehicle dealer/sales or service (no outside displays allowed in front yard or visible from public street)

f. Antique store

g. Art dealer/gallery

h. Bikes sales and/or repair (no outside displays allowed in front yard or visible from public street)

i. Building material sales/lumber (no outside displays allowed in front yard or visible from public street)

j. Consignment shop

k. Garden shop (no outside displays allowed in front yard or visible from public street)

l. Gift/toy store

m. Handicraft/artisans shop

n. Hardware store

o. Home improvement center (no outside displays allowed in front yard or visible from public street)

p. Jewelry store

q. Lawnmower sales and/or repair (no outside displays allowed in front yard or visible from public street)

r. Major appliance sales

s. Public market (no outside displays allowed in front yard or visible from public street)

t. Motorcycle dealer (new and/or repair) (no outside displays allowed in front yard or visible from public street)

u. Personal watercraft sales (new and/or repair) (no outside displays allowed in front yard or visible from public street)

v. Pet shop/supplies

w. Plant nursery

x. Printing/tee shirt shop

y. Sporting goods

z. Stamps, coin and other collectibles

aa. Used merchandise

bb. Vacuum cleaner sales and repair

cc. Woodworking shop

dd. Auto glass repair/tinting

ee. Auto laundry or carwash (attended or unattended)

ff. Auto muffler shop

gg. Auto tire repair/sales (no outside displays allowed in front yard or visible from public street)

hh. Automobile accessory installation

ii. Full service car wash

jj. Limousine/taxi service

kk. Quick lube/oil change/minor inspection

ll. Tire dealer (no outside displays allowed in front yard or visible from public street)

mm. Feed and grain store (no outside displays allowed in front yard or visible from public street)

nn. Manufacturing

oo. Office showroom

pp. Warehousing

qq. RV/boat parking

rr. Heating and air-conditioning sales/service

ss. Pawn shop

tt. Propane sales (refill and exchange only. Refill must be setback 150' from FM 1461 and CR 51)

2.) The following additional uses shall be Prohibited uses:

a. Motels

b. Sexually Oriented Businesses

c. Check Cashing/Payday Loans

d. Recycling Kiosk

e. Auto Dealer

f. Auto Repair, Major

g. Rental Car/Sales

3.) Open/outside storage: open/outside storage shall be allowed in any location on the subject property except within 150' of the right-of-way for County Road 51 (C.R. 51). Screening shall be required as outlined in the following "Screening" section. Open/outside storage shall comply with the City's Code of Ordinances as it currently exists or may be amended. Not visible from public street or stacked higher than the building.

4.) Screening: the property shall be required to provide a 4' earthen berm, within the 40' landscape setback (measured from the future ROW) along C.R. 51 and Frontier Parkway, and 3" caliper trees (at the time of planting) (or alternate as approved by the City Planning Director) generally located on 40' centers. The landscape screening along with the exterior building orientation shall provide the screening for the overall project (a separate masonry screen wall is not required along the perimeter of the site).

5.) Building orientation: the buildings along the exterior of the site, as generally depicted on the attached Zoning Exhibit "D", shall face one side of the building outward toward the right-of-way of C.R. 51 and Frontier Parkway. Interior buildings shall be allowed to orient the buildings as needed upon the approval of the City Fire Department and in compliance with the International Building Code.

6.) Building Materials: any building materials (masonry, concrete, blocks, metal, stucco, etc.) shall be allowed within the property except as noted below:

a. Any of the buildings located along the exterior of the site, as generally shown on the attached zoning exhibit "D", shall be required to have a 100% masonry wall that faces the right-of-way. All other buildings can be constructed with materials other than masonry. For example, the buildings that face C.R. 51 shall be required to have a western face made of 100% masonry and all other sides of the buildings can be made with other materials.

b. Masonry shall be defined as fired brick, natural and manufactured stone, granite, marble, architectural concrete block, tilt wall concrete, and concrete block.

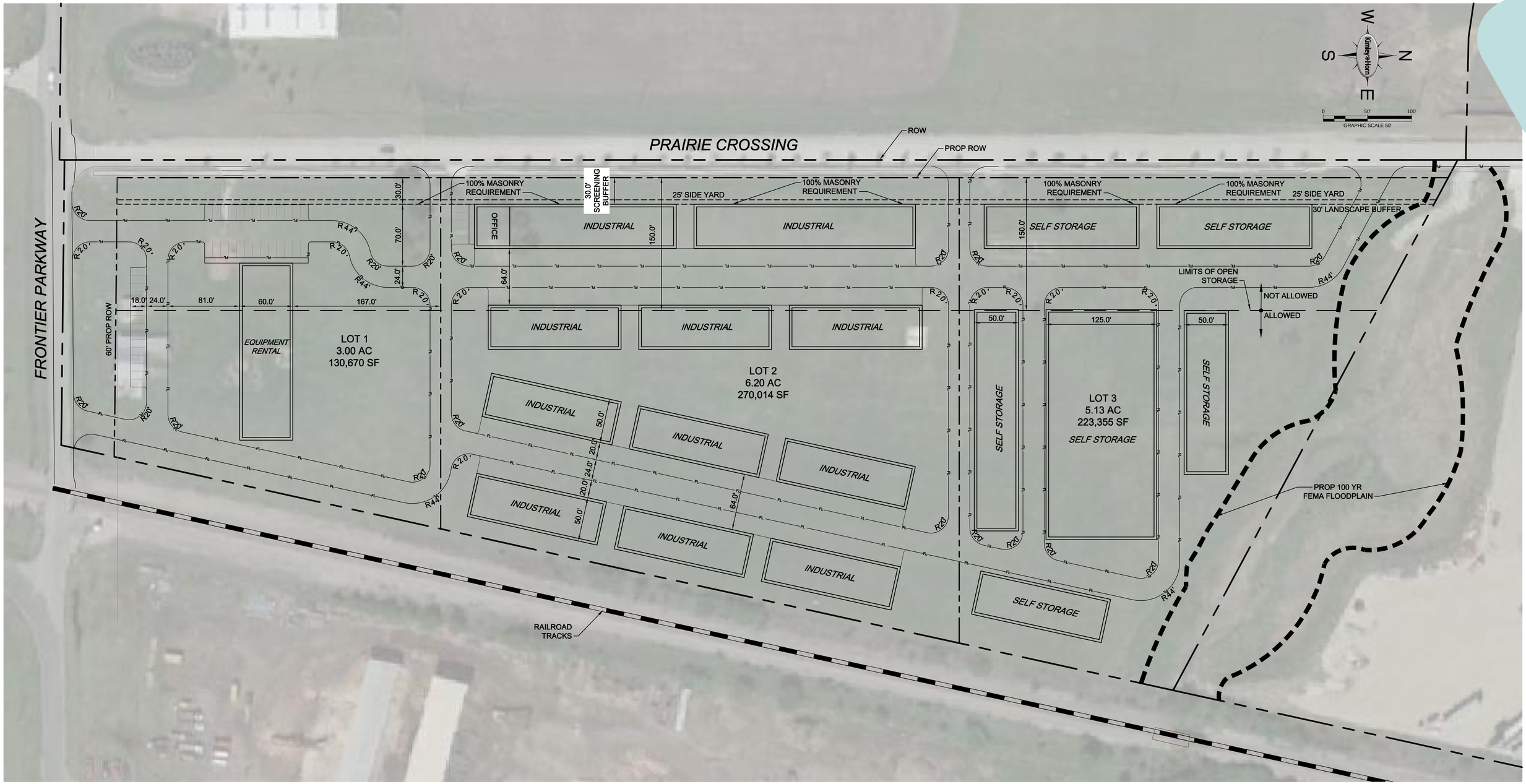
c. All interior facades and facades facing the railroad shall have a 3' masonry wainscot.

d. Any buildings located at the corner of C.R. 51 and Frontier Parkway shall provide 100% masonry on both sides facing the right-of-way and all other sides of the buildings can be made with other materials.

7.) Conceptual site plan: Zoning Exhibit “D” is included with the proposed zoning as a graphical explanation of the masonry and screening requirements.

8.) Parking:

a. No on-street parking associated with this site will be permitted on Prairie Crossing or Frontier Parkway.




# EXHIBIT "D" CONCEPT PLAN

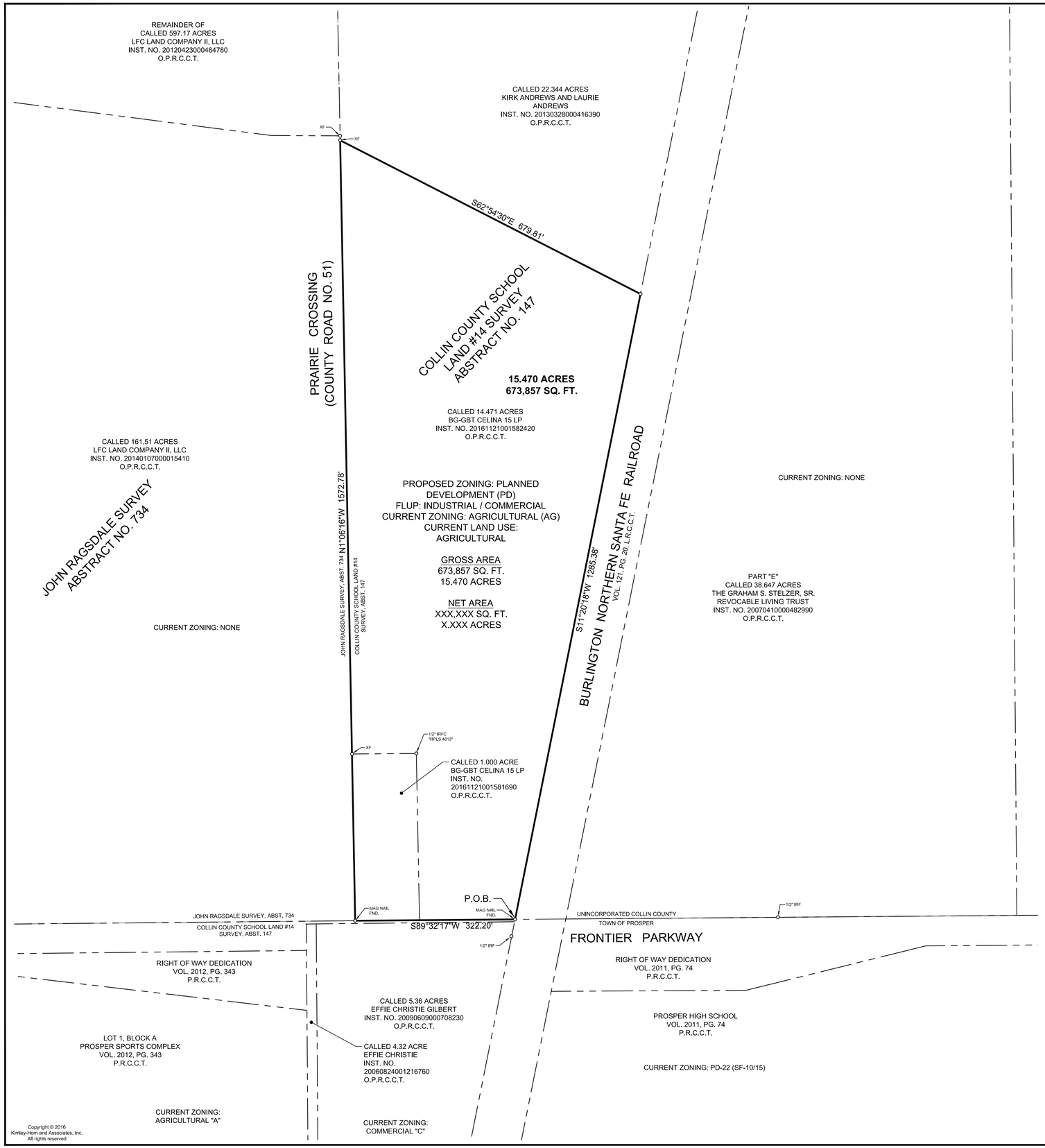
## Celina Industrial

Celina, Texas
February 2017

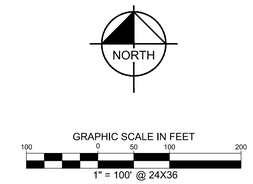
Kimley»Horn
5750 Genesis Court
Suite 200
Frisco, Texas 75034
972-335-3580
State of Texas Registration No. F-928

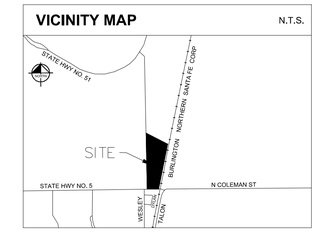
NOTE: THIS PLAN IS CONCEPTUAL IN NATURE AND HAS BEEN PRODUCED WITHOUT THE BENEFIT OF A SURVEY, TOPOGRAPHY, UTILITIES, CONTACT WITH THE CITY, ETC.

DWG NAME K:\FRI_CIVIL\63225300 - STELZER CELINA\DWG\EXHIBITS\ZONING EXHIBIT.DWG
LAST SAVED 2/17/2017 8:28 AM




Copyright © 2016
Kimley-Horn and Associates, Inc.
All rights reserved




**LEGAL DESCRIPTION**

**BEING** a tract of land situated in the Collin County School Land #14 Survey, Abstract No. 167, Collin County, Texas and being all of a 14.471 acre tract as conveyed to BG-GBT Celina 15 LP and recorded in County Clerks No. 20161121001582420, Official Public Records of Collin County (O.P.R.C.C.T.), Texas, also being all of a 1.000 acre tract as conveyed to BG-GBT Celina 15 LP and recorded in Instrument No. 20161121001581690, Official Public Records of Collin County (O.P.R.C.C.T.), Texas and being more particularly described by metes and bounds as follows:

**BEGINNING** at a mag nail found at the southeast corner of said 14.471 acre tract, said nail being in the west line of Burlington Northern Santa Fe Railroad Company tract as created in a deed recorded in Volume 121, Page 20, Land Records of Collin County, Texas, said nail also being in the approximate centerline of Frontier Parkway;

**THENCE** South 89°32'17" West, along the south line of said 14.471 acre tract, the south of said 1.000 acre tract and along the centerline of said Frontier Parkway, a distance of 322.20 feet to a mag nail found for the southwest corner of said 1.000 acre tract, also being the southeast corner of a called 161.51 acre tract conveyed to LFC Land Company II, LLC in Instrument No. 20140107000015410, O.P.R.C.C.T., same also being the intersection of the centerline of said Frontier Parkway with the centerline of Prairie Crossing (County Road No. 51);

**THENCE** North 01°06'16" West, along the west line of said 1.000 acre tract, and the west line of said 14.471 acre tract, and along the east line of said 161.51 acre tract, and along the centerline of said Prairie Crossing (County Road No. 51) a distance of 1572.78 feet to a "X" cut found for the northwest corner of said 14.471 acre tract, same being at the southwest corner of a called 22.334 acre tract conveyed to Kirk and Laurie Andrews as recorded in Instrument No. 20130328000416390, O.P.R.C.C.T.;

**THENCE** South 62°54'30" East, along the north line of said 14.471 acre tract and the south line of said 22.334 acre tract, a distance of 679.81 feet to the northeast corner of said 14.471 acre tract and the southeast corner of said 22.334 acre tract in the west line of aforesaid Burlington Northern Santa Fe Railroad Company tract;

**THENCE** South 11°20'18" West, along the west line of Burlington Northern Santa Fe Railroad Company tract and the east line of said 14.471 acre tract, a distance of 1285.38 feet to the **POINT OF BEGINNING** and containing 15.470 acres of land, more or less.

MICHAEL B. MARX
REGISTERED PROFESSIONAL
LAND SURVEYOR NO. 5181
5750 GENESIS COURT, SUITE 200
FRISCO, TEXAS 75034
PH. 972-335-3580
michael.marx@kimley-horn.com

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

LEGEND

P.O.B. = POINT OF BEGINNING
IRFC = IRON ROD W/CAP FOUND
FND = FOUND
O.P.R.C.C.T. = OFFICIAL PUBLIC RECORDS, COLLIN COUNTY, TEXAS
P.R.C.C.T. = PLAT RECORDS OF COLLIN COUNTY, TEXAS
L.R.C.C.T. = LAND RECORDS OF COLLIN COUNTY, TEXAS
F.L.U.P. = FUTURE LAND USE PLAN

# EXHIBIT B

ZONING CASE #16-XXXX

# Stelzer Tract

COLLIN COUNTY SCHOOL LAND # 14 SURVEY, ABSTRACT #147
AUGUST, 2016

ENGINEER / SURVEYOR:
Kimley-Horn and Associates
State of Texas Registration No. F-928
5750 Genesis Court, Suite 200
Frisco, TX 75034
P (972) 335-3580
F (972) 335-3779
Contact: David Kochalka, P.E.

OWNER / APPLICANT:
GB-GBT Celina 15 LP
9550 John W. Elliott Drive, Suite 106
Frisco, Texas 75033
Contact:
Ph:

Kimley»Horn

DWG NAME: K:\FRI_SURVEY\063223300-STELZER CELINA\DWG\063223300 ZONING.DWG PLOTTED BY MARX, MICHAEL 11/28/2016 3:25 PM LAST SAVED 11/28/2016 2:38 PM

**Planning & Development Services**
City of Celina, Texas

# Memorandum

To: **The Celina Planning and Zoning Commission**
CC: Lance Vanzant, Interim City Manager
From: Helen-Eve Liebman, AICP, Director of Planning & Development Services
Meeting Date: June 20, 2017
Re: Wilson Creek Meadows ETJ Development Agreement

---

**Action Requested:**
The Planning & Zoning Commission will conduct a public hearing to consider testimony and act upon a consideration of proposed land use regulations for Wilson Creek Meadows Extraterritorial Jurisdiction Development Agreement. The property is ±105.94 acres situated in the Jonathan Westover Survey, Abstract No. 1030, and the Coleman Watson Survey, Abstract No. 945, Collin County, Texas. The property is in the City of Celina's ETJ, generally located south of Choate Parkway, north of Frontier Parkway, east of Preston Road, and west of Custer Road. (Wilson Creek Meadows ETJ Development Agreement)

**Background Information:**
An application has been made from the Wilson Creek Meadows Development for a Development Agreement with the City of Celina for a 105.94 acre tract of land in the ETJ. This Development Agreement outlines development regulations and other considerations prior to the annexation and subsequent zoning of the property. The proposed Development Agreement is the mechanism that allows the property owner to be vested. These regulations will also be mimicked in the Wilson Creek Meadows Planned Development agenda item.

Land Use
The ETJ tract in this development agreement is proposed to be developed single-family with a base zoning of SF-R with a variety of lot mixes, which are explained below:

**Lot Summary**

| Lot Type | Min. Lot Area | Min. Lot Width | Min. Lot Depth | Max Lot Coverage | Front | Rear | Interior Side | Corner Side |
|---|---|---|---|---|---|---|---|---|
| A | 8,500 sf | 70' | 115' | 60% | 25' | 20' | 7' | 15' |
| B | 7,000 sf | 60' | 110' | 60% | 20' | 15' | 5' | 15' |
| C | 5,500 sf | 50' | 110' | 60% | 20' | 15' | 5' | 15' |

Density
The property will have a maximum of 80.7 acres of single-family, 20 acres of open space, and 1.8 acres will make up right-of-way.

The maximum number of single-family residential lots within the overall ETJ property shall be 350.

No more than 50% of the maximum number of lots may be 50' (Type C) lots, and 15% shall be 70' lots (Type A). The remainder of the lots shall be 60' lots (Type B).

**Thoroughfare Plan:**
The Thoroughfare Plan shows the northern boundary road of this property to be 100 foot of right-of-way for a four lane divided thoroughfare. The concept plan for the development of this tract complies with the City's Thoroughfare Plan.

**Comprehensive Plan:**
The City of Celina's Comprehensive Plan calls for suburban moderate high-residential in this area, therefore the proposed development agreement complies.

**Board Review/Citizen Input:**
A notice of public hearing was published in the Celina Record on June 2, 2017. Notices of the public hearing have been sent to all owners of property, as indicated by the most recently approved City of Celina tax rolls, who are located within 200 feet of the subject property.

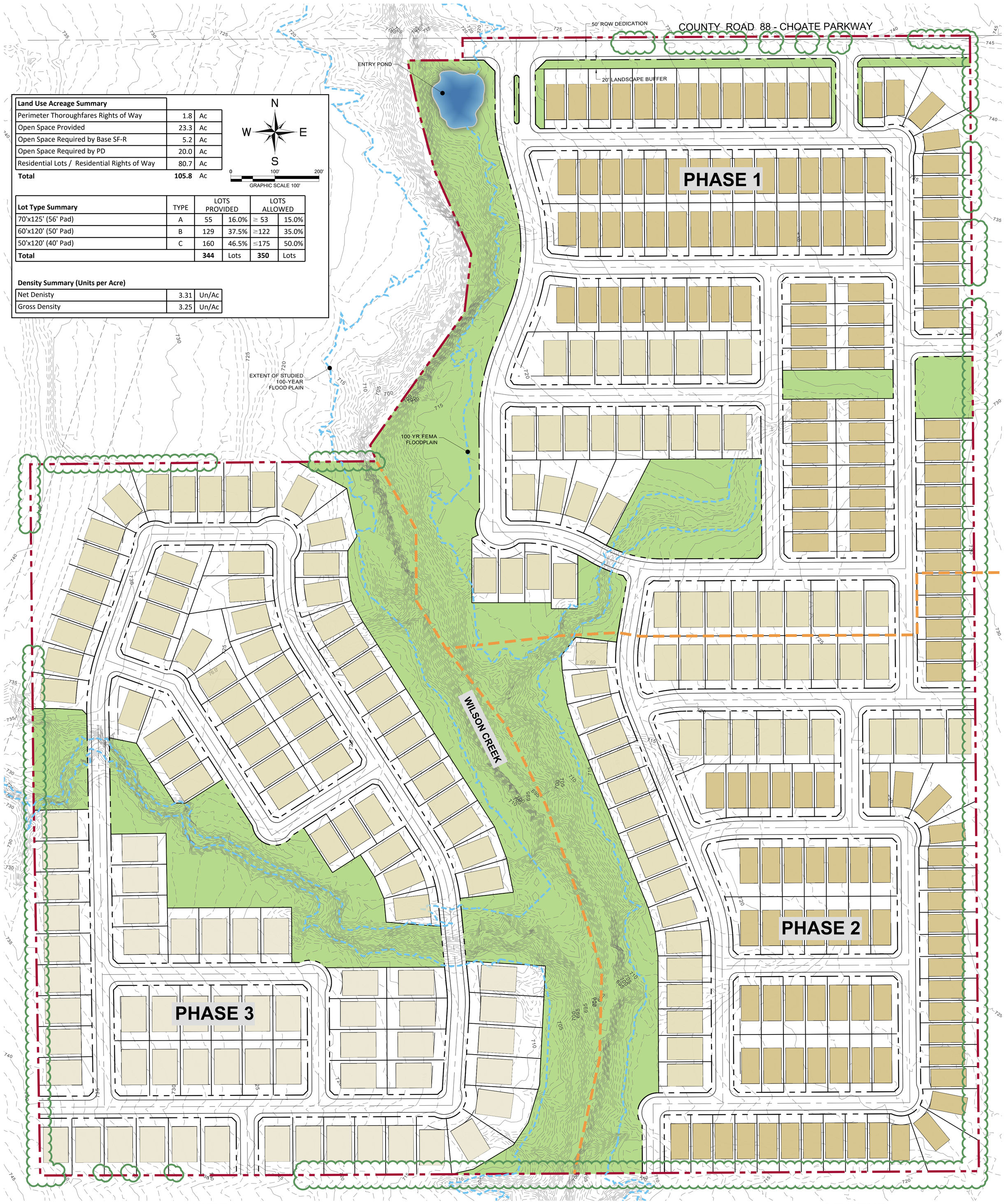
**Alternatives:**
N/A

**Financial Considerations:**
N/A

**Legal Review:**

**Supporting Documents:**
Proposed Concept Plan
Proposed Land Use Regulations

**Staff Recommendation:**
Staff recommends approval as presented.




| Land Use Acreage Summary | | |
|---|---|---|
| Perimeter Thoroughfares Rights of Way | 1.8 | Ac |
| Open Space Provided | 23.3 | Ac |
| Open Space Required by Base SF-R | 5.2 | Ac |
| Open Space Required by PD | 20.0 | Ac |
| Residential Lots / Residential Rights of Way | 80.7 | Ac |
| **Total** | **105.8** | Ac |

| Lot Type Summary | TYPE | LOTS PROVIDED | | LOTS ALLOWED | |
|---|---|---|---|---|---|
| 70'x125' (56' Pad) | A | 55 | 16.0% | ≥ 53 | 15.0% |
| 60'x120' (50' Pad) | B | 129 | 37.5% | ≥122 | 35.0% |
| 50'x120' (40' Pad) | C | 160 | 46.5% | ≤175 | 50.0% |
| **Total** | | **344** | Lots | **350** | Lots |

**Density Summary (Units per Acre)**

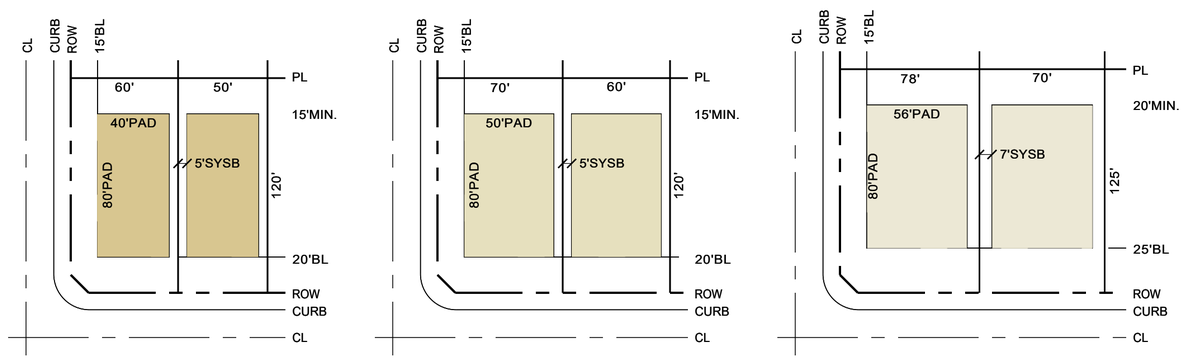
| | | |
|---|---|---|
| Net Denisty | 3.31 | Un/Ac |
| Gross Density | 3.25 | Un/Ac |

## NOTES

1. KEY LOTS SHALL HAVE A SIDEYARD SETBACK ADJACENT TO THE STREET WHICH IS THE SAME WIDTH AS THE FRONT YARD OF THE LOT IT BACKS UP TO.

## LEGEND

- PHASE LINE
- FLOOD PLAIN
- FENCE ROW TREE LINE




STANDARD 50' LOT

STANDARD 60' LOT

STANDARD 70' LOT

CONCEPT PLAN - EXHIBIT D
FOR
WILSON CREEK MEADOWS

BEING 105.94 ACRES
OUT OF THE
JONATHAN WESTOVER SURVEY, ABSTRACT NO. 1030
AND THE
COLEMAN WATSON SURVEY, ABSTRACT NO. 945
IN THE
CITY OF CELINA, COLLIN COUNTY, TEXAS


OWNER:
Celina Titus L.L.C.
106 Decker Dr. Suite 310
Irving, TX 75062
Tel: (214) 212-6326
Contact: Terry W. Mitchell

DEVELOPER:
Contrast Development
106 Decker Dr. - Suite 310
Irving, TX 75062
Tel: (214) 212-6326
Contact: Terry W. Mitchell

ENGINEER/SURVEYOR:
Kimley»Horn
12750 Genesis Ct. Suite 1000
Dallas, TX 75251
Tel: (972) 770-1300
Contact: Justin S. Christ, P.E.


| DESIGNED | DRAWN | CHECKED | SCALE | DATE | KH PROJECT NO. |
|---|---|---|---|---|---|
| SG | JSC | JSC | AS SHOWN | MAY 2017 | 063222900 |

# Exhibit C

# Wilson Creek Meadows

# Planned Development Regulations

For a 105.94 acre tract of land out of the Coleman Watson Survey, Abstract No. 945 and the Jonathan Westover Survey, Abstract No. 1030 in the City of Celina ETJ and Collin County, Texas as described in Exhibit A, Legal Description and as depicted graphically in Exhibit D, Concept Plan.

## 1.0 Purpose

The purpose of these Development Regulations is to create a well designed, environmentally sensitive community which preserves the Wilson Creek greenway and links the various neighborhoods together by a series of trails and enhanced open space areas that encourage and promote outdoor activity among the residents. The open space areas shown on the Concept Plan shall consist of existing trees and creeks, and proposed trails, ornamental trees and shade trees. This development will promote a sense of community, environmental stewardship and a healthy and robust relationship with ones neighbors.

## 2.0 Definitions

Except as otherwise defined in this Agreement, terms used herein shall be the same as those found in Section 14.01.007 of the Zoning Ordinance for the City of Celina, Texas, in effect on the effective date of this Agreement (the "Zoning Ordinance").

## 3.0 General Regulations

3.1 The Property shall comply with the Development Agreement, the zoning regulations of the Zoning Ordinance applicable to property zoned SF-R, and the City's subdivision ordinance and engineering design criteria in effect on the effective date of this Agreement (collectively, the "Subdivision Regulations"). In the event of a conflict between any of these documents, this Agreement shall control.

3.2 A property owners association shall be established and shall be responsible for the ownership and maintenance of all common areas, including all private open space areas shown on the Concept Plan.

3.3 The maximum number of single-family residential lots within the Property shall be 350. No more than 50 percent of the maximum number of lots may be Type C lots and at least 15 percent of the lots shall be Type A lots. The remainder of the lots which are not Type A lots or Type C lots shall be Type B lots. The layout for this planned development is shown on the Concept Plan.

3.4 The phasing shown on the Concept Plan is conceptual, and may be modified by the Owner during the development process (both the size of the phase and the order of the phases may be changed).

## 4.0 Use Regulations

The permitted uses are outlined below:

4.1 The following uses are permitted by right except as otherwise noted:

a. Single-family detached

b. Schools (private or public)

c. Civic

d. Country clubs

e. Golf course and related facilities

f. Marketing and sales centers associated with the development of the Property

g. Temporary construction offices and storage yards associated with development of the Property

h. Public works, including drainage facilities, water wells, and water and wastewater treatment, pumping, storage, and transmission facilities

i. Home occupations, as permitted in the zoning ordinance

j. Parks, playgrounds, trails, swimming pools, and other forms of improved and unimproved open space

k. Recreation/Amenity centers, pools, cabana buildings and/or locker/changing rooms

l. Temporary concrete or asphalt batch plants associated with development of the Property

m. Houses of worship

n. Gated communities (by conditional use permit only)

o. Agricultural, including a commercial tree farm

p. All other SF-R single family residential district uses

## 5.0 Area Regulations

5.1 General Area regulations for residential uses are set forth in the table below, which contains the exclusive lot size, setback, height, dwelling size, and lot coverage requirements for the Property.

| | Min. Lot Size (Sq. ft) | Max. Height (Ft.) | Min. Side Yard (Ft.)(6) | Min. Rear Yard (Ft.) | Min. Side Yard Corner Lots (Ft.)(6), (7) | Min. Front Yard (Ft.) (3), (5) | Min. Lot Width (Ft.) (1), (2) | Min Lot Depth (Ft.) | Min. Structure Size (Sq. ft.) | Max L Cover (4) |
|---|---|---|---|---|---|---|---|---|---|---|
| A | | | | | | | | | | |
| B | | | | | | | | | | |
| C | | | | | | | | | | |

1. The lot widths shall be measured along the arc of the front building line.
2. Lot width may be reduced by 20 percent for lots fronting cul-de-sacs, eyebrows, and inside curves. The minimum lot width is measured at the platted front yard building set back. Each lot shall have a minimum of 30 feet of frontage along the right-of-way.
3. Where front porches are provided, they shall be permitted to encroach a maximum of five feet into the front setback line.
4. Lot coverage is defined as the footprint of the primary residential structure, excluding without limitation patios (covered or uncovered), pools, driveways, sidewalks and other improvements which are not part of an enclosed building.
5. J-swing garages may encroach into the front building line by five feet.
6. The face of a J-swing garage may be located no closer than 20 feet to the side lot line it faces.
7. For street corner lots with a side touching and adjacent to the front yard of a lot behind it, the side yard on the street side of the lot shall be the same width as the adjacent lot front yard.

## 6.0 Building Regulations

6.1 Exterior building facades for residential structures shall meet or exceed the requirements outlined in Section 14.05.152 of the Zoning Ordinance except as follows:

1. Building materials shall comply with the applicable requirements in Section 14.05.152 of the Zoning Ordinance, except that cementitious fiberboard may be used on the second story provided it is interrupted by an intersecting roof line or another architectural feature. No other building design, layout or architectural standards of the Zoning Ordinance shall apply to detached single-family residences within the Property.

2. Every detached single-family residence shall have at least two covered parking spaces and two spaces on the driveway between the street right-of-way and the front building line.

3. Front facing garage doors with access from the street shall be allowed provided the garage doors are located at or behind the front building line. Additionally, all front facing garage doors must be in line with or behind the front façade of the house.

4. The primary roof pitch for residential building types shall not be less than 6:12 for Type C homes and shall not be less than 8:12 for Type A and B homes. The minimum pitches do not apply to porches, specialty roofs, awnings, dormers, or other similar architectural features.

5. No building shall exceed a height of more than 40 feet, measured at the mid-point between the top plate and the dominate roof ridge.

## 7.0 Screening Regulations

7.1 Landscape Buffer:

1. A landscape buffer with a minimum width of 20 feet will be required adjacent to right-of-ways of 90 feet in width or greater as shown on the City Thoroughfare Plan at the time this PD is approved. Trees shall be planted at least every 50 feet within the buffer. The Developer may install a more natural looking spacing of the required trees as long as the minimum tree count (based on 50-foot spacing) is maintained.

7.2 Screening Fences:

1. For single-family lots siding or backing to thoroughfares, there shall be a minimum six-foot masonry fence. As an alternative, a minimum six-foot decorative metal fence with shrubbery, trees and masonry columns (at a minimum spacing of 80 feet), a living screen, or any combination thereof may be used for screening.

2. Single-family lots backing or siding to open space shall have a minimum five-foot ornamental metal fencing adjacent to the open space area, which shall be installed during home construction and shall not be a condition of subdivision acceptance by the City.

3. No other screening fence requirements shall apply.

**8.0 Open Space Regulations**

8.1 This section shall satisfy all requirements in 14.03.008 SF-R, single-family residential district for open space dedication, amenities and improvements for the Property.

1. The Wilson Creek Park open space area shall be open to the public. Amenity centers, Common Areas or other amenities shall be privately owned and maintained by the Wilson Creek Meadows Homeowners Association.

2. A minimum of 20 acres (approximately 19 percent of the total planned development acreage), as shown on Exhibit E, Conceptual Open Space and Trail Plan, shall be retained as Open Space. Such open space may be located anywhere on the Property. For the purposes of this Exhibit C, the term “open space” means natural areas, floodplain, areas used for drainage and detention, common areas and parkway and landscape easements. Open space shall be privately owned. Open Space shall not consist of any area platted for residential dwellings or road right-of-way.

3. As shown on Exhibit E, Conceptual Open Space and Trail Plan, approximately 2600 linear feet of six-foot wide concrete trail (the Wilson Creek Trail) shall be built along Wilson Creek in phases as the Property is developed. The trail shall be located on land dedicated to the Wilson Creek Meadows HOA.

4. Park benches will be placed every 600 feet along the trail; however, the benches may be grouped provided the total number of benches shall equal the number based on 600 foot spacing.

5. When a street is adjacent to an open space, a five-foot sidewalk shall be built on the opposite side of the street from the Wilson Creek Trail. The five-foot wide sidewalk referenced

above will be built at the time the adjacent home is built by the homebuilder provided it is located in the front-yard or side-yard of a residential lot.

6. The exact location of the trail shown on Exhibit E, Conceptual Open Space and Trail Plan is conceptual and subject to change at the time the final street and lot layout is determined (construction plat). Further, the trail may be built in phases based on the limits of each construction plat.

7. To the extent allowed by state law, an amenity pond will be placed at the north end of the trail (just south of Choate Parkway) provided any governmental agency permits are attainable. The lake shall be equipped with a water fountain or aerator device.

8. All open space areas shall have slope not greater than 4:1, unless they are naturally existing or structurally supported.

9. All open space areas shall be owned and maintained by the HOA.

10. No other amenity requirements listed in Sec. 14.03.008(c)(5) of the SF-R Zoning Ordinance shall be required.

11. This Section 9 shall serve as the exclusive Open Space requirement for this planned development.

**9.0 Subdivision Regulations**

9.1 Development shall meet the standards as required in the Subdivision Regulations except as follows:

1. Block length – The maximum internal block length shall be 1,200 feet (measured from intersections such as elbows, tees and cross intersections) and shall contain no more than 20 lots on each side of the street. The maximum block length along open space, perimeter property lines or thoroughfares shall be 1500 feet and shall contain no more than 30 lots on one side of the street. Other exceptions to these block length requirements may be granted for special circumstances or conditions affecting the property in question; exceptions shall be applied for as a subdivision ordinance variance and presented to the Planning & Zoning Commission and City Council at the time of Construction/Preliminary Plat consideration for approval. Pecuniary interests standing alone shall not be justification for the granting of a variance.

2. Cul-de-Sac Length and Diameter – The maximum cul-de-sac length is 600 feet. The right-of-way “bulb” radius shall be fifty feet and the paving radius shall be 40.5 feet to back of curb.

3. Street Offset – The minimum street offset at street intersections measured centerline of road to centerline of road shall be 125 feet.

4. Temporary Dead End Streets - temporary dead end streets, which are less than or equal to 150 feet in length, are not required to have a temporary turnaround at the end of the street, even if the dead end street has lots facing it.

5. Tree Survey/Tree Credits - Due to the density of existing trees in natural areas being preserved by this planned development, trees located in these natural areas which are being used for preservation credit shall be inventoried for inclusion in Preservation Credits but need not have their exact location shown on the tree survey. Trees in the natural areas which are being used for Preservation Credits shall be tagged to insure no duplication occurs, and the species and size shall be included in the credit table. No other trees in the natural areas are required to be catalogued or location shown on a tree survey. The tree survey and any necessary tree mitigation plan shall be prepared and processed through the city at the time the construction plat is submitted.

6. Plat and GDP Extensions - If requested in writing by the owner or developer of any portion of the Property prior to the expiration date, any approved GDP, construction plat and/or construction plans shall be automatically extended one time for one year. City staff shall provide written confirmation of the one year extension upon receipt of said request from the owner or developer.

**Planning & Development Services**
City of Celina, Texas

# Memorandum

To: **The Celina Planning and Zoning Commission**
CC: Lance Vanzant, Interim City Manager
From: Helen-Eve Liebman, AICP, Director of Planning & Development Services
Meeting Date: June 20, 2017
Re: Wilson Creek Meadows Zoning

---

**Action Requested:**
The Planning & Zoning Commission will conduct a public hearing to consider testimony and act upon a rezoning request for an ±105.94 acre tract of land from AG, Agricultural zoning district to PD, Planned Development zoning district with base zoning designations of SF-R, single-family residential district. The property is situated in the Jonathan Westover Survey, Abstract No. 1030, and the Coleman Watson Survey, Abstract No. 945, Collin County, Texas. The property generally located south of Choate Parkway, north of Frontier Parkway, east of County Road 86 and 87, and west of Custer Road. (Wilson Creek Meadows Rezoning)

**Background Information:**
The property owners have requested that this property be rezoned from its current zoning of AG, Agriculture, to PD, Planned Development with a base zoning of SF-R, Single-Family Residential. The total acreage of the area to be rezoned is approximately 105.94 acres.

The proposed PD mirrors the ETJ Development Agreement Land Use. The development agreement is necessary to vest the property, but the property owners are moving forward with annexation and zoning immediately.

Land Use
The ETJ tract in this development agreement is proposed to be developed single-family with a base zoning of SF-R with a variety of lot mixes, which are explained below:

**Lot Summary**

| Lot Type | Min. Lot Area | Min. Lot Width | Min. Lot Depth | Max Lot Coverage | Front | Rear | Interior Side | Corner Side |
|---|---|---|---|---|---|---|---|---|
| A | 8,500 sf | 70’ | 115’ | 60% | 25’ | 20’ | 7’ | 15’ |
| B | 7,000 sf | 60’ | 110’ | 60% | 20’ | 15’ | 5’ | 15’ |
| C | 5,500 sf | 50’ | 110’ | 60% | 20’ | 15’ | 5’ | 15’ |

Density
The property will have a maximum of 80.7 acres of single-family, 20 acres of open space, and 1.8 acres will make up right-of-way.

The maximum number of single-family residential lots within the overall ETJ property shall be 350. No more than 50% of the maximum number of lots may be 50' (Type C) lots, and 15% shall be 70' lots (Type A). The remainder of the lots shall be 60' lots (Type B).

Open Space

The proposed Planned Development has 20 acres of open space, much of which will be utilizing Wilson Creek along the western boundary of the property to incorporate a trail system that is proposed to be owned and maintained by the HOA, but open to the public.

**Thoroughfare Plan:**

The Thoroughfare Plan shows the northern boundary road of this property to be 100 foot of right-of-way for a four lane divided thoroughfare. The concept plan for the development of this tract complies with the City's Thoroughfare Plan.

**Comprehensive Plan:**

The City of Celina's Comprehensive Plan calls for suburban moderate high-residential in this area, therefore the proposed development agreement complies.

**Board Review/Citizen Input:**

A notice of public hearing was published in the Celina Record on June 2, 2017. Notices of the public hearing have been sent to all owners of property, as indicated by the most recently approved City of Celina tax rolls, who are located within 200 feet of the subject property. No letters of opposition or in favor were received by Friday, June 16, 2017.

**Alternatives:**

N/A

**Financial Considerations:**

N/A

**Legal Review:**

**Supporting Documents:**

Proposed Concept Plan
Proposed Land Use Regulations

**Staff Recommendation:**

Staff recommends approval as presented.

# Exhibit C

# Wilson Creek Meadows

# Planned Development Regulations

For a 105.94 acre tract of land out of the Coleman Watson Survey, Abstract No. 945 and the Jonathan Westover Survey, Abstract No. 1030 in the City of Celina ETJ and Collin County, Texas as described in Exhibit A, Legal Description and as depicted graphically in Exhibit D, Concept Plan.

## 1.0 Purpose

The purpose of these Development Regulations is to create a well designed, environmentally sensitive community which preserves the Wilson Creek greenway and links the various neighborhoods together by a series of trails and enhanced open space areas that encourage and promote outdoor activity among the residents. The open space areas shown on the Concept Plan shall consist of existing trees and creeks, and proposed trails, ornamental trees and shade trees. This development will promote a sense of community, environmental stewardship and a healthy and robust relationship with ones neighbors.

## 2.0 Definitions

Except as otherwise defined in this Agreement, terms used herein shall be the same as those found in Section 14.01.007 of the Zoning Ordinance for the City of Celina, Texas, in effect on the effective date of this Agreement (the "Zoning Ordinance").

## 3.0 General Regulations

3.1 The Property shall comply with the Development Agreement, the zoning regulations of the Zoning Ordinance applicable to property zoned SF-R, and the City's subdivision ordinance and engineering design criteria in effect on the effective date of this Agreement (collectively, the "Subdivision Regulations"). In the event of a conflict between any of these documents, this Agreement shall control.

3.2 A property owners association shall be established and shall be responsible for the ownership and maintenance of all common areas, including all private open space areas shown on the Concept Plan.

3.3 The maximum number of single-family residential lots within the Property shall be 350. No more than 50 percent of the maximum number of lots may be Type C lots and at least 15 percent of the lots shall be Type A lots. The remainder of the lots which are not Type A lots or Type C lots shall be Type B lots. The layout for this planned development is shown on the Concept Plan.

3.4 The phasing shown on the Concept Plan is conceptual, and may be modified by the Owner during the development process (both the size of the phase and the order of the phases may be changed).

## 4.0 Use Regulations

The permitted uses are outlined below:

4.1 The following uses are permitted by right except as otherwise noted:

a. Single-family detached

b. Schools (private or public)

c. Civic

d. Country clubs

e. Golf course and related facilities

f. Marketing and sales centers associated with the development of the Property

g. Temporary construction offices and storage yards associated with development of the Property

h. Public works, including drainage facilities, water wells, and water and wastewater treatment, pumping, storage, and transmission facilities

i. Home occupations, as permitted in the zoning ordinance

j. Parks, playgrounds, trails, swimming pools, and other forms of improved and unimproved open space

k. Recreation/Amenity centers, pools, cabana buildings and/or locker/changing rooms

l. Temporary concrete or asphalt batch plants associated with development of the Property

m. Houses of worship

n. Gated communities (by conditional use permit only)

o. Agricultural, including a commercial tree farm

p. All other SF-R single family residential district uses

## 5.0 Area Regulations

5.1 General Area regulations for residential uses are set forth in the table below, which contains the exclusive lot size, setback, height, dwelling size, and lot coverage requirements for the Property.

| | Min. Lot Size (Sq. ft) | Max. Height (Ft.) | Min. Side Yard (Ft.)(6) | Min. Rear Yard (Ft.) | Min. Side Yard Corner Lots (Ft.)(6), (7) | Min. Front Yard (Ft.) (3), (5) | Min. Lot Width (Ft.) (1), (2) | Min Lot Depth (Ft.) | Min. Structure Size (Sq. ft.) | Max L Cover (4) |
|---|---|---|---|---|---|---|---|---|---|---|
| A | | | | | | | | | | |
| B | | | | | | | | | | |
| C | | | | | | | | | | |

1. The lot widths shall be measured along the arc of the front building line.
2. Lot width may be reduced by 20 percent for lots fronting cul-de-sacs, eyebrows, and inside curves. The minimum lot width is measured at the platted front yard building set back. Each lot shall have a minimum of 30 feet of frontage along the right-of-way.
3. Where front porches are provided, they shall be permitted to encroach a maximum of five feet into the front setback line.
4. Lot coverage is defined as the footprint of the primary residential structure, excluding without limitation patios (covered or uncovered), pools, driveways, sidewalks and other improvements which are not part of an enclosed building.
5. J-swing garages may encroach into the front building line by five feet.
6. The face of a J-swing garage may be located no closer than 20 feet to the side lot line it faces.
7. For street corner lots with a side touching and adjacent to the front yard of a lot behind it, the side yard on the street side of the lot shall be the same width as the adjacent lot front yard.

## 6.0 Building Regulations

6.1 Exterior building facades for residential structures shall meet or exceed the requirements outlined in Section 14.05.152 of the Zoning Ordinance except as follows:

1. Building materials shall comply with the applicable requirements in Section 14.05.152 of the Zoning Ordinance, except that cementitious fiberboard may be used on the second story provided it is interrupted by an intersecting roof line or another architectural feature. No other building design, layout or architectural standards of the Zoning Ordinance shall apply to detached single-family residences within the Property.

2. Every detached single-family residence shall have at least two covered parking spaces and two spaces on the driveway between the street right-of-way and the front building line.

3. Front facing garage doors with access from the street shall be allowed provided the garage doors are located at or behind the front building line. Additionally, all front facing garage doors must be in line with or behind the front façade of the house.

4. The primary roof pitch for residential building types shall not be less than 6:12 for Type C homes and shall not be less than 8:12 for Type A and B homes. The minimum pitches do not apply to porches, specialty roofs, awnings, dormers, or other similar architectural features.

5. No building shall exceed a height of more than 40 feet, measured at the mid-point between the top plate and the dominate roof ridge.

## 7.0 Screening Regulations

7.1 Landscape Buffer:

1. A landscape buffer with a minimum width of 20 feet will be required adjacent to right-of-ways of 90 feet in width or greater as shown on the City Thoroughfare Plan at the time this PD is approved. Trees shall be planted at least every 50 feet within the buffer. The Developer may install a more natural looking spacing of the required trees as long as the minimum tree count (based on 50-foot spacing) is maintained.

7.2 Screening Fences:

1. For single-family lots siding or backing to thoroughfares, there shall be a minimum six-foot masonry fence. As an alternative, a minimum six-foot decorative metal fence with shrubbery, trees and masonry columns (at a minimum spacing of 80 feet), a living screen, or any combination thereof may be used for screening.

2. Single-family lots backing or siding to open space shall have a minimum five-foot ornamental metal fencing adjacent to the open space area, which shall be installed during home construction and shall not be a condition of subdivision acceptance by the City.

3. No other screening fence requirements shall apply.

**8.0 Open Space Regulations**

8.1 This section shall satisfy all requirements in 14.03.008 SF-R, single-family residential district for open space dedication, amenities and improvements for the Property.

1. The Wilson Creek Park open space area shall be open to the public. Amenity centers, Common Areas or other amenities shall be privately owned and maintained by the Wilson Creek Meadows Homeowners Association.

2. A minimum of 20 acres (approximately 19 percent of the total planned development acreage), as shown on Exhibit E, Conceptual Open Space and Trail Plan, shall be retained as Open Space. Such open space may be located anywhere on the Property. For the purposes of this Exhibit C, the term “open space” means natural areas, floodplain, areas used for drainage and detention, common areas and parkway and landscape easements. Open space shall be privately owned. Open Space shall not consist of any area platted for residential dwellings or road right-of-way.

3. As shown on Exhibit E, Conceptual Open Space and Trail Plan, approximately 2600 linear feet of six-foot wide concrete trail (the Wilson Creek Trail) shall be built along Wilson Creek in phases as the Property is developed. The trail shall be located on land dedicated to the Wilson Creek Meadows HOA.

4. Park benches will be placed every 600 feet along the trail; however, the benches may be grouped provided the total number of benches shall equal the number based on 600 foot spacing.

5. When a street is adjacent to an open space, a five-foot sidewalk shall be built on the opposite side of the street from the Wilson Creek Trail. The five-foot wide sidewalk referenced

above will be built at the time the adjacent home is built by the homebuilder provided it is located in the front-yard or side-yard of a residential lot.

6. The exact location of the trail shown on Exhibit E, Conceptual Open Space and Trail Plan is conceptual and subject to change at the time the final street and lot layout is determined (construction plat). Further, the trail may be built in phases based on the limits of each construction plat.

7. To the extent allowed by state law, an amenity pond will be placed at the north end of the trail (just south of Choate Parkway) provided any governmental agency permits are attainable. The lake shall be equipped with a water fountain or aerator device.

8. All open space areas shall have slope not greater than 4:1, unless they are naturally existing or structurally supported.

9. All open space areas shall be owned and maintained by the HOA.

10. No other amenity requirements listed in Sec. 14.03.008(c)(5) of the SF-R Zoning Ordinance shall be required.

11. This Section 9 shall serve as the exclusive Open Space requirement for this planned development.

**9.0 Subdivision Regulations**

9.1 Development shall meet the standards as required in the Subdivision Regulations except as follows:

1. Block length – The maximum internal block length shall be 1,200 feet (measured from intersections such as elbows, tees and cross intersections) and shall contain no more than 20 lots on each side of the street. The maximum block length along open space, perimeter property lines or thoroughfares shall be 1500 feet and shall contain no more than 30 lots on one side of the street. Other exceptions to these block length requirements may be granted for special circumstances or conditions affecting the property in question; exceptions shall be applied for as a subdivision ordinance variance and presented to the Planning & Zoning Commission and City Council at the time of Construction/Preliminary Plat consideration for approval. Pecuniary interests standing alone shall not be justification for the granting of a variance.

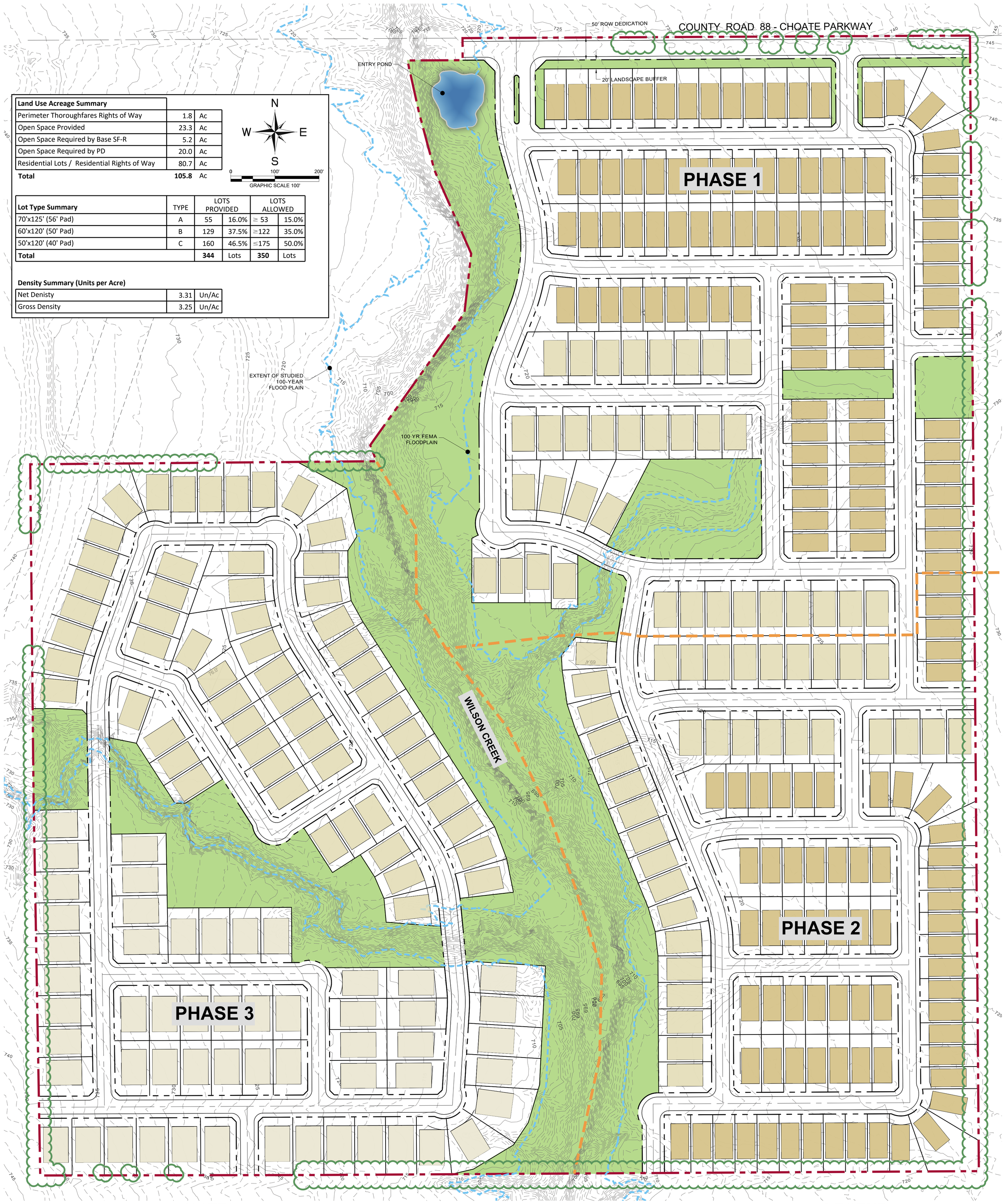
2. Cul-de-Sac Length and Diameter – The maximum cul-de-sac length is 600 feet. The right-of-way “bulb” radius shall be fifty feet and the paving radius shall be 40.5 feet to back of curb.

3. Street Offset – The minimum street offset at street intersections measured centerline of road to centerline of road shall be 125 feet.

4. Temporary Dead End Streets - temporary dead end streets, which are less than or equal to 150 feet in length, are not required to have a temporary turnaround at the end of the street, even if the dead end street has lots facing it.

5. Tree Survey/Tree Credits - Due to the density of existing trees in natural areas being preserved by this planned development, trees located in these natural areas which are being used for preservation credit shall be inventoried for inclusion in Preservation Credits but need not have their exact location shown on the tree survey. Trees in the natural areas which are being used for Preservation Credits shall be tagged to insure no duplication occurs, and the species and size shall be included in the credit table. No other trees in the natural areas are required to be catalogued or location shown on a tree survey. The tree survey and any necessary tree mitigation plan shall be prepared and processed through the city at the time the construction plat is submitted.

6. Plat and GDP Extensions - If requested in writing by the owner or developer of any portion of the Property prior to the expiration date, any approved GDP, construction plat and/or construction plans shall be automatically extended one time for one year. City staff shall provide written confirmation of the one year extension upon receipt of said request from the owner or developer.




| Land Use Acreage Summary | | |
|---|---|---|
| Perimeter Thoroughfares Rights of Way | 1.8 | Ac |
| Open Space Provided | 23.3 | Ac |
| Open Space Required by Base SF-R | 5.2 | Ac |
| Open Space Required by PD | 20.0 | Ac |
| Residential Lots / Residential Rights of Way | 80.7 | Ac |
| **Total** | **105.8** | Ac |

| Lot Type Summary | TYPE | LOTS PROVIDED | | LOTS ALLOWED | |
|---|---|---|---|---|---|
| 70'x125' (56' Pad) | A | 55 | 16.0% | ≥ 53 | 15.0% |
| 60'x120' (50' Pad) | B | 129 | 37.5% | ≥122 | 35.0% |
| 50'x120' (40' Pad) | C | 160 | 46.5% | ≤175 | 50.0% |
| **Total** | | **344** | Lots | **350** | Lots |

**Density Summary (Units per Acre)**

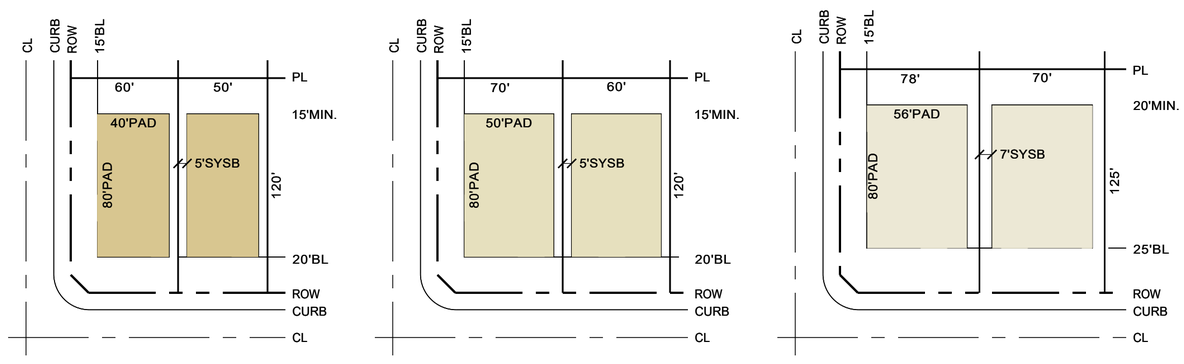
| | | |
|---|---|---|
| Net Denisty | 3.31 | Un/Ac |
| Gross Density | 3.25 | Un/Ac |

## NOTES

1. KEY LOTS SHALL HAVE A SIDEYARD SETBACK ADJACENT TO THE STREET WHICH IS THE SAME WIDTH AS THE FRONT YARD OF THE LOT IT BACKS UP TO.

## LEGEND

- PHASE LINE
- FLOOD PLAIN
- FENCE ROW TREE LINE




STANDARD 50' LOT

STANDARD 60' LOT

STANDARD 70' LOT

CONCEPT PLAN - EXHIBIT D
FOR
WILSON CREEK MEADOWS

BEING 105.94 ACRES
OUT OF THE
JONATHAN WESTOVER SURVEY, ABSTRACT NO. 1030
AND THE
COLEMAN WATSON SURVEY, ABSTRACT NO. 945
IN THE
CITY OF CELINA, COLLIN COUNTY, TEXAS


OWNER:
Celina Titus L.L.C.
106 Decker Dr. Suite 310
Irving, TX 75062
Tel: (214) 212-6326
Contact: Terry W. Mitchell

DEVELOPER:
Contrast Development
106 Decker Dr. - Suite 310
Irving, TX 75062
Tel: (214) 212-6326
Contact: Terry W. Mitchell

ENGINEER/SURVEYOR:
Kimley»Horn
12750 Genesis Ct. Suite 1000
Dallas, TX 75251
Tel: (972) 770-1300
Contact: Justin S. Christ, P.E.


| DESIGNED | DRAWN | CHECKED | SCALE | DATE | KH PROJECT NO. |
|---|---|---|---|---|---|
| SG | JSC | JSC | AS SHOWN | MAY 2017 | 063222900 |

**Planning & Development Services**
City of Celina, Texas

# Memorandum

| | |
|---|---|
| To: | **The Celina Planning and Zoning Commission** |
| CC: | Rick Chaffin, City Manager |
| | Helen-Eve Liebman, Planning & Development Services Director |
| From: | Ben Rodriguez, Planner |
| Meeting Date: | June 20, 2017 |
| Re: | Rezoning Request for Westgate 96 |

---

**Action Requested:**
Conduct a public hearing to consider testimony and take action on a zoning amendment request for a ±96.712 acre tract of land to amend PD#45 - Planned Development #45 located in the W.H. Ratton Survey, Abstract No. 753 and the L.M. Boyd Survey, Abstract No. 48, Collin County, Texas. The property is generally located east of SH 289 (Preston Road), west of CR 97, north of CR 100 and south of CR 134. (Westgate 96)

**Background Information:**
The applicant submitted a request to continue the public hearing on Friday, June 16, 2017.

**Public Notice:**
The public hearing notice was published in the *Celina Record* on Friday, April 29, 2017. Notices of the public hearing have been sent to all owners of property, as indicated by the most recently approved city tax roll, who are located within 200 feet of any property affected.

**Supporting Documents:**

**Legal Review:**
N/A

**Board/Committee Recommendation:**
N/A

**Staff Recommendation:**
Staff recommends the public hearing be continued per the applicant's request.

Kirkman Engineering
4821 Merlot Avenue, Suite 210
Grapevine, TX 76051
817.488.4960

June 16, 2017

Mr. Ben Rodriguez
Senior Planner
City of Celina
142 N. Ohio Street
Celina, Texas 75009

**RE: Westgate 96 PD Zoning Request**

Dear Mr. Rodriguez

On behalf of the property ownership of the above-mentioned property, I'd like to request a continuance of the zoning case mentioned above scheduled for the Planning and Zoning meeting on Tuesday, June 20, 2017. The owners need more time to review the staff report and evaluate options.

Please contact me at 817-488-4960 if you have any questions.

Sincerely,

Shea Kirkman, P.E.

**Planning & Development Services**
City of Celina, Texas

# Memorandum

| | |
|---|---|
| To: | **The Celina Planning and Zoning Commission** |
| CC: | Lance Vanzant, Interim City Manager<br>Helen-Eve Liebman, AICP, Director of Planning & Development Services |
| From: | Robyn Miga, Planner |
| Meeting Date: | June 20, 2017 |
| Re: | Chalk Hill Phase 1 Construction Plat |

---

**Action Requested:**
Consider and act on a Construction Plat for Chalk Hill Phase 1, being ±40.769 acres of land situated in the George W. Eastes Survey, Abstract No. 299, and Wade H. Rattan Survey, Abstract No. 753 in the City of Celina, Collin County, Texas, containing 160 residential lots and four (4) open space lots. The property is generally located south of County Road 102, east of Preston Road, and north of County Road 134, and west of County Road 132. (Chalk Hill Construction Plat)

**Background Information:**
Staff received the latest submittal for Chalk Hill Phase 1 Friday, June 9, 2017. Staff has distributed the plans for third party review and comments from multiple departments, but they are not expected back until Friday, June 23, 2017.

However, staff has worked with the engineer to ensure the majority of comments have been addressed, and is recommending approval pending comments being addressed prior to City Council on July 11, 2017.

**Board Review/Citizen Input:**
N/A

**Alternatives:**
N/A

**Financial Considerations:**
N/A

**Legal Review:**
The plat has been reviewed by the City's land use attorney.

**Supporting Documents:**
Plat Exhibits

**Staff Recommendation:**
Staff recommends approval as presented, pending all comments being addressed prior to City Council on July 11, 2017.

VICINITY MAP 1 " = 2000 '




BUILDING LINE & EASEMENT LAYOUT (TYPICAL)

100 0 100 200 300 Feet

SCALE : 1 " = 100 '

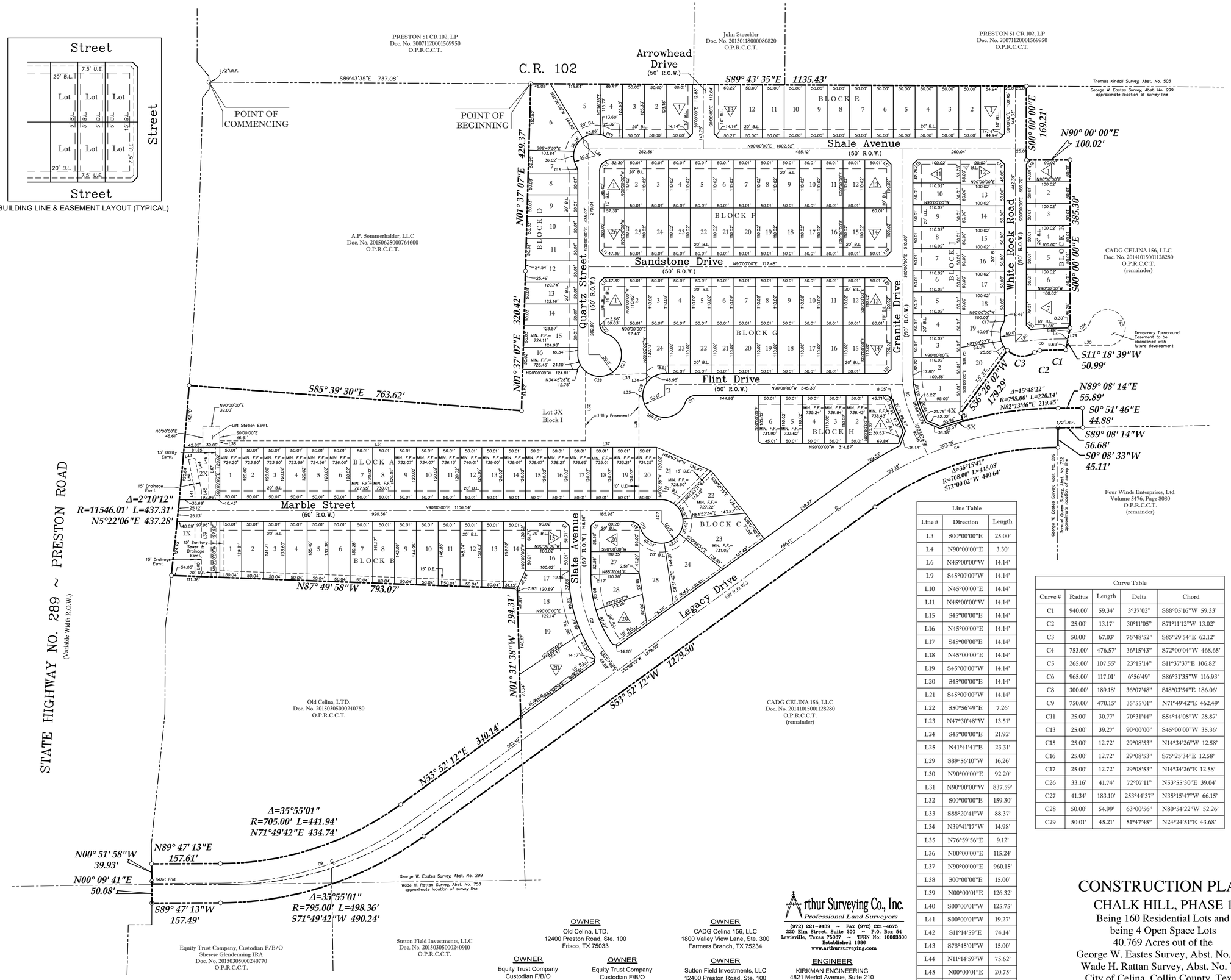
**NOTES:**

1. Horizontal datum shown is based on Texas State Plane Coordinate System, North Central Zone NAD83 (U.S. Feet) with a combined scale factor of 1.000152710.
2. All corners are 1/2 inch iron rods set with a yellow cap stamped "Arthur Surveying Company", unless otherwise noted.
3. Selling a portion of this addition by metes and bounds is a violation of town ordinance and State law and is subject to fines and withholding of utilities and building permits.
4. It is my opinion that no portion of subject property appears to lie within the 100-year flood zone area according to the Federal Emergency Management Agency Flood Insurance Rate Map Community-Panel No. 480130 0020 & 0110 J, present effective date of map, June 2, 2009, herein property situated within Zone "X" (unshaded).
5. The undersigned does hereby covenant and agree that he or she or they shall construct upon the Fire Lane Easements, as dedicated as shown hereon, a hard surface in accordance with the City of Celina's paving standards for Fire Lane, and that he or she or they shall maintain the same in a state of good repair at all times and keep the same free and clear of any structures, fences, trees, shrubs, or other improvements or obstruction, including but not limited to the parking of motor vehicles, trailers, boats or other impediments to the accessibility of fire appurtenances. The maintenance of paving on the Fire Lane Easements is the responsibility of the owner, and the owner shall post and maintain appropriate signs in conspicuous places along such fire lanes, stating "FIRE LANE, NO PARKING". The local law enforcement agency(s) is hereby authorized to enforce parking regulations within the fire lanes, and to cause such fire lanes and utility easements to be maintained free and unobstructed at all times for fire department and emergency use.
6. The undersigned does hereby covenant and agree that the access easement may be utilized by any person or the general public for ingress and egress to public vehicular and pedestrian use and access, and for fire department and emergency use in, along, upon and across said premises, with the right and privilege at all times of the City of Celina, its agents, employees, workmen and representatives having ingress, egress, and regress in, along, upon and across said premises.
7. Ownership and maintenance of all open space "X" lots shall be the responsibility of the Home Owner's Association (HOA).
8. The Home Owner's Association (HOA) shall be solely responsible for the maintenance of the storm water detention system and storm drainage system in common area lots. The HOA shall further hold the City of Celina harmless from any damages to persons, to the owner's lot or any lot arising from such maintenance responsibility. The detention easement shown hereunder shall not create any affirmative duty to the City to repair, maintain, or correct any condition that exists or occurs due to the natural flow of storm water runoff including but not limited to, storm water overflow, bank erosion and sloughing, loss of vegetation and trees, bank subsidence and interference with structures, the City retains the right to enter upon these easements for public purposes.
9. Subdivision Phasing Note: Phase 1 constructions is anticipated to begin in Fall of 2017. Dedication of all phase 1 rights-of-ways and street improvements are anticipated in late 2017/early 2018. The dedication of rights-of-ways and street improvements in phase 2 are anticipated in 2019.

**LEGEND:**

MON. - MONUMENT
I.R.S. - IRON ROD SET
I.R.F. - IRON ROD FOUND
FND. - FOUND
TX.DOT. - TEXAS DEPARTMENT OF TRANSPORTATION MONUMENT
ROW - RIGHT-OF-WAY
CM - CONTROL MONUMENT
POB - POINT OF BEGINNING
B.L. - BUILDING LINE
D.E. - DRAINAGE EASEMENT
U.E. - UTILITY EASEMENT
W.M.E. - WALL MAINTENANCE EASEMENT
A.S.C. - ARTHUR SURVEYING COMPANY
D.R.C.C.T. - DEED RECORDS, COLLIN COUNTY, TEXAS
O.P.R.C.C.T. - OFFICIAL PUBLIC RECORDS, COLLIN COUNTY, TEXAS
P.R.C.C.T. - PLAT RECORDS, COLLIN COUNTY, TEXAS
CL - CENTER LINE

○ - 1/2" IRON ROD SET CAPPED "ASC" UNLESS OTHERWISE DENOTED
△ - INDICATES ORIENTATION OF CORNER LOT
◇ - STREET NAME CHANGE




| Line Table | | |
|---|---|---|
| Line # | Direction | Length |
| L3 | S00°00'00"E | 25.00' |
| L4 | N90°00'00"E | 3.30' |
| L6 | N45°00'00"W | 14.14' |
| L9 | S45°00'00"W | 14.14' |
| L10 | N45°00'00"E | 14.14' |
| L11 | N45°00'00"W | 14.14' |
| L15 | S45°00'00"E | 14.14' |
| L16 | N45°00'00"E | 14.14' |
| L17 | S45°00'00"E | 14.14' |
| L18 | N45°00'00"E | 14.14' |
| L19 | S45°00'00"W | 14.14' |
| L20 | S45°00'00"E | 14.14' |
| L21 | S45°00'00"W | 14.14' |
| L22 | S50°56'49"E | 7.26' |
| L23 | N47°30'48"W | 13.51' |
| L24 | S45°00'00"E | 21.92' |
| L25 | N41°41'41"E | 23.31' |
| L29 | S89°56'10"W | 16.26' |
| L30 | N90°00'00"E | 92.20' |
| L31 | N90°00'00"W | 837.59' |
| L32 | S00°00'00"E | 159.30' |
| L33 | S88°20'41"W | 88.37' |
| L34 | N39°41'17"W | 14.98' |
| L35 | N76°59'56"E | 9.12' |
| L36 | N00°00'00"E | 115.24' |
| L37 | N90°00'00"E | 960.15' |
| L38 | S00°00'00"E | 15.00' |
| L39 | N00°00'01"E | 126.32' |
| L40 | S00°00'01"W | 125.75' |
| L41 | S00°00'01"W | 19.27' |
| L42 | S11°14'59"E | 74.14' |
| L43 | S78°45'01"W | 15.00' |
| L44 | N11°14'59"W | 75.62' |
| L45 | N00°00'01"E | 20.75' |
| L46 | S00°09'32"W | 120.02' |
| L47 | S00°09'32"W | 120.02' |

| Curve Table | | | | |
|---|---|---|---|---|
| Curve # | Radius | Length | Delta | Chord |
| C1 | 940.00' | 59.34' | 3°37'02" | S88°05'16"W 59.33' |
| C2 | 25.00' | 13.17' | 30°11'05" | S71°11'12"W 13.02' |
| C3 | 50.00' | 67.03' | 76°48'52" | S85°29'54"E 62.12' |
| C4 | 753.00' | 476.57' | 36°15'43" | S72°00'04"W 468.65' |
| C5 | 265.00' | 107.55' | 23°15'14" | S11°37'37"E 106.82' |
| C6 | 965.00' | 117.01' | 6°56'49" | S86°31'35"W 116.93' |
| C8 | 300.00' | 189.18' | 36°07'48" | S18°03'54"E 186.06' |
| C9 | 750.00' | 470.15' | 35°55'01" | N71°49'42"E 462.49' |
| C11 | 25.00' | 30.77' | 70°31'44" | S54°44'08"W 28.87' |
| C13 | 25.00' | 39.27' | 90°00'00" | S45°00'00"W 35.36' |
| C15 | 25.00' | 12.72' | 29°08'53" | N14°34'26"W 12.58' |
| C16 | 25.00' | 12.72' | 29°08'53" | S75°25'34"E 12.58' |
| C17 | 25.00' | 12.72' | 29°08'53" | N14°34'26"E 12.58' |
| C26 | 33.16' | 41.74' | 72°07'11" | N53°55'30"E 39.04' |
| C27 | 41.34' | 183.10' | 253°44'37" | N35°15'47"W 66.15' |
| C28 | 50.00' | 54.99' | 63°00'56" | N80°54'22"W 52.26' |
| C29 | 50.01' | 45.21' | 51°47'45" | N24°24'51"E 43.68' |

**OWNER**
Old Celina, LTD.
12400 Preston Road, Ste. 100
Frisco, TX 75033

**OWNER**
CADG Celina 156, LLC
1800 Valley View Lane, Ste. 300
Farmers Branch, TX 75234

**OWNER**
Equity Trust Company
Custodian F/B/O
Rex Glendenning IRA
12400 Preston Road, Ste. 100
Frisco, TX 75033

**OWNER**
Equity Trust Company
Custodian F/B/O
Sherese Glendenning IRA
12400 Preston Road, Ste. 100
Frisco, TX 75033

**OWNER**
Sutton Field Investments, LLC
12400 Preston Road, Ste. 100
Frisco, TX 75033


Arthur Surveying Co., Inc.
Professional Land Surveyors
(972) 221-9439 ~ Fax (972) 221-4675
220 Elm Street, Suite 200 ~ P.O. Box 54
Lewisville, Texas 75067 ~ TFRN No: 10063800
Established 1986
www.arthursurveying.com


**ENGINEER**
KIRKMAN ENGINEERING
4821 Merlot Avenue, Suite 210
Grapevine, TX 76051
Phone: (817) 488-4960
Contact: Patrick Filson

# CONSTRUCTION PLAT

## CHALK HILL, PHASE 1

Being 160 Residential Lots and
being 4 Open Space Lots
40.769 Acres out of the
George W. Eastes Survey, Abst. No. 299
Wade H. Rattan Survey, Abst. No. 753
City of Celina, Collin County, Texas

-- 2017 --

Sheet 1/2

DRAWN BY: Jav DATE: 01/27/17 SCALE: 1"=100' CHECKED BY: D.L.A. ASC NO.: 1508443-3

## State of Texas §
## County of Collin §
## Owner's Certificate and Dedication

**WHEREAS CADG CELINA 156, LLC, OLD CELINA, LTD., SUTTON FIELD INVESTMENTS, LLC, EQUITY TRUST COMPANY Custodian F/B/O Rex Glendenning IRA, AND EQUITY TRUST COMPANY Custodian F/B/O Sherese Glendenning IRA,** are the owners of all those lots, tracts or parcels of land situated in the George W. Eastes Survey, Abstract Number 299 and the Wade H. Rattan Survey, Abstract Number 753, City of Celina, Collin County, Texas, and being a part of that certain tract of land described by deed to CADG CELINA 156, LLC, recorded under Document Number 20141015001128280, Official Public Records of Collin County, Texas, being a part of that certain tract of land described by deed to Sutton Field Investments, LLC, recorded under Document Number 20150305000240910, Official Public Records of Collin County, Texas, being a part of that certain tract of land described by deed to Equity Trust Company, Custodian F/B/O Sherese Glendenning IRA, recorded under Document Number 20150305000240770 of the Official Public Records of Collin County, Texas, being a part of that certain tract of land described by deed to Old Celina, LTD., recorded under Document Number 20150305000240780 of the Official Public Records of Collin County, Texas, and being more particularly described by metes and bounds as follows:

**COMMENCING** at a 1/2 inch iron rod found for the most northwest corner of a tract of land described to A.P. Sommerhalder, LLC, by deed recorded in document number 20150625000764600, Deed Records, Collin County, Texas, and the southwest corner of that certain tract of land described by deed to Preston 51 CR 102, LP, recorded under Document Number 20071120001569950 of the Official Public Records of Collin County, Texas, and being in the east line of State Highway No. 289, also known as Preston Road, having a variable width right-of-way, and being within County Road 102;

**THENCE** South 89 degrees 43 minutes 35 seconds East, within said County Road 102 and with the north line of said A. P. Sommerhalder tract and the south line of said Preston 51 CR 102 tract, a distance of 737.08 feet to a 1/2 inch iron rod with a yellow cap stamped *"ARTHUR SURVEYING COMPANY" (ASC)* set for corner, being the POINT OF BEGINNING;

**THENCE** South 89 degrees 43 minutes 35 seconds East, continuing within said County Road 102, a distance of 1135.43 feet to a 1/2 inch iron rod with a yellow cap stamped *"ASC"* set for corner;

**THENCE** South 00 degrees 00 minutes 00 seconds East, within said CADG Celina 156 tract, a distance of 169.21 feet to a 1/2 inch iron rod with a yellow cap stamped *"ASC"* set for corner;

**THENCE** North 90 degrees 00 minutes 00 seconds East, continuing within said CADG Celina 156 tract, a distance of 100.02 feet to a 1/2 inch iron rod with a yellow cap stamped *"ASC"* set for corner;

**THENCE** South 00 degrees 00 minutes 00 seconds East, continuing within said CADG Celina 156 tract, a distance of 385.30 feet to a 1/2 inch iron rod with a yellow cap stamped *"ASC"* set for corner;

**THENCE** South 11 degrees 18 minutes 39 seconds West, continuing within said CADG Celina 156 tract, a distance of 50.99 feet to a 1/2 inch iron rod with a yellow cap stamped *"ASC"* set for corner, being at the beginning of a non-tangent curve to the left having a radius of 940.00 feet, with a delta angle of 03 degrees 37 minutes 02 seconds, whose chord bears South 88 degrees 05 minutes 16 seconds West, a distance of 59.33 feet;

**THENCE** continuing within said CADG Celina 156 tract and with said curve, an arc length of 59.34 feet to a 1/2 inch iron rod with a yellow cap stamped *"ASC"* set for corner, being at the beginning of a curve to the left with a radius of 25.00 feet, with a delta angle of 30 degrees 11 minutes 05 seconds, whose chord bears South 71 degrees 11 minutes 12 seconds West, a distance of 13.02 feet;

**THENCE** continuing within said CADG Celina 156 tract and with said curve, an arc length of 13.17 feet to a 1/2 inch iron rod with a yellow cap stamped *"ASC"* set for corner, being at the beginning of a reverse curve to the right having a radius of 50.00 feet, with a delta angle of 76 degrees 48 minutes 52 seconds, whose chord bears North 85 degrees 29 minutes 54 seconds West, a distance of 62.12 feet;

**THENCE** continuing within said CADG Celina 156 tract and with said curve, an arc length of 67.03 feet to a 1/2 inch iron rod with a yellow cap stamped *"ASC"* set for corner;

**THENCE** South 36 degrees 26 minutes 02 seconds West, continuing within said CADG Celina 156 tract, a distance of 179.29 feet to a 1/2 inch iron rod with a yellow cap stamped *"ASC"* set for corner;

**THENCE** South 15 degrees 40 minutes 25 seconds East, continuing within said CADG Celina 156 tract, a distance of 18.78 feet to a 1/2 inch iron rod with a yellow cap stamped *"ASC"* set for corner, being at the beginning of a non-tangent curve to the right having a radius of 798.00 feet, with a delta angle of 15 degrees 48 minutes 22 seconds, whose chord bears North 82 degrees 13 minutes 46 seconds East, a distance of 219.45 feet;

**THENCE** continuing within said CADG Celina 156 tract and with said curve, an arc length of 220.14 feet to a 1/2 inch iron rod with a yellow cap stamped *"ASC"* set for corner;

**THENCE** North 89 degrees 08 minutes 14 Seconds East, continuing within said CADG Celina 156 tract, a distance of 55.89 feet to a 1/2 inch iron rod with a yellow cap stamped *"ASC"* set for corner;

**THENCE** South 00 degrees 51 minutes 46 seconds East, continuing within said CADG Celina 156 tract, a distance of 44.88 feet to a 1/2 inch iron rod with a yellow cap stamped *"ASC"* set for corner in the north line of a tract of land described by deed to Four Winds Enterprises, Ltd., recorded in Volume 5476, Page 8080, Official Public Records of Collin County, Texas;

**THENCE** South 89 degrees 08 minutes 14 seconds West, with the north line of said Four Winds Enterprises, Ltd. tract, a distance of 56.68 feet to a 1/2 inch iron rod found for the northwest corner of said Four Winds Enterprises, Ltd. tract;

**THENCE** South 00 degrees 08 minutes 33 seconds West, with the west line of said Four Winds Enterprises, Ltd. tract, a distance of 45.11 feet to to a 1/2 inch iron rod with a yellow cap stamped *"ASC"* set for corner in the west line thereof, and at the beginning of a curve to the left having a radius of 708.00 feet, with a delta angle of 36 degrees 15 minutes 41 seconds, whose chord bears South 72 degrees 00 minutes 02 seconds West, a distance of 440.64 feet;

**THENCE** continuing within said CADG Celina 156 tract and with said curve, an arc length of 448.08 feet to a 1/2 inch iron rod with a yellow cap stamped *"ASC"* set for corner;

**THENCE** South 53 degrees 52 minutes 12 seconds West, continuing within said CADG Celina 156 tract and within said Sutton Field Investments tract, a distance of 1279.50 feet to a 1/2 inch iron rod with a yellow cap stamped *"ASC"* set for corner, being at the beginning of a curve to the right having a radius of 795.00 feet, with a delta angle of 35 degrees 55 minutes 01 second, whose chord bears South 71 degrees 49 minutes 42 seconds West, a distance of 490.24 feet;

**THENCE** continuing within said Sutton Field Investments tract and within said Equity Trust Company tract, and with said curve, an arc length of 498.36 feet to a 1/2 inch iron rod with a yellow cap stamped *"ASC"* set for corner;

**THENCE** South 89 degrees 47 minutes 13 seconds West, continuing within said Equity Trust tract, a distance of 157.49 feet to a 1/2 inch iron rod with a yellow cap stamped *"ASC"* set for corner in the east line of said Preston Road;

**THENCE** North 00 degrees 09 minutes 41 seconds East, with the east line of said Preston Road, a distance of 50.08 feet to a Texas Department of Transportation Monument (TxDot Mon.) found for corner;

**THENCE** North 00 degrees 51 minutes 58 seconds West, continuing with the east line of said Preston Road, a distance of 39.93 feet to a 1/2 inch iron rod with a yellow cap stamped *"ASC"* set for corner;

**THENCE** North 89 degrees 47 minutes 13 seconds East, within said Old Celina tract, a distance of 157.61 feet to a 1/2 inch iron rod with a yellow cap stamped *"ASC"* set for corner, being at the beginning of a curve to the left having a radius of 705.00 feet, with a delta angle of 35 degrees 55 minutes 01 second, whose chord bears North 71 degrees 49 minutes 42 seconds East, a distance of 434.74 feet;

**THENCE** continuing within said Old Celina tract and with said curve, an arc length of 441.94 feet to a 1/2 inch iron rod with a yellow cap stamped *"ASC"* set for corner;

**THENCE** North 53 degrees 52 minutes 12 seconds East, continuing within said Old Celina tract and within said CADG Celina 156 tract, a distance of 340.14 feet to a 1/2 inch iron rod with a yellow cap stamped *"ASC"* set for corner;

**THENCE** North 01 degrees 31 minutes 38 seconds West, continuing within said CADG Celina 156 tract, a distance of 294.31 feet to a 1/2 inch iron rod with a yellow cap stamped *"ASC"* set for corner;

**THENCE** North 87 degrees 49 minutes 58 seconds West, continuing within said CADG Celina 156 tract, a distance of 79.07 feet to a 1/2 inch iron rod with a yellow cap stamped *"ASC"* set for corner in the east line of said Preston Road, lying in a curve to the left having a radius of 11546.01 feet, with a delta angle of 02 degrees 10 minutes 12 seconds, whose chord bears North 05 degrees 22 minutes 06 seconds East, a distance of 437.28 feet;

**THENCE** continuing with the east line of said Preston Road and with said curve, an arc length of 437.31 feet to a 1/2 inch iron rod with a yellow cap stamped *"ASC"* set for the westernmost northwest corner of said CADG Celina 156 tract and the southwest corner of said A.P. Sommerhalder, LLC tract;

**THENCE** South 85 degrees 39 minutes 30 seconds East, with the westernmost north line of said CADG Celina 156 tract and the south line of said A.P. Sommerhalder, LLC. tract, a distance of 763.62 feet to a 1/2 inch iron rod with a yellow cap stamped *"ASC"* set for the southeast corner of said A.P.Sommerhalder, LLC. tract and an interior corner of said CADG Celina 156 tract;

**THENCE** North 01 degrees 37 minutes 07 seconds West, with the northernmost west line of said CADG Celina 156 tract and the east line of said A.P. Sommerhalder, LLC. tract, a distance of 320.42 feet to a 1/2 inch iron rod with a yellow cap stamped *"ASC"* set for corner in the east line of said A.P. Somerhalder LLC tract;

**THENCE** North 01 degrees 37 minutes 07 seconds East, with the east line of said A.P. Sommerhalder, LLC tract, a distance of 429.37 feet to the **POINT OF BEGINNING**, and containing 40.769 acres of land, more or less, and being subject to any and all easements that may affect.

## NOW, therefore, know all men by these presents:

**THAT CADG CELINA 156, LLC, OLD CELINA, LTD., SUTTON FIELD INVESTMENTS, LLC, EQUITY TRUST COMPANY Custodian F/B/O Rex Glendenning IRA, AND EQUITY TRUST COMPANY Custodian F/B/O Sherese Glendenning IRA,** acting herein by and through its duly authorized officers, do hereby certify and adopt this plat designating the herein above described property as **CHALK HILL, PHASE I**, and do hereby dedicate, in fee simple, to the public use forever, the streets, rights-of-way, and other public improvements shown thereon. The streets and alleys, if any, are dedicated for street purposes. The easements and public use areas, as shown, are dedicated for the public use forever, for the purposes indicated on this plat. No buildings, fences, trees, shrubs or other improvements or growths shall be constructed or placed upon, over or across the easements as shown, except that landscape improvements may be placed on landscape easements, if approved by the city council of the City of Celina. In addition, utility easements may also be used for the mutual use and accommodation of all public utilities desiring to use or using the same unless the easement limits the use to particular utilities, said use by public utilities being subordinate to the public's and City of Celina's use thereof. The City of Celina and public utility entities shall have the right to remove and keep removed all or parts of any buildings, fences, trees, shrubs or other improvements or growths which may in any way endanger or interfere with the construction, maintenance, or efficiency of their respective systems in said easements. The City of Celina and public utility entities shall at all times have the full right of ingress and egress to or from their respective easements for the purpose of constructing, reconstructing, inspecting, patrolling, maintaining, reading meters, and adding to or removing all or parts of their respective systems without the necessity at any time procuring permission from anyone.

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

WITNESS MY HAND AND SEAL OF OFFICE, this _____ day of _____, 2017.

**CADG CELINA 156, LLC**

By: _____

STATE OF TEXAS §
§
COUNTY OF COLLIN §

BEFORE ME, the undersigned, a Notary Public in and for the State of Texas, 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 as for the purpose and consideration therein expressed, and in the capacity therein stated.

GIVEN UNDER MY HAND AND SEAL OF OFFICE on the _____ day of _____, 2017

_____
Notary Public in and for the State of Texas

**OLD CELINA, LTD.,**
a Texas limited partnership

By: Rex Management, LLC,
a Texas limited liability company
Its General Partner

By: _____
Name: Rex Glendenning, President

STATE OF TEXAS §
§
COUNTY OF COLLIN §

This instrument was acknowledged before me on the _____ day of _____, 2017 by Rex Glendenning, the President of Rex Management, LLC, the General Partner of Old Celina, Ltd., a Texas limited partnership on behalf of said partnership.

_____
Notary Public, State of Texas

**EQUITY TRUST COMPANY,**
Custodian F/B/O Rex Glendenning IRA

By: _____
Name: Rex Glendenning, Beneficiary

STATE OF TEXAS §
§
COUNTY OF COLLIN §

This instrument was acknowledged before me on the _____ day of _____, 2017 by Rex Glendenning, Beneficiary of Equity Trust Company, Custodian F/B/O Rex Glendenning IRA on behalf of said entity.

_____
Notary Public, State of Texas

**EQUITY TRUST COMPANY,**
Custodian F/B/O Sherese Glendenning IRA

By: _____
Name: Sherese Glendenning, Beneficiary

STATE OF TEXAS §
§
COUNTY OF COLLIN §

This instrument was acknowledged before me on the _____ day of _____, 2017 by Sherese Glendenning, Beneficiary of Equity Trust Company, Custodian F/B/O Sherese Glendenning IRA on behalf of said entity.

_____
Notary Public, State of Texas

**SUTTON FIELD INVESTMENTS, LLC,**
a Texas limited liability company

By: _____
Name: Rex Glendenning, Manager

STATE OF TEXAS §
§
COUNTY OF COLLIN §

This instrument was acknowledged before me on the _____ day of _____, 2017 by Rex Glendenning, Manager of Sutton Field Investments, LLC, a Texas limited liability company on behalf of said entity.

_____
Notary Public, State of Texas

## State of Texas §
## County of Denton §

That I, J. R. January, do hereby certify that I prepared this plat from an actual and accurate survey of the land and that the corner monuments shown thereon as "SET" were properly placed under my supervision in accordance with the subdivision ordinance of the City of Celina, Texas.

**PRELIMINARY**

THIS DOCUMENT SHALL NOT BE RECORDED FOR ANY PURPOSE AND SHALL NOT BE VIEWED OR RELIED UPON AS A FINAL SURVEY DOCUMENT DATED 5/16/2017

_____
J. R. January, R.P.L.S.
Number 5382

## State of Texas §
## County of Denton §

BEFORE ME, the undersigned, a Notary Public in and for the State of Texas, on this day personally appeared J. R. January, known to me to be the person whose name is subscribed to the foregoing instrument and acknowledged to me that he executed the same as for the purpose and consideration therein expressed, and in the capacity therein stated.

GIVEN UNDER MY HAND AND SEAL OF OFFICE on the _____ day of _____, 2017.

_____
Notary Public in and for the State of Texas

**PROPERTY LOCATION STATEMENT:**

This property is located in the corporate limits of the City of Celina, Collin County, Texas.

_____ _____
Signature of Mayor Date of Approval

ATTEST:

_____ _____
City Secretary Date

**CERTIFICATE OF APPROVAL**

Approved for preparation of Final Plat following construction of all public improvements (or appropriate sureties thereof) necessary for the subdivision shown on this plat.

Recommended by: Planning and Zoning Commission
City of Celina, Texas

_____ _____
Signature of Chairperson Date of Recommendation

Approved by: City Council
City of Celina, Texas

_____ _____
Signature of Mayor Date of Approval

ATTEST:

_____ _____
City Secretary Date

| Lot and Block Analysis | | | |
|---|---|---|---|
| Lot | Block | Square Feet | Acreage |
| 1 | A | 9,664 | 0.222 |
| 2 | A | 7,959 | 0.183 |
| 3 | A | 7,503 | 0.172 |
| 4 | A | 7,503 | 0.172 |
| 5 | A | 7,491 | 0.172 |
| 6 | A | 8,673 | 0.199 |
| 7 | A | 15,396 | 0.353 |
| 8 | A | 9,187 | 0.211 |
| 9 | A | 8,357 | 0.192 |
| 10 | A | 8,976 | 0.206 |
| 11 | A | 8,183 | 0.188 |
| 12 | A | 8,789 | 0.202 |
| 13 | A | 6,013 | 0.138 |
| 14 | A | 6,032 | 0.138 |
| 15 | A | 6,052 | 0.139 |
| 16 | A | 6,072 | 0.139 |
| 17 | A | 6,092 | 0.140 |
| 1 | B | 9,985 | 0.229 |
| 2 | B | 8,128 | 0.187 |
| 3 | B | 8,128 | 0.187 |
| 4 | B | 9,328 | 0.214 |
| 5 | B | 7,468 | 0.171 |
| 6 | B | 6,002 | 0.138 |
| 7 | B | 6,002 | 0.138 |
| 8 | B | 6,016 | 0.138 |
| 9 | B | 6,182 | 0.142 |
| 10 | B | 9,674 | 0.222 |
| 11 | B | 9,674 | 0.222 |
| 12 | B | 9,674 | 0.222 |
| 13 | B | 9,674 | 0.222 |
| 14 | B | 9,674 | 0.222 |
| 15 | B | 9,674 | 0.222 |
| 16 | B | 9,674 | 0.222 |
| 17 | B | 9,674 | 0.222 |
| 18 | B | 9,674 | 0.222 |
| 19 | B | 9,674 | 0.222 |
| 20 | B | 9,674 | 0.222 |
| 1 | C | 9,662 | 0.222 |
| 2 | C | 6,002 | 0.138 |
| 3 | C | 6,002 | 0.138 |
| 4 | C | 8,392 | 0.193 |
| 5 | C | 6,281 | 0.144 |
| 6 | C | 7,493 | 0.172 |
| 7 | C | 7,557 | 0.173 |
| 8 | C | 6,002 | 0.138 |
| 9 | C | 6,002 | 0.138 |
| 10 | C | 6,002 | 0.138 |
| 11 | C | 6,002 | 0.138 |
| 12 | C | 6,002 | 0.138 |
| 13 | C | 6,002 | 0.138 |
| 14 | C | 6,002 | 0.138 |
| 15 | C | 7,153 | 0.164 |
| 16 | C | 8,716 | 0.200 |
| 17 | C | 7,511 | 0.172 |
| 18 | C | 7,509 | 0.172 |
| 19 | C | 7,508 | 0.172 |
| 20 | C | 7,506 | 0.172 |
| 21 | C | 7,504 | 0.172 |
| 22 | C | 7,969 | 0.183 |
| 23 | C | 8,806 | 0.202 |
| 24 | C | 8,048 | 0.185 |
| 25 | C | 8,701 | 0.200 |
| 26 | C | 9,500 | 0.218 |
| 27 | C | 12,155 | 0.279 |
| 28 | C | 10,995 | 0.252 |
| 1 | D | 9,902 | 0.227 |
| 2 | D | 9,008 | 0.207 |
| 3 | D | 7,508 | 0.172 |
| 4 | D | 12,358 | 0.284 |
| 5 | D | 12,446 | 0.286 |
| 6 | D | 6,240 | 0.143 |
| 7 | D | 6,018 | 0.138 |
| 8 | D | 6,007 | 0.138 |
| 9 | D | 7,093 | 0.163 |
| 10 | D | 7,186 | 0.165 |
| 11 | D | 6,602 | 0.152 |
| 12 | D | 6,602 | 0.152 |
| 13 | D | 6,602 | 0.152 |
| 14 | D | 6,602 | 0.152 |
| 15 | D | 6,602 | 0.152 |
| 16 | D | 6,602 | 0.152 |
| 17 | D | 6,602 | 0.152 |
| 18 | D | 7,183 | 0.165 |
| 19 | D | 8,709 | 0.200 |
| 20 | D | 7,503 | 0.172 |
| 21 | D | 7,503 | 0.172 |

| Lot and Block Analysis | | | |
|---|---|---|---|
| Lot | Block | Square Feet | Acreage |
| 1 | E | 7,939 | 0.182 |
| 2 | E | 6,122 | 0.141 |
| 3 | E | 6,122 | 0.141 |
| 4 | E | 6,122 | 0.141 |
| 5 | E | 6,122 | 0.141 |
| 6 | E | 6,122 | 0.141 |
| 7 | E | 6,122 | 0.141 |
| 8 | E | 6,122 | 0.141 |
| 9 | E | 6,122 | 0.141 |
| 10 | E | 6,122 | 0.141 |
| 11 | E | 6,122 | 0.141 |
| 12 | E | 7,153 | 0.164 |
| 13 | E | 7,153 | 0.164 |
| 14 | E | 6,122 | 0.141 |
| 15 | E | 6,122 | 0.141 |
| 16 | E | 6,122 | 0.141 |
| 17 | E | 6,122 | 0.141 |
| 18 | E | 6,122 | 0.141 |
| 19 | E | 6,122 | 0.141 |
| 20 | E | 6,122 | 0.141 |
| 21 | E | 6,122 | 0.141 |
| 22 | E | 6,122 | 0.141 |
| 23 | E | 6,122 | 0.141 |
| 24 | E | 8,333 | 0.191 |
| 1 | F | 7,296 | 0.167 |
| 2 | F | 6,752 | 0.155 |
| 3 | F | 6,752 | 0.155 |
| 4 | F | 6,752 | 0.155 |
| 5 | F | 6,752 | 0.155 |
| 6 | F | 6,752 | 0.155 |
| 7 | F | 6,752 | 0.155 |
| 8 | F | 6,752 | 0.155 |
| 9 | F | 6,752 | 0.155 |
| 10 | F | 6,743 | 0.155 |
| 11 | F | 8,193 | 0.188 |
| 12 | F | 18,436 | 0.423 |
| 13 | F | 7,238 | 0.166 |
| 14 | F | 6,000 | 0.138 |
| 15 | F | 5,999 | 0.138 |
| 16 | F | 5,999 | 0.138 |
| 17 | F | 5,998 | 0.138 |
| 18 | F | 5,998 | 0.138 |
| 19 | F | 5,997 | 0.138 |
| 20 | F | 5,997 | 0.138 |
| 21 | F | 5,997 | 0.138 |
| 22 | F | 5,996 | 0.138 |
| 23 | F | 5,996 | 0.138 |
| 24 | F | 5,995 | 0.138 |
| 25 | F | 7,144 | 0.164 |
| 1 | G | 7,538 | 0.173 |
| 2 | G | 7,489 | 0.172 |
| 3 | G | 7,613 | 0.175 |
| 4 | G | 7,830 | 0.180 |
| 5 | G | 7,503 | 0.172 |
| 6 | G | 7,503 | 0.172 |
| 7 | G | 7,937 | 0.182 |
| 8 | G | 8,703 | 0.200 |
| 9 | G | 8,703 | 0.200 |
| 10 | G | 7,851 | 0.180 |
| 11 | G | 7,602 | 0.175 |
| 12 | G | 7,503 | 0.172 |
| 13 | G | 7,938 | 0.182 |
| 14 | G | 7,498 | 0.172 |
| 15 | G | 7,392 | 0.170 |
| 16 | G | 7,595 | 0.174 |
| 17X | G | 176,702 | 4.057 |
| 18X | G | 1,564 | 0.036 |
| 1 | H | 10,726 | 0.246 |
| 2 | H | 8,714 | 0.200 |
| 3 | H | 8,748 | 0.201 |
| 4 | H | 9,014 | 0.207 |
| 5 | H | 8,285 | 0.190 |
| 6 | H | 8,695 | 0.200 |
| 7 | H | 7,959 | 0.183 |
| 8 | H | 7,929 | 0.182 |
| 9 | H | 7,899 | 0.181 |

**OWNER**
Old Celina, LTD.
12400 Preston Road, Ste. 100
Frisco, TX 75033

**OWNER**
CADG Celina 156, LLC
1800 Valley View Lane, Ste. 300
Farmers Branch, TX 75234

**OWNER**
Equity Trust Company
Custodian F/B/O
Rex Glendenning IRA
12400 Preston Road, Ste. 100
Frisco, TX 75033

**OWNER**
Equity Trust Company
Custodian F/B/O
Sherese Glendenning IRA
12400 Preston Road, Ste. 100
Frisco, TX 75033

**OWNER**
Sutton Field Investments, LLC
12400 Preston Road, Ste. 100
Frisco, TX 75033

**ENGINEER**
KIRKMAN ENGINEERING
4821 Merlot Avenue, Suite 210
Grapevine, TX 76051
Phone: (817) 488-4960
Contact: Patrick Filson


Arthur Surveying Co., Inc.
Professional Land Surveyors
(972) 221-9439 ~ Fax (972) 221-4675
220 Elm Street, Suite 200 ~ P.O. Box 54
Lewisville, Texas 75067 ~ TFRN No: 10063800
Established 1986
www.arthursurveying.com


# CONSTRUCTION PLAT
## CHALK HILL, PHASE 1
Being 160 Residential Lots and
being 4 Open Space Lots
40.769 Acres out of the
George W. Eastes Survey, Abst. No. 299
Wade H. Rattan Survey, Abst. No. 753
City of Celina, Collin County, Texas
-- 2017 --

Shee
2/2

DRAWN BY: Jav DATE: 01/27/17 SCALE: 1"=100' CHECKED BY: D.L.A. ASC NO.: 1508443-

**Planning & Development Services**
City of Celina, Texas

# Memorandum

| | |
|---|---|
| To: | **The Celina Planning and Zoning Commission** |
| CC: | Lance Vanzant, Interim City Manager<br>Helen-Eve Liebman, AICP, Director of Planning & Development Services |
| From: | Robyn Miga, Planner |
| Meeting Date: | June 20, 2017 |
| Re: | Sutton Fields North Phase 1 Construction Plat |

---

**Action Requested:**
Consider and act on a Construction Plat for Sutton Fields North Phase 1 being a ±43.5 acre tract of land situated in the Thomas H. McIntyre Survey, Abstract No. 903, City of Celina, Denton County, containing 162 residential lots and six (6) non-residential lots. The property is generally located east of Farm-to-Market 1385, north of Crutchfield Road, south County Road 428, and west of Smiley Road. (Sutton Fields North Phase 1 Construction Plat)

**Background Information:**
Staff has reviewed the proposed Construction Plat for Sutton Fields North Phase 1, and the remaining comments are minor in nature and can be addressed prior to City Council approval July 11, 2017.

**Board Review/Citizen Input:**
N/A

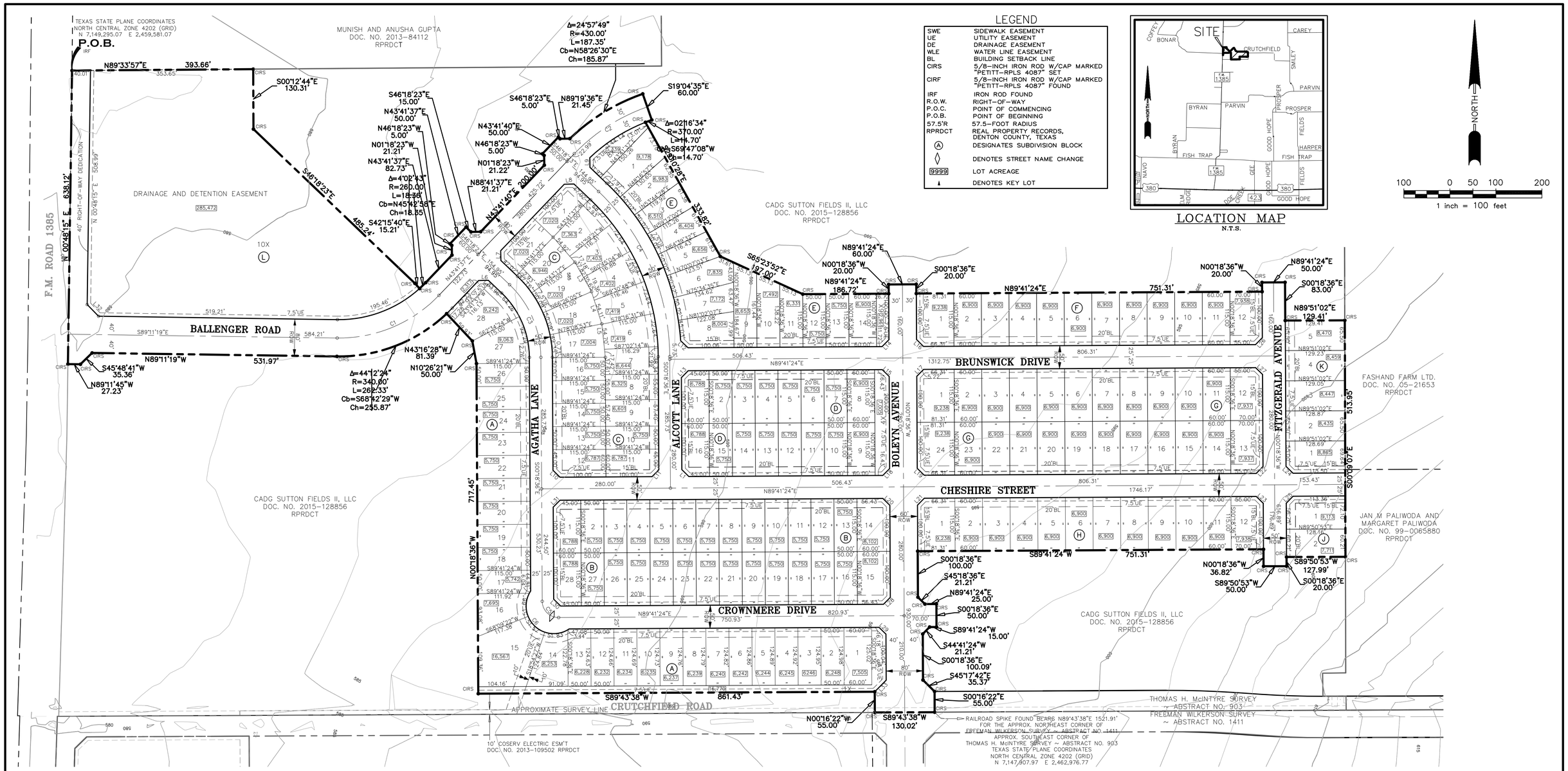
**Alternatives:**
N/A

**Financial Considerations:**
N/A

**Legal Review:**
N/A

**Supporting Documents:**
Plat Exhibit

**Staff Recommendation:**
Staff recommends approval pending all comments being addressed prior to City Council.




NOTES:

1. THE SUBJECT PROPERTY IS LOCATED WITHIN ZONE "X" (UNSHADED) ON THE FLOOD INSURANCE RATE MAP, MAP NO. 48121C0270G, REVISION DATE APRIL 18, 2011. ZONE X (UNSHADED) IS DEFINED THEREON AS "AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN."

2. ALL PERIMETER PROPERTY CORNERS ARE 5/8-INCH IRON ROD WITH CAPS MARKED "PETITT-RPLS 4087" SET, UNLESS NOTED OTHERWISE.

3. LOTS ENDING WITH AN "X" ARE NON-RESIDENTIAL LOTS. MAINTENANCE OF "X" LOTS SHALL NOT BE THE RESPONSIBILITY OF DENTON COUNTY OR THE CITY OF CELINA. SAID NON-RESIDENTIAL LOTS ARE TO BE OWNED AND MAINTAINED BY THE HOMEOWNER'S ASSOCIATION.

4.. THE BEARINGS SHOWN AND RECITED HEREON ARE REFERENCED TO THE TEXAS STATE PLANE COORDINATE SYSTEM – NAD 83 (CORS TEXAS NORTH CENTRAL ZONE NO. 4202). ALL DISTANCES ARE SURFACE DISTANCES WITH A SURFACE TO GRID SCALE FACTOR OF 0.999849392677.

5. THIS PLAT IS HEREBY ADOPTED BY THE OWNERS AND APPROVED BY THE CITY OF CELINA (CALLED "CITY") SUBJECT TO THE FOLLOWING CONDITIONS WHICH SHALL BE BINDING UPON THE OWNERS, THEIR HEIRS, GRANTEES, SUCCESSORS AND ASSIGNS: THE PORTION OF BLOCK VVV, LOT 3X AS SHOWN ON THE PLAT IS CALLED "DRAINAGE AND DETENTION EASEMENT. THE DRAINAGE AND DETENTION EASEMENT WITHIN THE LIMITS OF THIS ADDITION, WILL REMAIN ACCESSIBLE AT ALL TIMES AND WILL BE MAINTAINED IN A SAFE AND SANITARY CONDITION BY THE OWNERS OF THE LOT OR LOTS THAT ARE TRAVERSED BY OR ADJACENT TO THE DRAINAGE AND DETENTION EASEMENT. THE CITY WILL NOT BE RESPONSIBLE FOR THE MAINTENANCE AND OPERATION OF SAID EASEMENT OR FOR ANY DAMAGE TO PRIVATE PROPERTY OR PERSON THAT RESULTS FROM CONDITIONS IN THE EASEMENT, OR FOR THE CONTROL OF EROSION. NO CONSTRUCTION OF ANY TYPE OF BUILDING, FENCE OR ANY OTHER STRUCTURE WITHIN THE DRAINAGE AND DETENTION EASEMENT, AS HEREIN ABOVE DEFINED SHALL BE PERMITTED, UNLESS APPROVED BY THE CITY ENGINEER. PROVIDED, HOWEVER, IT IS UNDERSTOOD THAT IN THE EVENT IT BECOMES NECESSARY FOR THE CITY TO ERECT OR CONSIDER ERECTING ANY TYPE OF DRAINAGE STRUCTURE IN ORDER TO IMPROVE THE STORM DRAINAGE THAT MAY BE OCCASIONED BY DRAINAGE IN OR ADJACENT TO THE SUBDIVISION, THEN IN SUCH EVENT, THE CITY SHALL HAVE THE RIGHT TO ENTER UPON THE DRAINAGE AND DETENTION EASEMENT AT ANY POINT, OR POINTS, TO INVESTIGATE, SURVEY OR TO ERECT, CONSTRUCT AND MAINTAIN ANY DRAINAGE FACILITY DEEMED NECESSARY FOR DRAINAGE PURPOSES. EACH PROPERTY OWNER SHALL KEEP THE DRAINAGE AND DETENTION EASEMENT CLEAN AND FREE OF DEBRIS, SILT, AND ANY SUBSTANCE WHICH WOULD RESULT IN UNSANITARY CONDITIONS OR OBSTRUCT THE FLOW OF WATER, AND THE CITY SHALL HAVE THE RIGHT OF INGRESS AND EGRESS FOR THE PURPOSE OF INSPECTION AND SUPERVISION OF MAINTENANCE WORK BY THE PROPERTY OWNER TO ALLEVIATE ANY UNDESIRABLE CONDITIONS WHICH MAY OCCUR. THE NATURAL DRAINAGE THROUGH THE DRAINAGE AND DETENTION EASEMENT IS SUBJECT TO STORM WATER OVERFLOW AND NATURAL BANK EROSION TO AN EXTENT WHICH CANNOT BE DEFINITELY DEFINED. THE CITY SHALL NOT BE HELD LIABLE FOR ANY DAMAGES OF ANY NATURE RESULTING FROM THE FAILURE OF ANY STRUCTURE OR STRUCTURES, WITHIN THE EASEMENT.

6. SELLING A PORTION OF THIS ADDITION BY METES AND BOUNDS IS A VIOLATION OF CITY ORDINANCE AND STATE LAW, AND IS SUBJECT TO FINES AND WITHHOLDING OF UTILITIES AND BUILDING PERMITS.

7. THE UNDERSIGNED DOES HEREBY COVENANT AND AGREE THAT HE OR SHE OR THEY SHALL CONSTRUCT UPON THE FIRE LANE EASEMENTS, AS DEDICATED AS SHOWN HEREON, A HARD SURFACE IN ACCORDANCE WITH THE CITY OF CELINA'S PAVING STANDARDS FOR FIRE LANE, AND THAT HE OR SHE OR THEY SHALL MAINTAIN THE SAME IN A STATE OF GOOD REPAIR AT ALL TIMES AND KEEP HE SAME FREE AND CLEAR OF ANY STRUCTURES, FENCES, TREES, SHRUBS, OR OTHER IMPROVEMENTS OR OBSTRUCTION, INCLUDING BUT NOT LIMITED TO THE PARKING OF MOTOR VEHICLES, TRAILERS, BOATS, OR OTHER IMPEDIMENTS TO THE ACCESSIBILITY OF FIRE APPARATUS. THE MAINTENANCE OF PAVING ON THE FIRE LANE EASEMENTS IS THE RESPONSIBILITY OF THE OWNER, AND THE OWNER SHALL POST AND MAINTAIN APPROPRIATE SIGNS IN CONSPICUOUS PLACES ALONG SUCH FIRE LANES, STATING "FIRE LANE, NO PARKING." THE LOCAL LAW ENFORCEMENT AGENCY(S) IS HEREBY AUTHORIZED TO ENFORCE PARKING REGULATIONS WITHIN THE FIRE LANES, AND TO CAUSE SUCH FIRE LANES AND UTILITY EASEMENTS TO BE MAINTAINED FREE AND UNOBSTRUCTED AT ALL TIMES FOR FIRE DEPARTMENT AND EMERGENCY USE.

8. THE UNDERSIGNED DOES HEREBY COVENANT AND AGREE THAT THE ACCESS EASEMENT MAY BE UTILIZED BY ANY PERSON OR THE GENERAL PUBLIC FOR INGRESS AND EGRESS TO PUBLIC VEHICULAR AND PEDESTRIAN USE AND ACCESS, AND FOR FIRE DEPARTMENT AND EMERGENCY USE IN, ALONG, UPON, AND ACROSS SAID PREMISES, WITH THE RIGHT AND PRIVILEGE AT ALL TIMES OF THE CITY OF CELINA, ITS AGENTS, EMPLOYEES, WORKMEN, AND REPRESENTATIVES HAVING INGRESS, EGRESS, AND REGRESS IN, ALONG, UPON AND ACROSS SAID PREMISES.

9. THE AREA OR AREAS SHOWN ON THE PLAT AS "VAM" (VISIBILITY, ACCESS, AND MAINTENANCE) EASEMENT(S) ARE HEREBY GIVEN AND GRANTED TO THE CITY, ITS SUCCESSORS AND ASSIGNS, AS AN EASEMENT TO PROVIDE VISIBILITY, RIGHT OF ACCESS FOR MAINTENANCE UPON AND ACROSS SAID VAM EASEMENT. SHOULD THE CITY EXERCISE THIS MAINTENANCE RIGHT. THEN IT SHALL BE PERMITTED TO REMOVE AND DISPOSE OF ANY AND ALL LANDSCAPING IMPROVEMENTS, INCLUDING WITHOUT LIMITATION, ANY TREES, SHRUBS, FLOWERS, GROUND COVER AND FIXTURES. THE CITY MAY WITHDRAW MAINTENANCE OF THE VAM EASEMENT AT ANY TIME. THE ULTIMATE MAINTENANCE RESPONSIBILITY FOR THE VAM EASEMENT SHALL REST WITH THE OWNERS. NO BUILDING, FENCE, SHRUB, TREE, OR OTHER IMPROVEMENTS OR GROWTHS, WHICH IN ANY WAY MAY ENDANGER OR INTERFERE WITH THE VISIBILITY, SHALL BE CONSTRUCTED IN, ON, OVER, OR ACROSS THE VAM EASEMENT. THE CITY SHALL ALSO HAVE THE RIGHT BUT NOT THE OBLIGATION TO AD ANY LANDSCAPE IMPROVEMENTS TO THE VAM EASEMENT, TO ERECT ANY TRAFFIC CONTROL DEVICES, OR SIGNS ON THE VAM EASEMENT AND TO REMOVE ANDY OBSTRUCTION THEREON. THE CITY, ITS SUCCESSORS, ASSIGNS, OR AGENTS SHALL HAVE THE RIGHT AND PRIVILEGE AT ALL TIMES TO ENTER UPON THE VAM EASEMENT OR ANY PART THEREOF FOR THE PURPOSES AND WITH ALL RIGHTS AND PRIVILEGES SET FORTH HEREIN.

10. DETENTION PONDS ARE TO BE OWNED AND MAINTAINED BY THE HOMEOWNER'S ASSOCIATION.

LINE TABLE

| LINE | BEARING | DISTANCE |
|---|---|---|
| L1 | S46°18'23"E | 62.02 |
| L2 | S41°00'59"E | 72.10 |
| L3 | S29°25'19"E | 73.47 |
| L4 | S17°42'31"E | 73.47 |
| L5 | S06°04'51"E | 72.40 |
| L6 | S88°41'37"W | 21.21 |
| L7 | N01°18'23"W | 21.21 |
| L8 | N88°41'37"E | 21.21 |
| L9 | N00°34'13"W | 20.94 |
| L10 | N45°18'36"W | 21.21 |
| L11 | N44°41'24"E | 21.21 |
| L12 | N46°46'15"W | 21.75 |
| L13 | S44°41'24"E | 21.21 |
| L14 | S44°41'24"E | 21.21 |
| L15 | N45°18'36"W | 21.21 |
| L16 | N45°18'36"W | 21.21 |
| L17 | N44°41'24"E | 21.21 |
| L18 | N44°41'24"E | 21.21 |
| L19 | N45°18'36"W | 21.21 |
| L20 | N45°18'36"W | 21.21 |
| L21 | N44°41'24"E | 21.21 |
| L22 | S44°41'24"W | 21.21 |
| L23 | N45°18'36"W | 21.21 |
| L24 | N45°18'36"W | 21.21 |
| L25 | N44°41'24"E | 21.21 |
| L26 | N44°41'24"E | 21.21 |
| L27 | N45°18'36"W | 21.21 |
| L28 | N44°41'24"E | 21.21 |
| L29 | S45°18'36"E | 21.21 |
| L30 | N45°18'36"W | 21.21 |
| L31 | N44°41'24"E | 21.21 |
| L32 | N44°11'32"W | 35.36 |
| L33 | N44°42'18"E | 35.35 |

CURVE TABLE

| CURVE | DELTA | RADIUS | LENGTH | TANGENT | CHORD BEARING | CHORD DISTANCE |
|---|---|---|---|---|---|---|
| C1 | 47°07'04" | 300.00 | 246.71 | 130.81 | N67°15'09"E | 239.81 |
| C2 | 27°13'48" | 400.00 | 190.10 | 96.88 | S57°18'31"W | 188.32 |
| C3 | 45°59'47" | 220.00 | 176.61 | 93.38 | N23°18'30"W | 171.91 |
| C4 | 45°59'47" | 500.00 | 401.40 | 212.22 | N23°18'30"W | 390.70 |
| C5 | 90°00'00" | 35.50 | 55.76 | 35.50 | S45°18'36"E | 50.20 |
| C6 | 157°06'53" | 60.00 | 164.53 | 296.43 | S45°18'36"E | 117.61 |

CONSTRUCTION PLAT

# SUTTON FIELDS NORTH – PHASE 1

43.500 ACRES TOTAL
162 RESIDENTIAL LOTS
6 NON-RESIDENTIAL LOTS
SITUATED IN THE
THOMAS H. McINTYRE SURVEY ~ ABSTRACT NO. 903
CITY OF CELINA
DENTON COUNTY, TEXAS

RPLS OF RECORD: JIMMIE D. NICHOLS
REGISTERED PROFESSIONAL
LAND SURVEYOR NO. 5184

OWNER: CADG SUTTON FIELDS, LLC.
1800 VALLEY VIEW LANE, SUITE 300
FARMERS BRANCH, TX 75234
PHONE (469) 892-7200

CITY PLAN No. P-201612-01

PETITT BARRAZA LLC
ENGINEERING PLANNING SURVEYING
TBPE FIRM REGISTRATION NO. 1488
TBPLS FIRM REGISTRATION NO. 101068
1651 N. Glenville Dr. Ste. 212
Richardson, Texas 75081
Tel. No. (214) 221-9955
Fax No. (214) 340-3550
DATE: MAY 2017
SCALE: 1"=100'
JNICHOLS@PETITTBARRAZA.COM
JOB NO. 1401302

"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."

F:\2014\1401302\SURVEY\1401302FP.dwg May 03,2017 - 8:28 am cheath

STATE OF TEXAS §

COUNTY OF DENTON §

WHEREAS CADG SUTTON FIELDS II, LLC IS THE OWNER OF A TRACT OF LAND SITUATED IN THE THOMAS H. MCINTYRE SURVEY, ABSTRACT NUMBER 903 IN DENTON COUNTY, TEXAS, SAID TRACT ALSO BEING PART OF A TRACT OF LAND DESCRIBED IN A DEED TO CADG SUTTON FIELDS II, LLC, RECORDED IN DOCUMENT NUMBER 2015–128856, REAL PROPERTY RECORDS OF DENTON COUNTY, TEXAS (RPRDCT), AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT A 1/2–INCH IRON ROD FOUND FOR THE WESTERNMOST NORTHWEST CORNER OF SAID CADG SUTTON FIELDS TRACT, SAID IRON ROD ALSO BEING THE SOUTHWEST CORNER OF A TRACT OF LAND DESCRIBED IN A DEED TO MUNISH AND ANUSHA GUPTA, RECORDED IN DOCUMENT NUMBER 2013–84112 (RPRDCT);

THENCE NORTH 89°33'57" EAST, ALONG THE COMMON LINE OF SAID CADG SUTTON FIELDS AND GUPTA TRACTS, A DISTANCE OF 393.66 FEET TO A 5/8–INCH IRON ROD WITH CAP MARKED "PETITT–RPLS 4087" SET FOR CORNER;

THENCE, DEPARTING SAID COMMON LINE, OVER AN ACROSS SAID CADG SUTTON FIELDS TRACT THE FOLLOWING COURSES AND DISTANCES TO 5/8–INCH IRON RODS WITH CAPS MARKED "PETITT–RPLS 4087" SET FOR CORNERS:

SOUTH 00°12'44" EAST, A DISTANCE OF 130.31 FEET;

SOUTH 46°18'23" EAST, A DISTANCE OF 485.24 FEET;

SOUTH 42°15'40" EAST, A DISTANCE OF 15.21 FEET, SAID IRON ROD ALSO BEING THE BEGINNING OF A NON–TANGENT CURVE TO THE LEFT;

NORTHEASTERLY, ALONG SAID CURVE TO THE LEFT, WHICH HAS A CHORD THAT BEARS NORTH 45°42'58" EAST FOR 18.35 FEET, A CENTRAL ANGLE OF 04°02'43", AND A RADIUS OF 260.00 FEET, FOR AN ARC DISTANCE OF 18.36 FEET;
NORTH 43°41'37" EAST, A DISTANCE OF 82.73 FEET;

NORTH 01°18'23" WEST, A DISTANCE OF 21.21 FEET;

NORTH 46°18'23" WEST, A DISTANCE OF 5.00 FEET;

NORTH 43°41'37" EAST, A DISTANCE OF 50.00 FEET;

SOUTH 46°18'23" EAST, A DISTANCE OF 15.00 FEET;

NORTH 88°41'37" EAST, A DISTANCE OF 21.21 FEET;

NORTH 43°41'40" EAST, A DISTANCE OF 200.00 FEET;

NORTH 01°18'23" WEST, A DISTANCE OF 21.22 FEET;

NORTH 46°18'23" WEST, A DISTANCE OF 5.00 FEET;

NORTH 43°41'40" EAST, A DISTANCE OF 50.00 FEET;

SOUTH 46°18'23" EAST, A DISTANCE OF 5.00 FEET;

NORTH 89°19'36" EAST, A DISTANCE OF 21.45 FEET, SAID IRON ROD ALSO BEING THE BEGINNING OF A NON–TANGENT CURVE TO THE RIGHT;

NORTHEASTERLY, ALONG SAID CURVE TO THE RIGHT, WHICH HAS A CHORD THAT BEARS NORTH 58°26'30" EAST FOR 185.87 FEET, A CENTRAL ANGLE OF 24°57'49", AND A RADIUS OF 430.00 FEET, FOR AN ARC DISTANCE OF 187.35 FEET;

SOUTH 19°04'35" EAST, A DISTANCE OF 60.00 FEET, SAID IRON ROD ALSO BEING THE BEGINNING OF A NON–TANGENT CURVE TO THE LEFT;

SOUTHWESTERLY, ALONG SAID CURVE TO THE RIGHT, WHICH HAS A CHORD THAT BEARS SOUTH 69°47'08" WEST FOR 14.70 FEET, A CENTRAL ANGLE OF 02°16'34", AND A RADIUS OF 370.00 FEET, FOR AN ARC DISTANCE OF 14.70 FEET;

SOUTH 29°10'28" EAST, A DISTANCE OF 333.82 FEET;

SOUTH 65°23'52" EAST, A DISTANCE OF 197.00 FEET;

NORTH 89°41'24" EAST, A DISTANCE OF 186.72 FEET;

NORTH 00°18'36" WEST, A DISTANCE OF 20.00 FEET;

NORTH 89°41'24" EAST, A DISTANCE OF 60.00 FEET;

SOUTH 00°18'36" EAST, A DISTANCE OF 20.00 FEET;

NORTH 89°41'24" EAST, A DISTANCE OF 751.31 FEET;

NORTH 00°18'36" WEST, A DISTANCE OF 20.00 FEET;

NORTH 89°41'24" EAST, A DISTANCE OF 50.00 FEET;

SOUTH 00°18'36" EAST, A DISTANCE OF 83.00 FEET;

AND NORTH 89°51'02" EAST, A DISTANCE OF 129.41 FEET, SAID IRON ROD ALSO BEING IN THE EAST LINE OF SAID CADG SUTTON FIELDS TRACT, AND IN THE WEST LINE OF A TRACT OF LAND DESCRIBED IN A DEED TO FASHAND FARM, LTD., RECORDED IN DOCUMENT NUMBER 05–21653 (RPRDCT);

THENCE SOUTH 00°09'07" EAST, ALONG SAID EAST LINE, A DISTANCE OF 513.95 FEET TO A 5/8–INCH IRON ROD WITH CAP MARKED "PETITT–RPLS 4087" SET FOR CORNER, SAID IRON ROD ALSO BEING IN THE WEST LINE OF A TRACT OF LAND DESCRIBED IN A DEED TO JAN M AND MARGARET PALIWODA, RECORDED IN DOCUMENT NUMBER 99–0065880 (RPRDCT);

THENCE DEPARTING SAID EAST LINE, OVER AND ACROSS SAID CADG SUTTON FIELDS TRACT, THE FOLLOWING COURSES AND DISTANCES TO 5/8–INCH IRON RODS WITH CAPS MARKED "PETITT–RPLS 4087" SET FOR CORNERS:

SOUTH 89°50'53" WEST, A DISTANCE OF 127.99 FEET;

SOUTH 00°18'36" EAST, A DISTANCE OF 20.00 FEET;

SOUTH 89°50'53" WEST, A DISTANCE OF 50.00 FEET

NORTH 00°18'36" WEST, A DISTANCE OF 36.82 FEET;

SOUTH 89°41'24" WEST, A DISTANCE OF 751.31 FEET;

SOUTH 00°18'36" EAST, A DISTANCE OF 100.00 FEET;

SOUTH 45°18'36" EAST, A DISTANCE OF 21.21 FEET;

NORTH 89°41'24" EAST, A DISTANCE OF 25.00 FEET;

SOUTH 00°18'36" EAST, A DISTANCE OF 50.00 FEET;

SOUTH 89°41'24" WEST, A DISTANCE OF 15.00 FEET;

SOUTH 44°41'24" WEST, A DISTANCE OF 21.21 FEET;

SOUTH 00°18'36" EAST, A DISTANCE OF 100.09 FEET;

AND SOUTH 45°17'42" EAST, A DISTANCE OF 35.37 FEET, SAID IRON ROD ALSO BEING IN THE NORTH RIGHT–OF–WAY OF CRUTCHFIELD ROAD;

THENCE SOUTH 00°16'22" EAST, A DISTANCE OF 55.00 FEET TO A 5/8–INCH IRON ROD WITH CAP MARKED "PETITT–RPLS 4087" SET FOR CORNER, SAID IRON ROD BEING IN THE SOUTH LINE OF SAID CADG SUTTON FIELDS TRACT, AND IN THE APPROXIMATE CENTER OF SAID CRUTCHFIELD ROAD;

THENCE SOUTH 89°43'38" WEST, WITH SAID SOUTH LINE, A DISTANCE OF 130.02 FEET TO A 5/8–INCH IRON ROD WITH CAP MARKED "PETITT–RPLS 4087" SET FOR CORNER;

THENCE NORTH 00°16'22" WEST, DEPARTING SAID SOUTH LINE, A DISTANCE OF 55.00 FEET TO A 5/8–INCH IRON ROD WITH CAP MARKED "PETITT–RPLS 4087" SET FOR CORNER, SAID IRON ROD ALSO BEING IN THE NORTH RIGHT–OF–WAY LINE OF SAID CRUTCHFIELD ROAD;

(CONTINUED):

THENCE SOUTH 89°43'38" WEST, CONTINUING ALONG SAID NORTH RIGHT–OF–WAY, A DISTANCE OF 861.43 FEET TO A 5/8–INCH IRON ROD WITH CAP MARKED "PETITT–RPLS 4087" SET FOR CORNER;

THENCE, DEPARTING SAID NORTH RIGHT–OF–WAY OVER AND ACROSS SAID CADG TRACT, THE FOLLOWING COURSES AND DISTANCES TO 5/8–INCH IRON RODS WITH CAPS MARKED "PETITT–RPLS 4087" SET FOR CORNERS:

NORTH 00°18'36" WEST, A DISTANCE OF 717.45 FEET;

NORTH 10°26'21" WEST, A DISTANCE OF 50.00 FEET;

NORTH 43°16'28" WEST, A DISTANCE OF 81.39 FEET, SAID IRON ROD ALSO BEING THE BEGINNING OF A NON–TANGENT CURVE TO THE RIGHT;

SOUTHWESTERLY, ALONG SAID CURVE TO THE RIGHT, WHICH HAS A CHORD THAT BEARS SOUTH 68°42'29" WEST FOR 255.87 FEET, A CENTRAL ANGLE OF 44°12'24", AND A RADIUS OF 340.00 FEET, FOR AN ARC DISTANCE OF 262.33 FEET;

NORTH 89°11'19" WEST, A DISTANCE OF 531.97 FEET;

SOUTH 45°48'41" WEST, A DISTANCE OF 35.36 FEET;

AND NORTH 89°11'45" WEST, A DISTANCE OF 27.23 FEET IN THE EAST RIGHT–OF–WAY OF FARM TO MARKET ROAD 1385, AND BEING IN THE WEST LINE OF SAID CADG SUTTON FIELDS TRACT;

THENCE NORTH 00°48'15" EAST, WITH SAID WEST LINE AND EAST RIGHT–OF–WAY LINE, A DISTANCE OF 638.12 FEET TO THE POINT OF BEGINNING, AND CONTAINING 43.464 ACRES OF LAND, MORE OR LESS.

OWNER'S DEDICATION

NOW, THEREFORE, KNOW ALL MEN BY THESE PRESENTS:

THAT CADG SUTTON FIELDS, LLC, A TEXAS LIMITED LIABILITY COMPANY, ACTING HEREIN BY AND THROUGH HIS/HER(ITS) DULY AUTHORIZED OFFICER(S), DOES HEREBY ADOPT THIS PLAT DESIGNATING THE HEREIN ABOVE DESCRIBED PROPERTY AS SUTTON FIELDS PHASE 2, AN ADDITION TO THE CITY OF CELINA, TEXAS, AND DOES HEREBY DEDICATE, IN FEE SIMPLE TO THE PUBLIC USE FOREVER, THE STREETS, RIGHTS–OF–WAY, AND OTHER PUBLIC IMPROVEMENTS SHOWN THEREON. THE STREETS AND ALLEYS, IF ANY, ARE DEDICATED FOR STREET PURPOSES. THE EASEMENTS AND PUBLIC USE AREAS, AS SHOWN, ARE DEDICATED, FOR THE PUBLIC USE FOREVER, FOR THE PURPOSES INDICATED ON THIS PLAT. NO BUILDINGS, FENCES, TREES, SHRUBS OR OTHER IMPROVEMENTS OR GROWTHS SHALL BE CONSTRUCTED OR PLACED UPON, OVER OR ACROSS THE EASEMENTS AS SHOWN, EXCEPT THAT LANDSCAPE IMPROVEMENTS MAY BE PLACED ON LANDSCAPE EASEMENTS, IF APPROVED BY THE CITY COUNCIL OF THE CITY OF CELINA. IN ADDITION, UTILITY EASEMENTS MAY ALSO BE USED FOR THE MUTUAL USE AND ACCOMMODATION OF ALL PUBLIC UTILITIES DESIRING TO USE OR USING THE SAME UNLESS THE EASEMENT LIMITS THE USE TO PARTICULAR UTILITIES, SAID USE BY PUBLIC UTILITIES BEING SUBORDINATE TO THE PUBLIC'S AND CITY OF CELINA'S USE THEREOF. THE CITY OF CELINA AND PUBLIC UTILITY ENTITIES SHALL HAVE THE RIGHT TO REMOVE AND KEEP REMOVED ALL OR PARTS OF ANY BUILDINGS, FENCES, TREES, SHRUBS OR OTHER IMPROVEMENTS OR GROWTHS WHICH MAY IN ANY WAY ENDANGER OR INTERFERE WITH THE CONSTRUCTION, MAINTENANCE, OR EFFICIENCY OF THEIR RESPECTIVE SYSTEMS IN SAID EASEMENTS. THE CITY OF CELINA AND PUBLIC UTILITY ENTITIES SHALL AT ALL TIMES HAVE THE FULL RIGHT INGRESS AND EGRESS TO OR FROM THEIR RESPECTIVE EASEMENTS FOR THE PURPOSE OF CONSTRUCTING, RECONSTRUCTING, INSPECTING, PATROLLING, MAINTAINING, READING METERS, AND ADDING TO OR REMOVING ALL OR PARTS OF THEIR RESPECTIVE SYSTEMS WITHOUT THE NECESSITY AT ANY TIME PROCURING PERMISSION FROM ANYONE.

THIS PLAT APPROVED SUBJECT TO ALL PLATTING ORDINANCES, RULES, REGULATIONS AND RESOLUTIONS OF THE CITY OF CELINA, TEXAS

WITNESS, MY HAND THIS THE _____ DAY OF _____, 2017.

BY: CADG SUTTON FIELDS, LLC,
A TEXAS LIMITED PARTNERSHIP

BY: CTMGT, LLC.
A TEXAS LIMITED LIABILITY COMPANY,
IT'S SOLE MANAGER AND MEMBER

BY: _____
AUTHORIZED SIGNATURE OF OWNER

_____
MEHRDAD MOAYEDI
SOLE MANAGER AND MEMBER

STATE OF TEXAS
COUNTY OF COLLIN

BEFORE ME, THE UNDERSIGNED AUTHORITY, A NOTARY PUBLIC IN AND FOR THE STATE OF TEXAS, ON THIS DAY PERSONALLY APPEARED MEHRDAD MOAYEDI, THE SOLE MANAGER AND MEMBER IF CTMGT, LLC, 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 CONSIDERATIONS THEREIN EXPRESSED.

GIVEN UNDER MY AND SEAL OF OFFICE, THIS __ DAY OF _____, 2017.

_____
NOTARY PUBLIC IN AND FOR THE STATE OF TEXAS

_____
MY COMMISSION EXPIRES ON:

SURVEYOR'S CERTIFICATE

KNOW ALL MEN BY THESE PRESENTS:

THAT I, JIMMIE D. NICHOLS, DO HEREBY CERTIFY THAT I PREPARED THIS PLAT FROM AN ACTUAL AND ACCURATE SURVEY OF THE LAND AND THAT THE CORNER MONUMENTS SHOWN THEREON AS "SET" WERE PROPERLY PLACED UNDER MY PERSONAL SUPERVISION IN ACCORDANCE WITH THE SUBDIVISION ORDINANCE OF THE CITY OF CELINA.

"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."

_____
SIGNATURE OF THE REGISTERED PROFESSIONAL

_____
TEXAS REGISTRATION NO.

STATE OF TEXAS
COUNTY OF COLLIN

BEFORE ME, THE UNDERSIGNED AUTHORITY, A NOTARY PUBLIC IN AND FOR THE STATE OF TEXAS, ON THIS DAY PERSONALLY APPEARED JIMMIE D. NICHOLS, REGISTERED PUBLIC LAND SURVEYOR, 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 CONSIDERATIONS THEREIN EXPRESSED.

GIVEN UNDER MY AND SEAL OF OFFICE, THIS __ DAY OF _____, 2017.

_____
NOTARY PUBLIC IN AND FOR THE STATE OF TEXAS

_____
MY COMMISSION EXPIRES ON:

**UTILITY COMPANY APPROVAL**

| | |
|---|---|
| ELECTRIC & GAS COMPANY: | |
| _____ | _____ |
| COSERV | DATE |
| TELEPHONE COMPANY: | |
| _____ | _____ |
| AT&T | DATE |

| | |
|---|---|
| RECOMMENDED BY: | Planning and Zoning Commission<br>City of Celina, Texas |
| _____ _____ | _____ |
| Signature of Chairperson | Date of Recommendation |
| APPROVED BY: | City Council<br>City of Celina, Texas |
| _____ | _____ |
| Signature of Mayor | Date of Approval |
| ATTEST: | |
| _____ | _____ |
| City Secretary | Date |

THIS PROPERTY IS LOCATED IN THE CORPORATE LIMITS OF THE CITY OF CELINA, DENTON COUNTY, TEXAS.

| | |
|---|---|
| _____ | _____ |
| SIGNATURE OF MAYOR | DATE OF APPROVAL |
| ATTEST: | |
| _____ | _____ |
| CITY SECRETARY | DATE |

CONSTRUCTION PLAT

# SUTTON FIELDS NORTH – PHASE 1

43.500 ACRES TOTAL
162 RESIDENTIAL LOTS
6 NON–RESIDENTIAL LOTS
SITUATED IN THE
THOMAS H. McINTYRE SURVEY ~ ABSTRACT NO. 903
CITY OF CELINA
DENTON COUNTY, TEXAS


RPLS OF RECORD: JIMMIE D. NICHOLS
REGISTERED PROFESSIONAL
LAND SURVEYOR NO. 5184

OWNER: CADG SUTTON FIELDS, LLC.
1800 VALLEY VIEW LANE, SUITE 300
FARMERS BRANCH, TX 75234
PHONE (469) 892–7200


CITY PLAN No. P–201612–01


PETITT BARRAZA
ENGINEERING PLANNING SURVEYING
TBPE FIRM REGISTRATION NO. 1488
TBPLS FIRM REGISTRATION NO. 101068
1651 N. Glenville Dr. Ste. 212
Richardson, Texas 75081
Tel. No. (214) 221–9955
Fax No. (214) 340–3550


DATE: MA 2017
SCALE: 1"=100'
JNICHOLS@PETITTBARRAZA.COM
JOB NO. 1401302

"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."

F:\2014\1401302\SURVEY\1401302FP.dwg May 03,2017 – 8:27 am cheath