CVS/pharmacy®

CVS STORE NO. 10413
SEC PRESTON RD. & SUTTON DRIVE
CELINA, TEXAS

CITY OF CELINA, TEXAS
APPROVED FOR CONSTRUCTION
DATE: 12/3/13 BY:

PROJECT DIRECTORY

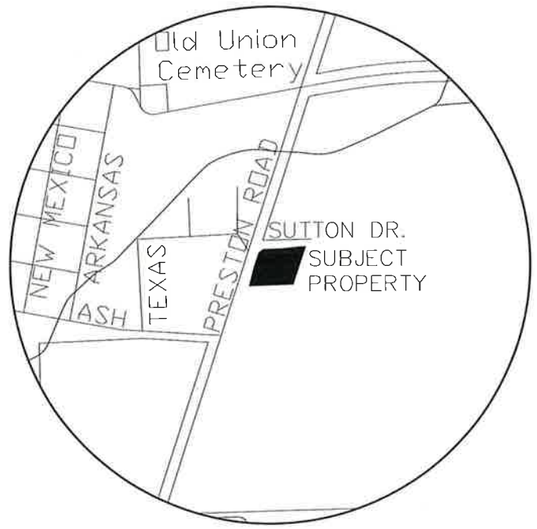
CITY OF CELINA
CITY OF CELINA DEVELOPMENT SERVICES
142 N. OHIO ST. SUITE A
CELINA, TEXAS 75009
CONTACT: HELEN-EVE LIEBMAN
PH. (972) 382-3617

CLIENT:
ORANGE DEVELOPMENT, INC. 1200
CORPORATE DRIVE
SUITE G-50
BIRMINGHAM, ALABAMA 35242
PH. (205) 408-3443
FAX (205) 408-1850

ELECTRIC
ONCOR ELECTRIC DELIVERY COMPANY
4600 STATE HIGHWAY 121
McKINNEY, TEXAS 75070
CONTACT: ALLAN BAXTER
PH. (972) 569-1283

ARCHITECT:
GENESIS DESIGN GROUP, INC.
421 W. HARWOOD ROAD
HURST, TEXAS 76054
PH. (817) 285-7444
FAX (817) 285-7318

TELEPHONE
AT&T OKLAHOMA
2301 RIDGEVIEW DR. 2nd FLOOR
PLANO, TEXAS 75025
CONTACT: STEPHEN S. TURPIE
PH. (972) 569-4767



VICINITY MAP
NOT TO SCALE

11/26/2013 Issued for Construction
08/27/2013 Bid Set
08/12/2013 City Comments
07/08/2013 1st Submittal

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THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF CONSTRUCTION UNDER THE AUTHORITY OF MICHAEL T. DOGGETT, P.E. 98628 ON NOVEMBER 26, 2013.

G:\701\95\ENGINEERING\Construction Plans\70195-cov.dwg

CVS pharmacy®
SOUTHERN 14,600-LEFT CHAMFER DRIVE-THRU
STORE NUMBER: 10413
SEC OF PRESTON RD. & SUTTON DRIVE
CELINA, TEXAS
PROJECT TYPE: NEW
DEAL TYPE: FEE FOR SERVICE
CS PROJECT NUMBER: 72532

CIVIL ENGINEER:
Winkelmann & Associates, Inc.
CONSULTING CIVIL ENGINEERS ■ SURVEYORS
8750 HILLCREST PLAZA DR., SUITE 325 (972) 490-7090
DALLAS, TEXAS 75230 (972) 490-7095 FAX
Contact: Michael Doggett
Texas Engineers Registration No. 89
Texas Surveyors Registration No. 100566-00

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CONSULTANT:

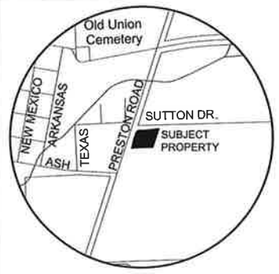
DEVELOPER:
Orange Development Inc.
1200 Corporate Drive
Suite G-50
BIRMINGHAM, AL 35242
TEL.: (205)408-3443
FAX: (205)408-1850

SEAL:
MICHAEL T. DOGGETT 98628 LICENSED PROFESSIONAL ENGINEER
11-26-13

REVISIONS:
1) 11/26/13 ISSUED FOR CONST.

FILE NAME: 70195-cov.dwg
JOB NUMBER: 70195.00
DATE: August 27, 2013
TITLE: COVER SHEET
SHEET NUMBER: C-1
COMMENTS:

P-201311-03

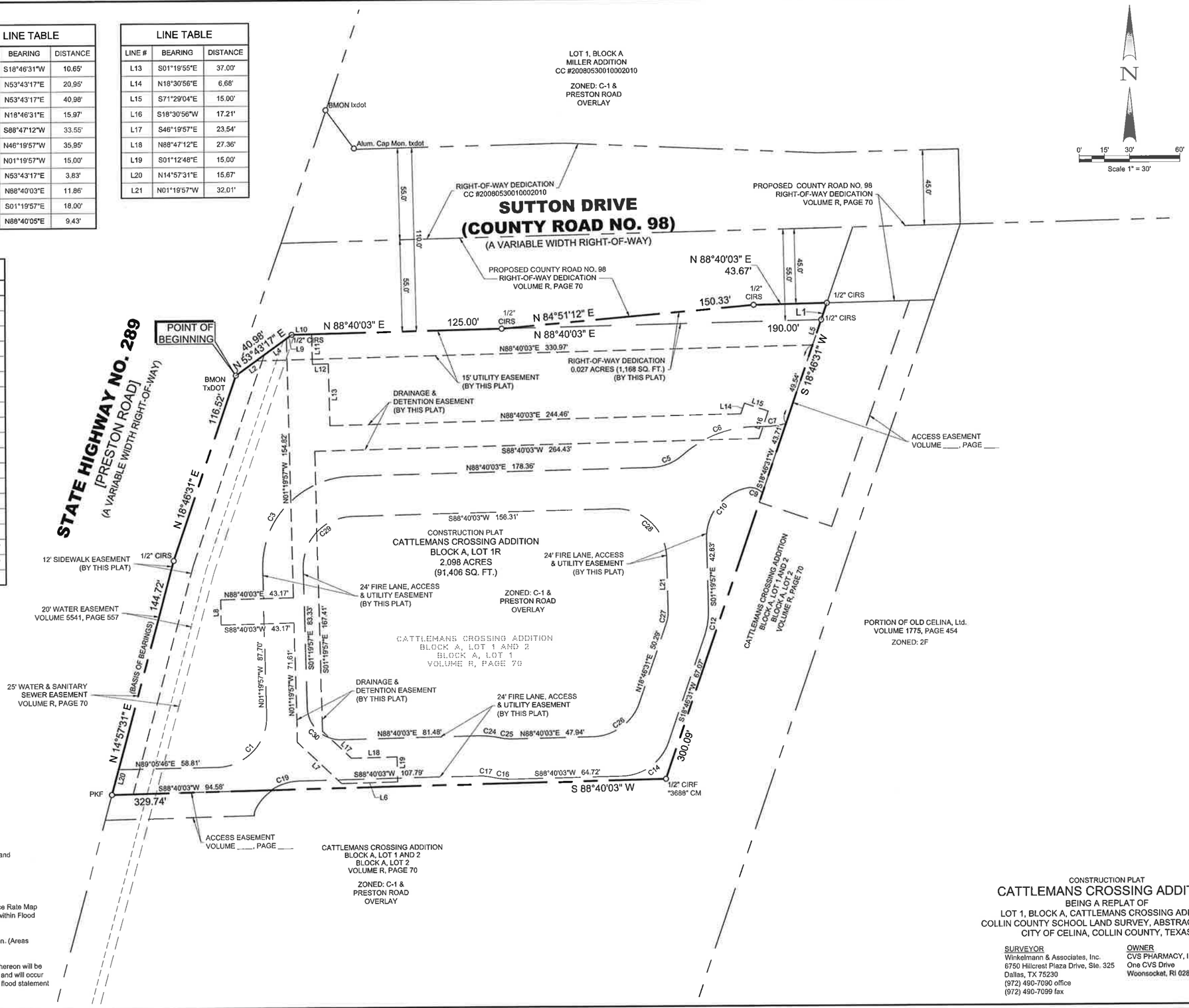


VICINITY MAP
NOT TO SCALE

LINE TABLE		
LINE #	BEARING	DISTANCE
L1	S18°46'31"W	10.65'
L2	N53°43'17"E	20.95'
L4	N53°43'17"E	40.98'
L5	N18°46'31"E	15.97'
L6	S88°47'12"W	33.55'
L7	N46°19'57"W	35.95'
L8	N01°19'57"W	15.00'
L9	N53°43'17"E	3.83'
L10	N88°40'03"E	11.86'
L11	S01°19'57"E	18.00'
L12	N88°40'05"E	9.43'

LINE TABLE		
LINE #	BEARING	DISTANCE
L13	S01°19'55"E	37.00'
L14	N18°30'56"E	6.68'
L15	S71°29'04"E	15.00'
L16	S18°30'56"W	17.21'
L17	S46°19'57"E	23.54'
L18	N88°47'12"E	27.36'
L19	S01°12'48"E	15.00'
L20	N14°57'31"E	15.67'
L21	N01°19'57"W	32.01'

CURVE TABLE					
NO.	DELTA	RADIUS	LENGTH	CH. L	CH. B
C1	90°25'43"	30.00'	47.35'	42.58'	N43°52'54"E
C3	90°00'00"	54.00'	84.82'	76.37'	N43°40'03"E
C5	40°11'28"	30.00'	21.04'	20.62'	N68°34'19"E
C6	43°15'09"	66.00'	49.82'	48.65'	N70°06'10"E
C7	16°31'24"	54.00'	15.57'	15.52'	N83°28'02"E
C9	59°05'35"	10.00'	10.31'	9.86'	N72°04'29"W
C10	79°25'26"	30.00'	41.59'	38.34'	S38°39'58"W
C12	20°06'26"	44.00'	15.44'	15.36'	S08°43'17"W
C14	69°53'32"	30.00'	36.60'	34.37'	S53°43'17"W
C16	13°55'19"	54.00'	13.12'	13.09'	N84°22'19"W
C17	13°55'17"	30.00'	7.29'	7.27'	N84°22'18"W
C19	33°26'40"	30.00'	17.51'	17.26'	S71°56'43"W
C24	13°55'17"	54.00'	13.12'	13.09'	S84°22'18"E
C25	13°55'19"	30.00'	7.29'	7.27'	S84°22'19"E
C26	69°53'32"	30.00'	36.60'	34.37'	N53°43'17"E
C27	20°06'26"	20.00'	7.02'	6.98'	N08°43'17"E
C28	90°00'00"	30.00'	47.12'	42.43'	N46°19'57"W
C29	90°00'00"	30.00'	47.12'	42.43'	S43°40'03"W
C30	90°00'00"	20.00'	31.42'	28.28'	S46°19'57"E



Purpose Statement:
The purpose of this Replat is to establish new easements for development and dedicate right-of-way along Sutton Drive (County Road No. 98).

FLOOD NOTE

According to the Federal Emergency Management Agency, Flood Insurance Rate Map Community Panel No. 48085C0110J, dated June 2, 2009, this property is within Flood Zone X.

Zone X - Areas determined to be outside the 0.2% annual chance floodplain. (Areas determined to be outside the 500-year floodplain.)

This flood statement does not imply that the property and/or the structure thereon will be free from flooding or flood damage. On rare occasions, greater floods can and will occur and flood heights may be increased by man-made or natural causes. This flood statement shall not create liability on the part of the surveyor.

CONSTRUCTION PLAT
CATTLEMANS CROSSING ADDITION
BEING A REPLAT OF
LOT 1, BLOCK A, CATTLEMANS CROSSING ADDITION
COLLIN COUNTY SCHOOL LAND SURVEY, ABSTRACT NO. 167
CITY OF CELINA, COLLIN COUNTY, TEXAS

SURVEYOR
Winkelmann & Associates, Inc.
6750 Hillcrest Plaza Drive, Ste. 325
Dallas, TX 75230
(972) 490-7090 office
(972) 490-7099 fax

OWNER
CVS PHARMACY, INC.
One CVS Drive
Woonsocket, RI 02895

Winkelmann & Associates, Inc.
CONSULTING CIVIL ENGINEERS ■ SURVEYORS
6750 HILLCREST PLAZA DRIVE, SUITE 325 (972) 490-7090
DALLAS, TEXAS 75230 FAX (972) 490-7099 FAX
Texas Engineer Registration No. 88
Texas Surveyor Registration No. 100703-03

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COLLIN COUNTY SCHOOL LAND SURVEY, ABSTRACT NO. 167
CITY OF CELINA
COLLIN COUNTY, TEXAS

CVS PHARMACY, INC.
ONE CVS DRIVE
WOONSOCKET, RI 02895

CONSTRUCTION PLAT
CATTLEMANS CROSSING ADDITION
2.125 ACRES

Date : 08.05.13
Scale : 1" = 30'
File : 70195-RPLT
Project No. : 70195

SHEET 1 OF 2

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P-201311-03

PROPERTY OWNERS CERTIFICATE

STATE OF TEXAS §
COUNTY OF COLLIN §

WHEREAS CVS Pharmacy, Inc. is the owner of a tract of land situated in the COLLIN COUNTY SCHOOL LAND SURVEY, ABSTRACT NO. 167, in the City of Celina, Collin County, Texas, being all of Block A, Lot 1, Cattlemans Crossing Addition, Block A, Lots 1 and 2, an addition to the City of Celina, Collin County, Texas, according to the Plat thereof recorded in Volume R, Page 70, Official Public Records, Collin County, Texas, and being more particularly described as follows:

BEGINNING at a brass TxDOT monument found for the most Westerly Northwest corner of said Lot 1, said being at the Southerly end of a corner clip at the intersection of the Easterly right-of-way of State Highway No. 289 (Preston Road), a variable width right-of-way, with the Southerly right-of-way dedication of proposed County Road No. 98, a variable width right-of-way;

THENCE North 53 deg 43 min 17 sec East, along said corner clip, a distance of 40.98 feet to a 1/2-inch iron rod with a red plastic cap stamped "W.A.I." set for corner on the Southerly right-of-way dedication of proposed County Road No. 98;

THENCE North 88 deg 40 min 03 sec East, along said Southerly right-of-way dedication of proposed County Road No. 98, a distance of 125.00 feet to a 1/2-inch iron rod with a red plastic cap stamped "W.A.I." set for corner;

THENCE North 84 deg 51 min 12 sec East, continuing along said Southerly right-of-way dedication of proposed County Road No. 98, a distance of 150.33 feet to a 1/2-inch iron rod with a red plastic cap stamped "W.A.I." set for corner;

THENCE North 88 deg 40 min 03 sec East, continuing along said Southerly right-of-way dedication of proposed County Road No. 98, a distance of 43.67 feet to a 1/2-inch iron rod with a red plastic cap stamped "W.A.I." set for the Northeast corner of said Lot 1, said point also being the most Northwesterly corner of Lot 2, Block A, of said Cattlemans Crossing Addition;

THENCE South 18 deg 46 min 31 sec West, departing said Southerly right-of-way dedication of proposed County Road No. 98, along the East line of said Lot 1 and the most Northerly West line of said Lot 2, a distance of 300.09 feet to a 1/2-inch iron rod with a plastic cap stamped "3688" found for the Southeast corner of said Lot 1;

THENCE South 86 deg 40 min 03 sec West, along the South line of said Lot 1 and the most Westerly North line of said Lot 2, a distance of 329.74 feet to PK nail found for corner on the Easterly right-of-way of said State Highway No. 289, said point being the Southwest corner of said Lot 1 and the most Westerly Northwest corner of said Lot 2;

THENCE North 14 deg 57 min 31 sec East, along the Easterly right-of-way of said State Highway No. 289 and the West line of said Lot 1, a distance of 144.72 feet to a 1/2-inch iron rod with a red plastic cap stamped "W.A.I." set for corner;

THENCE North 18 deg 46 min 31 sec East, continuing along the Easterly right-of-way of said State Highway No. 289 and the West line of said Lot 1, a distance of 116.52 feet to the POINT OF BEGINNING.

CONTAINING within these metes and bounds 92,574 square feet or 2.125 acres of land, more or less. Bearings shown hereon are based upon the Geoshack V.R.S. (Virtual Reference System).

NOW, THEREFORE, KNOW ALL MEN BY THESE PRESENTS:

That CVS Pharmacy, Inc., acting herein by and through his/her(its) duly authorized officer(s), does hereby adopt this plat designating the herein above described property as 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 easement areas as shown, except that, if approved by the City Council of the City of Celina: (a) landscape improvements may be placed within the 15' utility easement area; (b) paving and curbing for driveways may be placed within the 24' fire lane, access and utility easement area; and (c) paving and curbing for driveways, parking lots and sidewalks, and landscape improvements may be placed within the drainage and detention easement area. 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 _____, 2013.

CVS PHARMACY, INC.,
a Rhode Island corporation

BY:_____
Name: Toni A. Motta
Title: Assistant Secretary

STATE OF RHODE ISLAND §
COUNTY OF PROVIDENCE §

I, the undersigned authority, a Notary Public in and for said county in said state, hereby certify that Toni A. Motta, whose name is signed to the foregoing instrument as Assistant Secretary of CVS Pharmacy, Inc. and who is known to me, acknowledged before me on this day that, being informed of the contents of said instrument, she executed the same voluntarily on behalf of CVS Pharmacy, Inc. on the day the same bears date.

GIVEN UNDER MY HAND AND OFFICIAL SEAL this the ____ day of _____, 2013.

_____
Notary Public in and for the State of Rhode Island

My Commission Expires:_____

SURVEYOR'S CERTIFICATE

KNOW ALL MEN BY THESE PRESENTS:

That I, Leonard J. Lueker, 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.

_____
Leonard J. Lueker
Registered Professional Land Surveyor Date:_____
Texas Registration No. 5714
Winkelmann & Associates, Inc.
6750 Hillcrest Plaza Drive, Suite 325
Dallas, Texas 75230 Phone: (972) 490-7090

STATE OF TEXAS §
COUNTY OF DALLAS §

BEFORE ME, a Notary Public in and for The State of Texas, on this day personally appeared Leonard J. Lueker, Registered Public Land Surveyor, known to me to be the person and officer whose name is subscribed to the foregoing instrument, and acknowledged to me that he executed the same for the purposes and considerations therein expressed and in the capacity therein stated.

GIVEN UNDER MY HAND AND SEAL OF OFFICE this the ____ day of _____, 2013.

_____
Notary Public, in and for the State of Texas
My Commission expires on: _____

STANDARD 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. 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 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.
3. 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.
4. 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. The city shall have the right but not the obligation to maintain any and all landscaping within the VAM Easement. Should the city exercise this maintenance right, then is 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 add any landscape Improvements to the VAM Easement, to erect any traffic control devices or signs on the VAM Easement and to remove any 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.

DRAINAGE AND DETENTION EASEMENT

This plat is hereby adopted by the Owners and approved by the City of Celina ("City") subject to the following conditions which shall be binding upon the Owners, their heirs, grantees, successors and assigns. The Portion of Block A, Lot 1R, as shown on this plat is called a "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 lots 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 Drainage and Detention 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 liable for any damages of any nature resulting from the failure of any structure or structures, within the Drainage and Detention Easement.

APPROVAL BLOCK

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

CONSTRUCTION PLAT
CATTLEMANS CROSSING ADDITION
BEING A REPLAT OF
LOT 1, BLOCK A, CATTLEMANS CROSSING ADDITION
COLLIN COUNTY SCHOOL LAND SURVEY, ABSTRACT NO. 167
CITY OF CELINA, COLLIN COUNTY, TEXAS

SURVEYOR
Winkelmann & Associates, Inc.
6750 Hillcrest Plaza Drive, Ste. 325
Dallas, TX 75230
(972) 490-7090 office
(972) 490-7099 fax

OWNER
CVS PHARMACY, INC.
One CVS Drive
Woonsocket, RI 02895

Winkelmann & Associates, Inc.
CONSULTING CIVIL ENGINEERS ■ SURVEYORS
6750 HILLCREST PLAZA DRIVE, SUITE 325 (972) 490-7090
DALLAS, TEXAS 75230 (972) 490-7099 FAX
Texas Engineer Registration No. 89
Texas Surveyor Registration No. 100703

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COLLIN COUNTY SCHOOL LAND SURVEY, ABSTRACT NO. 167
CITY OF CELINA
COLLIN COUNTY, TEXAS

CVS PHARMACY, INC.
ONE CVS DRIVE
WOONSOCKET, RI 02895

CONSTRUCTION PLAT
CATTLEMANS CROSSING ADDITION
2.125 ACRES

Date : 08.05.13
Scale : N/A
File : 70195-RPLT
Project No. : 70195

SHEET 2 OF 2

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P-201311-03

CRITERIA CHECKLIST

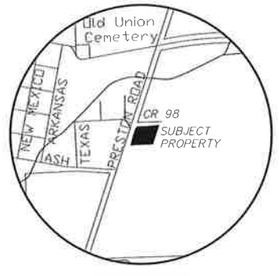
PROJECT DATA	
PARKING PROVIDED	73 SPACES
PARKING REQUIRED	73 SPACES (1 PARKING SPACE / 200 SF OF GROSS FLOOR AREA)
LOADING AREA PROVIDED	1 SPACE
LOADING AREA REQUIRED	1 SPACE
LAND INFORMATION	
LOT/BLOCK	LOT 1, BLOCK A
DETENTION EVALUATION	DETENTION IS REQUIRED AND PROVIDED UNDERGROUND
OFF SITE IMPROVEMENTS	ACCESS
EASEMENTS	ACCESS
ZONING INFORMATION	
EXISTING ZONING	PRESTON OVERLAY DISTRICT; C-1
ADJACENT ZONING	PRESTON OVERLAY DISTRICT; C-1
BUILDING HEIGHT LIMIT	45'
OPERATIONS INFORMATION	
DRIVE-THRU ALLOWED	YES
24-HOUR SERVICE ALLOWED	YES
BEER / WINE SALES ALLOWED	SEPARATE APPLICATION
MINUTE CLINIC ALLOWED AND PERMITTED USE	YES
LANDSCAPE INFORMATION	
EXTERNAL REQUIREMENTS	40' L.B. ALONG PRESTON; 25' L.B. ALONG CR 98
INTERNAL REQUIREMENTS	10% OF PARKED AREA
STORM & UTILITY INFORMATION	
STORM AVAILABILITY	INTERSECTION
ELECTRIC AVAILABILITY	ALONG PRESTON RD.
TELEPHONE AVAILABILITY	ALONG PRESTON RD.
CABLE AVAILABILITY	ALONG PRESTON RD.
WATER AVAILABILITY	ALONG PRESTON RD. & EAST SIDE OF PROPERTY
SEWER AVAILABILITY	ALONG PRESTON RD.
GAS AVAILABILITY	NOT AVAILABLE

SITE DATA

SITE AREA	TOTAL SITE AREA= 2.125 AC.	
PERVIOUS AREA	0.566 ACRES	
IMPERVIOUS AREA	1.559 ACRES (73.4%)	
MAXIMUM IMPERVIOUS AREA	80%	
BUILDING AREA	14,600 SF	
BUILDING DENSITY	14,600 S.F. (BLDG) / 92,582 S.F. (LOT) =15.77%	
MAXIMUM BUILDING DENSITY	N/A	
PARKING AREA	27,230 S.F.	
REQ'D INTERIOR LANDSCAPING	(10% OF PARKING AREA) = 2,723 S.F.	
PROVIDED INTERIOR LANDSCAPING	24,636 S.F.	
BUILDING SETBACK REQUIREMENTS	REQUIRED	PROVIDED
PRESTON RD.	60'	100'
CR 98	25'	133'
REAR YARD	25'	47.5'
SIDE YARD	15'	33'

SITE PLAN LEGEND

- TRANSFORMER BOX ON PAD
- (1) NUMBER OF PARKING SPACES
- ♿ ACCESSIBLE PARKING SPACES
- HEAVY DUTY CONCRETE SEE SHEET C-7 FOR PAVING SECTIONS
- STANDARD DUTY CONCRETE SEE SHEET C-7 FOR PAVING SECTIONS
- DUMPSTER PAVEMENT SEE SHEET C-7 FOR PAVEMENT SECTION
- A1 MONUMENT SIGN
- A2 MONUMENT SIGN
- DS DIRECTIONAL SIGN
- LA LANDSCAPE AREA



VICINITY MAP
NOT TO SCALE

BENCHMARKS

BM #1
"X" CUT AT MIDDLE FACE OF CURB INLET ON THE SOUTH SIDE OF COUNTY ROAD NO. 98, APPROX. 60.5' EAST OF PRESTON ROAD. ELEVATION: 723.96

BM #2
"X" CUT IN CONCRETE CURB AT THE NORTHEAST END OF A PARKING BAY ON THE NORTH SIDE OF CATTLEMAN'S CROSSING ADDITION, APPROX. 290' EAST OF THE CENTERLINE OF PRESTON ROAD, AND APPROX. 337' SOUTH OF THE CENTERLINE OF COUNTY ROAD NO. 98
ELEVATION = 737.38

ABBREVIATION LEGEND

ABBR.	DEFINITION
IRF	IRON ROD FOUND
CIRS	IRON ROD SET w/CAP STAMPED "WAI"
CIRF	IRON ROD FOUND w/CAP
XCS	"X" CUT IN CONCRETE SET
XCF	"X" CUT IN CONCRETE FOUND
PKS	PK NAIL SET
PKF	PK NAIL FOUND
PP	POWER POLE
GW	GUY WIRE
MH	MANHOLE

ABBREVIATION LEGEND

WV	WATER VALVE
TP	TELEPHONE PEDESTAL
WM	WATER METER
FH	FIRE HYDRANT
ICV	IRRIGATION CONTROL VALVE
CO	CLEANOUT
AC	AIR CONDITIONER
SB	SIGNAL BOX
SP	SIGNAL POLE
SN	SIGN
SS	SANITARY SEWER

ABBREVIATION LEGEND

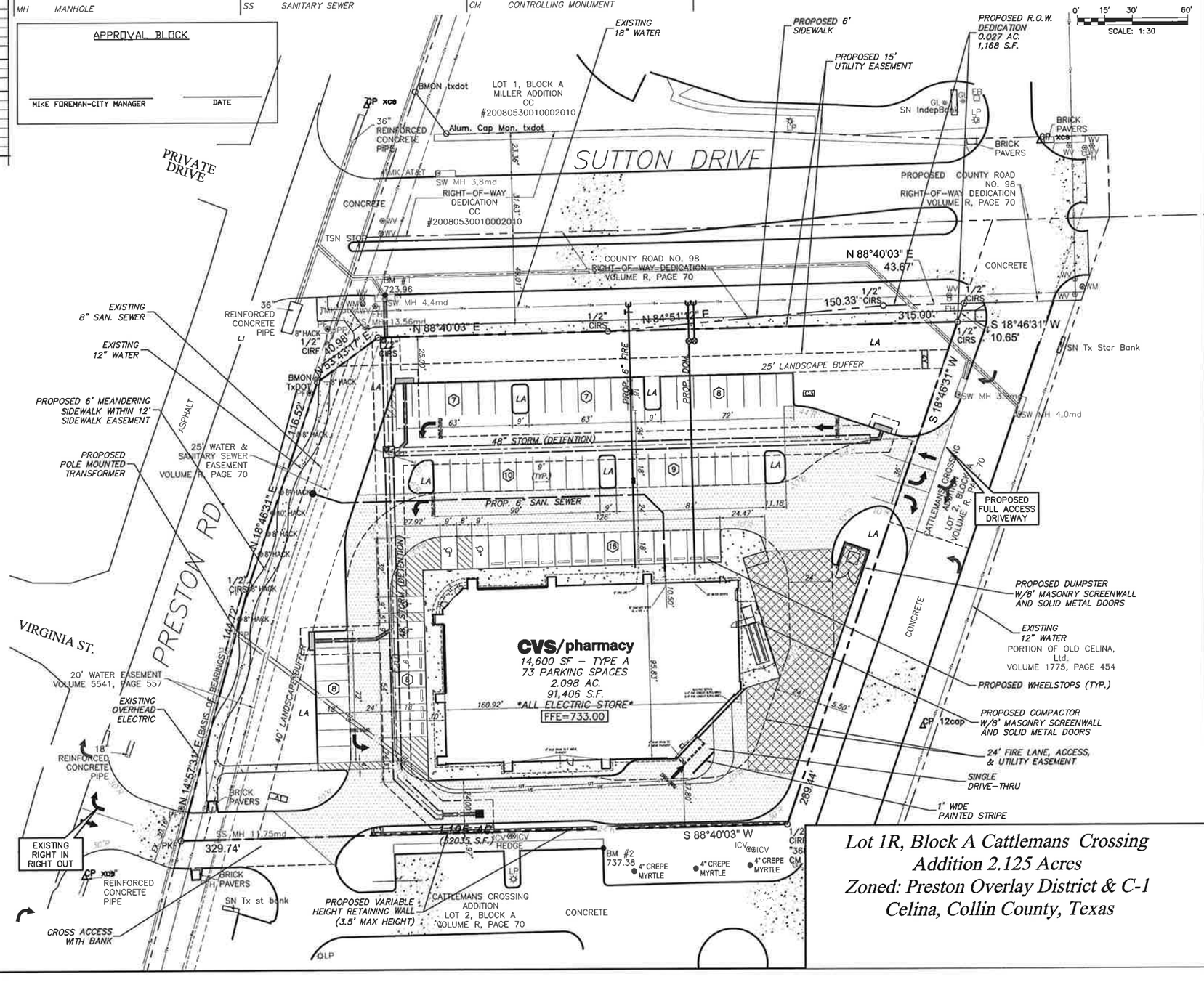
SW	STORM SEWER
TPAD	TRANSFORMER PAD
GM	GAS METER
GMK	GAS MARKER
TMK	TELEPHONE MARKER
TSN	TRAFFIC SIGN
UGC	UNDERGROUND CABLE MARKER
EB	ELECTRIC BOX
EM	ELECTRIC METER
CC#	COUNTY CLERK'S INSTRUMENT No.
CM	CONTROLLING MONUMENT

ABBREVIATION LEGEND

GI	GRATE INLET
IN	INLET
HC	HANDICAPPED
MP	METAL POST
MB	MAIL BOX
BILLB	BILLBOARD
GL	GROUND LIGHT
LP	LIGHT POLE

APPROVAL BLOCK

MIKE FOREMAN-CITY MANAGER _____ DATE _____



Lot 1R, Block A Cattlemans Crossing Addition 2.125 Acres
Zoned: Preston Overlay District & C-1
Celina, Collin County, Texas

CVS pharmacy®

SOUTHERN 14,600-LEFT CHAMFER DRIVE-THRU

STORE NUMBER: 10413

SEC OF PRESTON RD. & SUTTON DRIVE
CELINA, TEXAS
PROJECT TYPE: NEW
DEAL TYPE: FEE FOR SERVICE

CS PROJECT NUMBER: 72532

CIVIL ENGINEER:

Winkelmann & Associates, Inc.
CONSULTING CIVIL ENGINEERS ■ SURVEYORS
6750 HILLCREST PLAZA DR., SUITE 325 (972) 490-7090
DALLAS, TEXAS 75230 (972) 490-7099 FAX
Contact: Michael Doggett
Texas Engineers Registration No. 89
Texas Surveyors Registration No. 100866-00

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SEAL:

MICHAEL T. DOGGETT 98628 LICENSED PROFESSIONAL ENGINEER

REVISIONS:
1) 11/26/13 ISSUED FOR CONST.

FILE NAME: 70195-sp1.dwg
JOB NUMBER: 70195.00
DATE: August 27, 2013

TITLE: SITE PLAN

SHEET NUMBER: C-3

COMMENTS:

P-201311-03

G:\701\95\ENGINEERING\Construction Plans\70195-sp1.dwg

GENERAL PAVING NOTES

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CITY STANDARDS AND SPECIFICATIONS, WHERE CITY DETAILS ARE UNAVAILABLE OR UNCLEAR, STATE SPECIFICATIONS SHALL APPLY, AND STATE SPECIFICATIONS SHALL TAKE PRECEDENCE IN STATE RIGHT-OF-WAY(S).

2. CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL PLAN, AT LEAST 48 HOURS PRIOR TO ANY WORK IN A CITY STREET. TRAFFIC CONTROL MEASURES SHALL CONFORM TO THE CITY AND STATE WORK ZONE TRAFFIC CONTROL MANUALS. TRAFFIC CONTROL MEASURES SHALL BE INSTALLED FOR ANY WORK ACTIVITY THAT TAKES PLACE ON OR ADJACENT TO ANY CITY STREET OR ROADWAY. THE CITY ENGINEER MAY REQUIRE THE TRAFFIC CONTROL PLAN TO BE DESIGNED AND SEALED BY AN ENGINEER LICENSED IN THE STATE.

3. CONTACT TRAFFIC ENGINEERING DIVISION AT LEAST 48 HOURS PRIOR TO WORK REQUIRING THE REMOVAL OR RELOCATION OF TRAFFIC SIGNS, TRAFFIC CONTROL EQUIPMENT OR OTHER TRAFFIC CONTROL APPURTENANCES.

4. CONTRACTOR SHALL FIELD VERIFY HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UTILITIES BEFORE CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR PROTECTING EXISTING UTILITIES (SHOWN OR NOT SHOWN) WITHIN SCOPE OF CONSTRUCTION. IF ANY EXISTING UTILITIES ARE DAMAGED, THE CONTRACTOR SHALL REPLACE THEM AT HIS OWN EXPENSE.

5. CONTRACTOR SHALL FURNISH ALL PAVEMENT MARKINGS FOR FIRE LANES, PARKING STALLS, HANDICAPPED PARKING SYMBOLS, AND MISC. STRIPING WITHIN PARKING LOT AND AROUND BUILDING AS SHOWN ON THE PLANS. SEE ARCH. PLANS FOR PARKING LOT STRIPING DETAILS ADJACENT TO BUILDING.

6. ALL DIMENSIONS SHOWN ARE TO FACE OF CURB UNLESS INDICATED OTHERWISE.

7. ALL CURB RADII ON FIRE LANES ARE AS NOTED.

8. THE CONTRACTOR SHALL SUBMIT A JOINT LAYOUT PLAN TO THE ENGINEER FOR APPROVAL PRIOR TO THE START OF PAVEMENT CONSTRUCTION.

9. ALL JOINTS SHALL EXTEND THROUGH THE CURB.

10. MINIMUM LENGTH OF OFFSET JOINTS AT RADIUS POINTS IS 1.5 FEET.

11. ALL JOINTS, INCLUDING EXPANSION JOINTS WITH REMOVABLE TACK STRIPS, SHALL BE SEALED WITH JOINT SEALANT.

12. TRANSVERSE JOINTS MAY BE SKEWED OR ADJUSTED BY SHIFTING TO MEET MANHOLES, INLETS, OTHER STRUCTURES, ETC.

13. ALL REINFORCING STEEL, SHALL BE NEW DOMESTIC BILLET STEEL CONFORMING TO ASTM A-615, GRADE 50, AND SHALL BE SUPPORTED BY BAR CHAIRS.

14. SEE ARCHITECTURAL PLANS FOR PAVEMENT WITHIN GARDEN AREA, MISCELLANEOUS REINFORCED CONCRETE SIDEWALK ADJACENT TO BUILDING, TRUCK DOCK RETAINING WALLS, PATTERNED CONCRETE WARNING STRIP ADJACENT TO BUILDING, AND EXACT LOCATION OF PYLON SIGN.

15. SEE IRRIGATION PLAN FOR LOCATION OF PROPOSED SLEEVING.

16. ALL PARKING LOT STRIPING TO BE YELLOW.

SITE GRADING GENERAL NOTES

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CITY STANDARDS, SPECIFICATIONS, AND DETAILS. STATE SPECIFICATIONS SHALL TAKE PRECEDENCE IN STATE RIGHT-OF-WAY(S).

2. VEGETATION, DEBRIS, AND TOPSOIL CONTAINING ORGANIC MATERIALS SHOULD BE CLEARED AND GRUBBED FROM THE ENTIRE SITE (APPROX. DEPTH OF 8 INCHES) AT THE BEGINNING OF EARTHWORK.

3. REFERENCE CIVIL SPECIFICATIONS AND PLAN SHEETS FOR PAVEMENT SUBGRADE PREPARATION REQUIREMENTS. REFERENCE ARCHITECTURAL SPECIFICATIONS FOR BUILDING PAD PREPARATION.

4. PROPOSED CONTOURS AND SPOT ELEVATIONS SHOWN IN PAVED AREAS REFLECT TOP OF PAVEMENT SURFACE OR TOP OF CURB AT CURB LINE. THE LIMITS OF EARTHWORK IN PAVED AREAS IS THE BOTTOM OF PAVEMENT. PROPOSED CONTOURS SHOWN OUTSIDE PAVED AREAS ARE THE EXACT LIMITS OF GRADING.

5. THE CONTRACTOR SHALL FIELD VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL EXISTING UTILITIES PRIOR TO START OF EARTHWORK AND SHALL NOTIFY THE ARCHITECT AND ENGINEER OF ANY CONFLICTS DISCOVERED. CONTRACTOR IS RESPONSIBLE FOR PROTECTING EXISTING UTILITIES (SHOWN OR NOT SHOWN) WITHIN SCOPE OF CONSTRUCTION. IF ANY EXISTING UTILITIES ARE DAMAGED, THE CONTRACTOR SHALL REPLACE THEM AT HIS OWN EXPENSE.

6. THE CONTRACTOR SHALL MAINTAIN ADEQUATE SITE DRAINAGE DURING ALL PHASES OF CONSTRUCTION. THE CONTRACTOR SHALL USE SILT FENCES (OR OTHER METHOD APPROVED BY THE CITY) AS REQUIRED TO PREVENT SILT AND CONSTRUCTION DEBRIS FROM FLOWING ONTO ADJACENT PROPERTIES. CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE FEDERAL, STATE, OR LOCAL EROSION, CONSERVATION, AND SILTATION ORDINANCES. CONTRACTOR SHALL REMOVE ALL TEMPORARY EROSION CONTROL DEVICES UPON COMPLETION OF PERMANENT DRAINAGE FACILITIES AND THE ESTABLISHMENT OF A STAND OF GRASS OR OTHER GROWTH TO PREVENT EROSION.

7. ROUGH GRADING UNDER PROPOSED PAVING AND ALL GENERAL SITE ROUGH GRADING SHALL BE BROUGHT TO WITHIN +/- 0.1 FOOT. ROUGH GRADING ELEVATIONS IN PAVED AREAS ARE TO BOTTOM OF PAVEMENT, SEE LANDSCAPE PLANS FOR ADDITIONAL GRADING ELEVATIONS IN LANDSCAPED AREAS.

8. FOR ALL WORK WITHIN STATE OR CITY RIGHT OF WAY, THE CONTRACTOR SHALL:
   A. NOTIFY THE STATE OR CITY A MINIMUM OF 2 WORKING DAYS PRIOR TO BEGINNING CONSTRUCTION AND HAVE ALL NECESSARY PERMITS.
   B. NOT STORE MATERIAL, EXCESS DIRT OR EQUIPMENT ON THE SHOULDERS OF PAVEMENT OR IN MEDIAN STRIPS. THE PAVEMENT SHALL BE KEPT CLEAN, FREE OF ANY MUD OR EXCAVATION WASTE FROM TRUCKS OR OTHER EQUIPMENT. ON COMPLETION OF THE WORK, ALL DEBRIS AND EXCESS MATERIAL SHALL BE REMOVED FROM THE RIGHT OF WAY.
   C. PROVIDE ALL NECESSARY AND ADEQUATE SAFETY PRECAUTIONS SUCH AS SIGNS, FLAGMEN, LIGHTS, AND BARRICADES AS REQUIRED BY THE CITY AND IN ACCORDANCE WITH THE STATE MUTCD. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR AND HOLD HARMLESS THE STATE, THE CITY, AND THE OWNER FROM ANY CLAIMS FOR DAMAGE DONE TO EXISTING PRIVATE PROPERTY, PUBLIC UTILITIES, OR TO THE TRAVELING PUBLIC.
   D. POST NECESSARY BONDS AS REQUIRED BY THE CITY AND/OR THE STATE.

9. THE CONTRACTOR SHALL TAKE ALL AVAILABLE PRECAUTIONS TO CONTROL DUST. CONTRACTOR SHALL CONTROL DUST BY SPRINKLING WATER, OR BY OTHER MEANS APPROVED BY THE ARCHITECT, ENGINEER, AND THE OWNER, AT NO ADDITIONAL COST TO THE OWNER.

10. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING ANY EXISTING STRUCTURES, FENCES, DEBRIS, OR TREES ON SITE, AND SHALL COORDINATE ALL REMOVAL WITH THE GENERAL CONTRACTOR. NO TREES OR OTHER ITEMS SHALL BE REMOVED WITHOUT THE APPROVAL OF THE ARCHITECT, ENGINEER, AND OWNER. ALL TREES NOT REMOVED SHALL BE GUARDED AND PRESERVED DURING CONSTRUCTION. IF DAMAGED, THE EXISTING TREE WILL BE REPLACED (EQUAL CALIPER) AT THE CONTRACTOR'S EXPENSE.

11. THE CONTRACTOR SHALL ESTABLISH VEGETATION ON ALL DISTURBED AREAS OF THE SITE. SUPPLY OF WATER AS NEEDED FOR VEGETATION GROWTH SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

12. ALL EXCAVATING IS UNCLASSIFIED AND SHALL INCLUDE ALL MATERIALS ENCOUNTERED. UNUSABLE EXCAVATED MATERIAL AND ALL WASTE RESULTING FROM SITE CLEARING AND GRUBBING SHALL BE DISPOSED OF OFF SITE BY THE GRADING CONTRACTOR AT HIS EXPENSE.

13. BEFORE ANY EARTHWORK IS DONE, THE CONTRACTOR SHALL STAKE OUT AND MARK THE LIMITS OF PAVEMENT AND OTHER ITEMS ESTABLISHED BY THE PLANS. THE CONTRACTOR SHALL PROTECT AND PRESERVE CONTROL POINTS AT ALL TIMES DURING THE COURSE OF THE PROJECT. THE GRADING CONTRACTOR SHALL PROVIDE ALL NECESSARY ENGINEERING AND SURVEYING FOR LINE AND GRADE CONTROL POINTS RELATED TO EARTHWORK.

14. THE CONTRACTOR SHALL SALVAGE AND PROTECT ALL EXISTING POWER POLES, SIGNS, MANHOLES, TELEPHONE RISERS, WATER VALVES, ETC. DURING ALL CONSTRUCTION PHASES.

NOTE: THE GENERAL NOTES APPLY TO ALL SHEETS. CITY GENERAL NOTES SUPERCEDE THESE NOTES.

WATER AND SANITARY SEWER GENERAL NOTES

1. ALL CONSTRUCTION MATERIALS AND PROCEDURES SHALL ADHERE TO CITY STANDARD DETAILS AND SPECIFICATIONS AND NCTCOG PUBLIC WORKS CONSTRUCTION STANDARDS. ALL MATERIALS SHALL BE U.L. LISTED AND FACTORY MUTUAL APPROVED UNLESS DIRECTED OTHERWISE BY THE ARCHITECT, ENGINEER, OR THE CITY.

2. THE CONTRACTOR SHALL FIELD VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UTILITIES PRIOR TO START OF CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND ARCHITECT IMMEDIATELY IF A CONFLICT IS DISCOVERED.

3. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS SHOWN, COORDINATING THE HORIZONTAL AND VERTICAL LOCATION OF ALL UTILITY SERVICES ENTERING THE BUILDING AND/OR CROSSING OTHER UTILITIES.

4. ALL WATER AND SANITARY SEWER SERVICES SHALL TERMINATE 5 FEET OUTSIDE THE BUILDING, EXCEPT THE FIRE SPRINKLER LINE SHALL BE PLUGGED INSIDE OF THE BUILDING, AND UNLESS NOTED OTHERWISE. THE END OF THESE SERVICES SHALL BE TIGHTLY PLUGGED OR CAPPED AND MARKED UNTIL THE CONNECTION IS MADE TO THE BUILDING PIPING.

5. THE SITE UTILITY CONTRACTOR SHALL PROVIDE ALL MATERIALS AND APPURTENANCES NECESSARY FOR COMPLETE INSTALLATION OF THE UTILITIES. ALL PIPE, STRUCTURES, AND FITTING INSPECTED BY THE CITY WATER DEPARTMENT AND/OR CODE ENFORCEMENT INSPECTOR PRIOR TO BEING COVERED. THE INSPECTOR MUST ALSO BE PRESENT DURING DISINFECTION AND PRESSURE TESTING OF ALL MAINS.

6. ALL WATER MAINS ARE TO BE AS SHOWN ON THE DRAWINGS. WATER MAINS SHALL HAVE A MIN. COVER OF 42 INCHES FROM FINISHED GRADE TO TOP OF PIPE AND SHALL BE BEDDED AND BACKFILLED IN ACCORDANCE WITH CITY STANDARD DETAILS. ALL FIRE HYDRANTS, BENDS AND PIPE ENDS SHALL BE BLOCKED WITH CONCRETE PER CITY STANDARD DETAILS.

7. ALL WATER SERVICES 3 INCHES AND SMALLER SHALL BE TYPE 'K' COPPER.

8. ALL FIRE HYDRANTS SHALL BE PRIMED AND PAINTED WITH A MACHINE IMPLEMENT GRADE ENAMEL PAINT. THE HYDRANT BODY AND BONNET SHALL BE PAINTED IN ACCORDANCE CITY STANDARDS.

9. ALL APPURTENANCES USED FOR FIRE PROTECTION SHALL CONFORM TO THE CURRENT CITY FIRE DEPARTMENT STANDARDS AND SPECIFICATIONS.

10. FIRE SPRINKLER LINE SHALL BE SIZED AND INSTALLED BY A STATE LICENSED FIRE SPRINKLER CONTRACTOR.

11. ALL SANITARY SEWER MAINS AND LATERALS SHALL BE SDR 35 PVC (ASTM 3034). SANITARY SEWER LINES SHALL BE BEDDED AND BACKFILLED IN ACCORDANCE WITH CITY STANDARD DETAILS.

12. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR SITE TRENCH SAFETY DURING ALL PHASES OF CONSTRUCTION. THE CONTRACTOR SHALL SUBMIT A TRENCH EXCAVATION PROTECTION PLAN PREPARED, SIGNED, AND SEALED BY A GEOTECHNICAL ENGINEER REGISTERED IN THE STATE, FOR ALL CONSTRUCTION IN EXCAVATIONS DEEPER THAN 5 FEET, PRIOR TO START OF CONSTRUCTION. SAID SAFETY PLAN SHALL CONFORM TO ALL APPLICABLE FEDERAL AND STATE LAWS REGARDING EXCAVATING AND TRENCHING OPERATIONS.

13. THE CITY WILL INSPECT ALL "PUBLIC" CONSTRUCTION. THE CONTRACTOR'S BID PRICE SHALL INCLUDE ALL INSPECTION FEES.

14. FIRE HYDRANTS & WATER METERS TO BE PROTECTED BY EITHER 6" CURB OR BOLLARDS.

CVS pharmacy®

SOUTHERN 14,600-LEFT CHAMFER DRIVE-THRU

STORE NUMBER: 10413

SEC OF PRESTON RD. & SUTTON DRIVE
CELINA, TEXAS
PROJECT TYPE: NEW
DEAL TYPE: FEE FOR SERVICE

CS PROJECT NUMBER: 72532

CIVIL ENGINEER:

Winkelmann & Associates, Inc.
CONSULTING CIVIL ENGINEERS ■ SURVEYORS
8750 HILLCREST PLAZA DR., SUITE 325 (972) 490-7090
DALLAS, TEXAS 75230 (972) 490-7099 FAX
Contact: Michael Doggett
Texas Engineers Registration No. 89
Texas Surveyors Registration No. 100866-00

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DEVELOPER:

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TEL: (205)408-3443
FAX: (205)408-1850

SEAL:

REVISIONS:
1) 11/26/13 ISSUED FOR CONST.

FILE NAME: 70195-gen.dwg
JOB NUMBER: 70195.00
DATE: August 27, 2013
TITLE: GENERAL NOTES
SHEET NUMBER: C-4.1
COMMENTS:

P-201311-03

City of Celina
CONSTRUCTION GENERAL NOTES – Revised 8/1/2013

GENERAL

1. All construction shall be in accordance with the latest revision of the North Central Texas Council of Governments "Standard Specifications for Public Works Construction" including the Standard Drawings therein and the City of Celina's addendum thereto. Contractor shall have at least one set of approved Engineering Plans and Specifications on-site at all times.

2. Before beginning construction, the contractor shall prepare a construction sequence schedule. The construction schedule shall be such that there is minimum interference with traffic along or adjacent to the project.

3. Construction may not begin earlier than 7:00 A.M. on weekdays nor continue after dark without permission from the City of Celina. Construction on holidays and Saturday must be approved two days in advance. A fee of $300.00 a day for working on holidays and Saturday will be accessed payable to the city before work is performed. Work may not begin before 8:00 A.M. on holidays and Saturday and work on Sunday is prohibited without special permission and payment of fees.

4. Utilities shown on the plans were taken from field surveys and information provided by the utility companies. The completeness and the accuracy of this data is not guaranteed.

   The contractor is responsible for verifying the location of all underground utilities and structures and protecting them from damage during construction.

   It will be the responsibility of each contractor to protect all existing public and private utilities throughout the construction of this project. Contractor shall contact the appropriate utility companies for line location prior to commencement of construction and shall assume full liability to those companies for any damages caused to their facilities.

DIG TESS	800-DIG-TESS
GCEC-TELECOM	903-482-7274
GCEC-ELECTRIC	903-821-3007
AT&T	972-569-3013
ATMOS ENERGY	972-881-4161
ATMOS ENERGY	214-341-9900
CROSSTEX ENERGY	817-570-6753
ONEOK	903-257-6594
COSERV-ELEC	940-321-7800
COSERV-GAS	940-321-7800
CITY OF CELINA	972-382-2682
TOWN OF PROSPER	972-347-9969
MARILEE SUD	972-382-3222
GRANDE	972-410-0583
SUDDEN LINK	469-853-0486

5. Work may not be backfilled or covered until the City has inspected it.

6. Material testing shall be performed by an independent testing laboratory and paid for by the Contractor. The following material tests shall be provided by the Contractor:

   a. Embankment - One soil density test shall be performed at each location for each 500 C.Y. of backfill placed.
   b. Pavement Sub grade - One gradation test (where lime stabilized) and one soil density test shall be performed for each 300 linear feet of pavement unless otherwise noted. Gradations must pass 100% through a 1 ¾" sieve and 60% through a #4 sieve.
   c. Utility Trench Backfill - One soil density test shall be performed at 300 feet intervals or as directed by the Inspector.
   d. Concrete Tests:
      (1). Compressive Strength - Four test cylinders shall be taken from a representative portion of the concrete being placed for every 150-cubic yards of concrete pavement placed, but in no case shall less than 2 sets of cylinders be taken from any one day's placement.)
      (2). Air, slump, and temperature tests shall be taken for every set of cylinders made. Concrete with a temperature above 95° F will be rejected.
      (3). Additional cylinders and/or tests may be required at the Inspector's discretion.

   The City shall select the location and depth of each soil density test unless otherwise directed.

7. All excavation on the project is unclassified.

8. Temporary erosion control shall be used to minimize the spread of silt and mud from the project on to existing streets, alleys, drainage ways and public and private property. Temporary erosion controls may include silt fences, rock check dams, stabilized construction entrances, straw bales, berms, dikes, swales, strips of undisturbed vegetation, check dams and other methods as required by the City Manager or his representative and shall conform to the Storm Water Quality Best Management Practices for Construction Activities as published by the North Central Texas Council of Governments and the City of Celina Erosion and Sediment Control Manual.

9. Finished slopes on public rights-of-way and easements shall not be steeper than 4:1. All slopes steeper than 6:1 shall be covered with erosion control matting and are hydro mulched and maintained by the contractor until grass covers all parts of the slope.

10. The contractor shall maintain two-way traffic at all times along the project.

11. Remove, salvage and replace all street and traffic control signs, which may be damaged by the construction of the project.

12. All trenching and excavation shall be performed in accordance with OSHA standards. Trench safety design will be the responsibility of the Contractor. Contractor shall submit a trench safety design approved by a professional engineer to the City for review prior to the start of any underground utility construction.

PAVING

1. All embankments shall be compacted to 95% Standard Proctor density.

2. All streets and alleys shall be placed on lime stabilized sub grade with a lime content of not less than 7%. or as approved by city engineer.

3. The minimum 28 day compressive strength of concrete street paving shall not be less than 3600 psi and shall be air entrained. Water may not be applied to the surface of concrete paving to improve workability.

4. All curb and gutter shall be integral with the pavement.

5. Parabolic crowns are required on all street pavements except on major thoroughfares where straight sections are required.

6. Streets and alleys shall be constructed with provisions for sidewalk ramps at all intersections.

DRAINAGE

1. Storm sewer pipe shall be reinforced concrete, Class III unless otherwise noted.

2. All structural concrete shall be Class "C" (3600 psi compressive strength at 28 days), air entrained.

3. The contractor shall install plugs in storm sewer lines or otherwise prevent mud from entering the storm sewer system during construction.

WATER AND SANITARY SEWER

1. Water mains shall be AWWA C-900 or 905 PVC Class 200 unless otherwise noted. Minimum cover for waterlines is 48" below top of curb, 60" where no curbed street is present or as required to clear existing utilities, whichever is greater. Class B+ embedment unless otherwise noted.

2. All utility trench backfill shall be performed in 12" loose lifts and mechanically compacted with approved vibratory methods.

3. Marking tape shall be installed one foot above and over PVC water lines.

4. Fittings for PVC water lines shall be ductile iron and be encased in a polyethylene sheath.

5. All Mechanical Joints will be restrained. (Mega-Lug etc.)

6. Valves, including tapping valves shall be resilient seat gate valves, unless noted otherwise.

7. All direct burial valves shall be provided with cast iron valve boxes with PVC stacks. Valve stacks shall be vertical and concentric with the valve stem. Stainless steel valve extensions are required on all valves where the operating nut is greater than 4 feet below finished grade.

8. Fire hydrants shall be Waterous or equal as directed or approved by the City of Celina on a case by case basis and field painted silver with bonnet and caps color-coded to pipe size.
   a. Six inch line- silver body with RED bonnet and caps.
   b. Eight inch line- silver body with BLUE bonnet and caps.
   c. Ten inch line- silver body with GREEN bonnet and caps.
   d. Twelve inch and larger- silver body with YELLOW bonnet and caps.

9. All exposed bolting on any buried equipment or material shall be stainless steel. Included are:
   a. Bonnet and stuffing box bolts on valves.
   b. Shoe bolts on fire hydrants.
   c. Flange bolts.
   d. "Cor-ten" mechanical joint "T" bolts are acceptable for direct burial service.

10. Meter boxes shall approved by the City of Celina.

10. Sanitary sewer mains shall be DR 35 PVC. Class H embedment unless otherwise noted.
   a. The contractor shall install and maintain watertight plugs in all connections to the City's sanitary sewer system until the City accepts the project.
   b. All sanitary sewer lines and manholes shall be leak tested before the project is accepted. Deflection testing of PVC sewer lines is required. Deflection shall be tested with a mandrel for 5% deflection.
   c. All sewer lines shall be video inspected with a copy of the video and station report submitted to the Inspector.
   d. Mandrel, Air Test, and Video inspection shall not be performed until all utilities are complete, in place, and backfilled.

NOTE: THE GENERAL NOTES APPLY TO ALL SHEETS.

CVS pharmacy®

SOUTHERN 14,600-LEFT CHAMFER DRIVE-THRU

STORE NUMBER: 10413

SEC OF PRESTON RD. & SUTTON DRIVE
CELINA, TEXAS
PROJECT TYPE: NEW
DEAL TYPE: FEE FOR SERVICE

CS PROJECT NUMBER: 72532

CIVIL ENGINEER:

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SEAL:

REVISIONS:
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FILE NAME: 70195-gen.dwg
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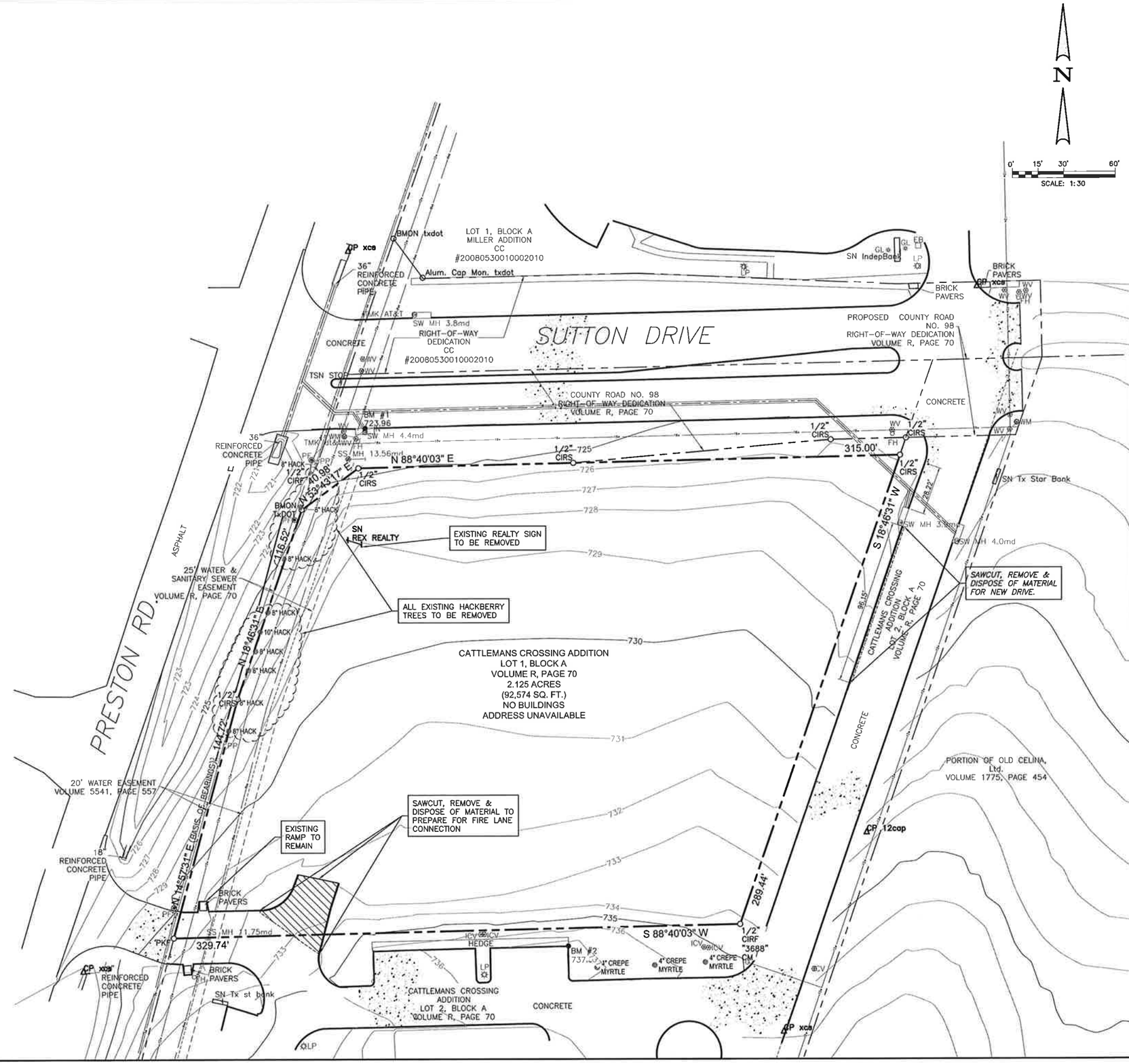
DATE: August 27, 2013
TITLE: GENERAL NOTES
SHEET NUMBER: C-4.2
COMMENTS:

P-201311-03



Texas 811

NOTICES TO CONTRACTOR

EXISTING UNDERGROUND/BURIED PUBLIC, PRIVATE, AND FRANCHISE UTILITIES/FACILITIES AFFECT THIS SITE, AND ARE DEPICTED ON THE PLANS PER THE BEST AVAILABLE INFORMATION AT THE TIME THE PLANS WERE PRODUCED. WINKELMANN & ASSOC., INC. SHALL NOT BE RESPONSIBLE FOR KNOWING THE EXACT LOCATION OF ALL FACILITIES OR DEPICTING EXACT LOCATIONS OF SAID FACILITIES ON THE PLANS BEYOND WHAT IS STATED ABOVE.

CONTRACTOR(S) SHALL CALL "811" A MINIMUM OF 48 HOURS PRIOR TO BEGINNING WORK ON THE SITE, AND SHALL NOT BEGIN ANY EXCAVATION OR DEMOLITION ACTIVITES UNTIL AFTER SAID FACILITIES HAVE BEEN MARKED AND/OR FLAGGED PER "811" OR THE FACILITY OWNERS.

CONTRACTOR(S) SHALL BE WHOLLY RESPONSIBLE FOR ANY DAMAGE THAT MAY OCCUR TO SAID FACILITIES DUE TO WORK BEING DONE WITHOUT FOLLOWING THE PROCEDURES ABOVE.

BENCHMARKS

BM #1
"X" CUT AT MIDDLE FACE OF CURB INLET ON THE SOUTH SIDE OF COUNTY ROAD NO. 98, APPROX. 60.5' EAST OF PRESTON ROAD.
ELEVATION: 723.96

BM #2
"X" CUT IN CONCRETE CURB AT THE NORTHEAST END OF A PARKING BAY ON THE NORTH SIDE OF CATTLEMAN'S CROSSING ADDITION, APPROX. 290' EAST OF THE CENTERLINE OF PRESTON ROAD, AND APPROX. 337' SOUTH OF THE CENTERLINE OF COUNTY ROAD NO. 98
ELEVATION = 737.38

G:\701\95\ENGINEERING\Construction Plans\70195-dem.dwg

CVS pharmacy®

SOUTHERN 14,600-LEFT CHAMFER DRIVE-THRU

STORE NUMBER: 10413

SEC OF PRESTON RD. & SUTTON DRIVE
CELINA, TEXAS
PROJECT TYPE: NEW
DEAL TYPE: FEE FOR SERVICE

CS PROJECT NUMBER: 72532

CIVIL ENGINEER:

Winkelmann & Associates, Inc.
CONSULTING CIVIL ENGINEERS ★ SURVEYORS
6750 HILLCREST PLAZA DR., SUITE 225 (972) 490-7090
DALLAS, TEXAS 75230 (972) 490-7095 FAX
Contact: Michael Doggett
Texas Engineers Registration No. 89
Texas Surveyors Registration No. 100866-00

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CONSULTANT:

DEVELOPER:

Orange Development Inc.
1200 Corporate Drive
Suite G-50
BIRMINGHAM, AL 35242
TEL: (205)408-3443
FAX: (205)408-1850

SEAL:

MICHAEL T. DOGGETT
98628
LICENSED
PROFESSIONAL ENGINEER
11-26-13

REVISIONS:
1) 11/26/13 ISSUED FOR CONST.

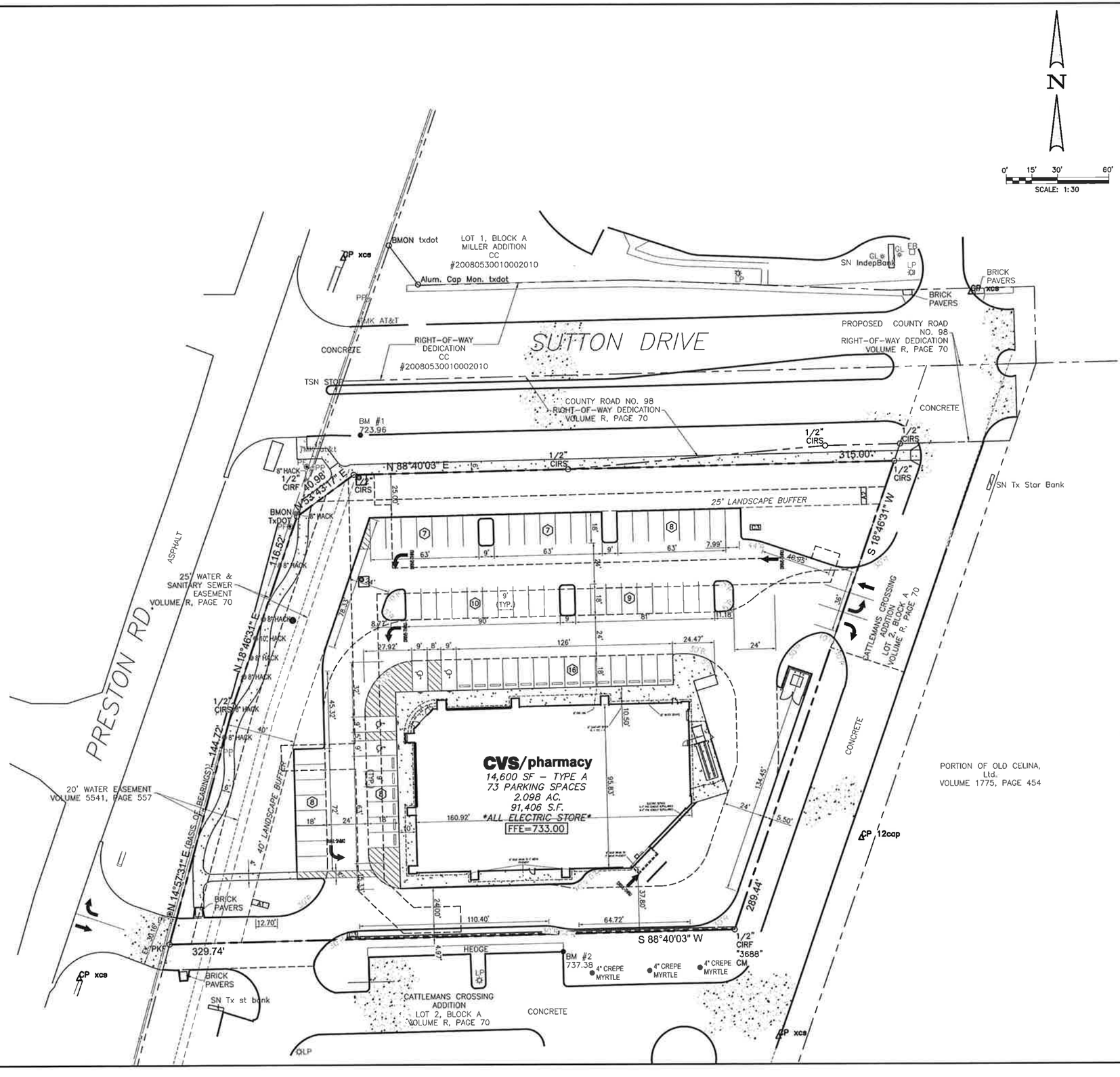
FILE NAME: 70195-DEM.DWG
JOB NUMBER: 70195.00
DATE: August 27, 2013

TITLE: EX. CONDITIONS DEMOLITION PLAN

SHEET NUMBER: C-5

COMMENTS:

P-201311-03



BENCHMARKS

BM #1
"X" CUT AT MIDDLE FACE OF CURB INLET ON THE SOUTH SIDE OF COUNTY ROAD NO. 98, APPROX. 60.5' EAST OF PRESTON ROAD.
ELEVATION: 723.96

BM #2
"X" CUT IN CONCRETE CURB AT THE NORTHEAST END OF A PARKING BAY ON THE NORTH SIDE OF CATTLEMAN'S CROSSING ADDITION, APPROX. 290' EAST OF THE CENTERLINE OF PRESTON ROAD, AND APPROX. 337' SOUTH OF THE CENTERLINE OF COUNTY ROAD NO. 98
ELEVATION = 737.38

Texas 811

G:\701\95\ENGINEERING\Construction Plans\70195-dim.dwg

CVS pharmacy®

SOUTHERN 14,600-LEFT CHAMFER DRIVE-THRU

STORE NUMBER: 10413

SEC OF PRESTON RD. & SUTTON DRIVE
CELINA, TEXAS
PROJECT TYPE: NEW
DEAL TYPE: FEE FOR SERVICE

CS PROJECT NUMBER: 72532

CIVIL ENGINEER:

Winkelmann & Associates, Inc.
CONSULTING CIVIL ENGINEERS ■ SURVEYORS
6750 HILLCREST PLAZA DR., SUITE 325 (972) 490-7090
DALLAS, TEXAS 75230 (972) 490-7099 FAX
Contact: Michael Doggett
Texas Engineers Registration No. 89
Texas Surveyors Registration No. 100866-00

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SEAL:

MICHAEL T. DOGGETT
98628
LICENSED
PROFESSIONAL ENGINEER
11-26-13

REVISIONS:
1) 11/26/13 ISSUED FOR CONST.

FILE NAME: 70195-dim.dwg
JOB NUMBER: 70195.00
DATE: August 27, 2013

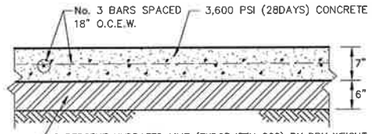
TITLE: DIMENSION CONTROL PLAN

SHEET NUMBER: C-6

COMMENTS:

P-201311-03

REFER TO GEOTECH REPORT PREPARED BY TERRACON CONSULTANTS, INC., PROJECT No. 94135125 DATED JUNE 4, 2013

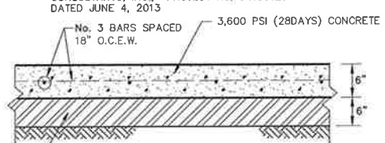


8 PERCENT HYDRATED LIME (TXDOT ITEM 260) BY DRY WEIGHT THOROUGHLY MIXED AND BLENDED WITH THE TOP 6 INCHES OF THE SUB GRADE. STABILIZATION SHOULD EXTEND A MINIMUM OF ONE FOOT BEYOND THE EDGE OF PAVEMENT. SUB GRADE COMPACTED TO 95% MINIMUM STANDARD PROCTOR DRY DENSITY (ASTM D-698) -1 TO +3 PERCENTAGE POINTS OF OPTIMUM MOISTURE CONTENT.

DUMPSTER PAVEMENT SECTION

N.T.S.

REFER TO GEOTECH REPORT PREPARED BY TERRACON CONSULTANTS, INC., PROJECT No. 94135125 DATED JUNE 4, 2013

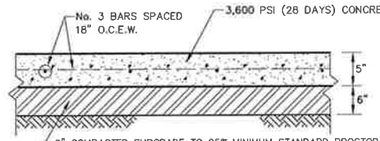


8 PERCENT HYDRATED LIME (TXDOT ITEM 260) BY DRY WEIGHT THOROUGHLY MIXED AND BLENDED WITH THE TOP 6 INCHES OF THE SUB GRADE. STABILIZATION SHOULD EXTEND A MINIMUM OF ONE FOOT BEYOND THE EDGE OF PAVEMENT. SUB GRADE COMPACTED TO 95% MINIMUM STANDARD PROCTOR DRY DENSITY (ASTM D-698) -1 TO +3 PERCENTAGE POINTS OF OPTIMUM MOISTURE CONTENT.

HEAVY DUTY CONCRETE PAVEMENT SECTION

N.T.S.

REFER TO GEOTECH REPORT PREPARED BY TERRACON CONSULTANTS, INC., PROJECT No. 94135125 DATED JUNE 4, 2013



6" COMPACTED SUBGRADE TO 95% MINIMUM STANDARD PROCTOR DRY DENSITY (ASTM D-698) -1 TO +3 PERCENTAGE POINTS OF OPTIMUM MOISTURE CONTENT, PER GEOTECH REPORT.

LIGHT DUTY CONCRETE PAVEMENT SECTION

N.T.S.

NOTE: SEE DIMENSIONAL CONTROL PLAN FOR STRIPING DIMENSIONS.

NOTE: ALL PARKING LOT STRIPING IS TO BE YELLOW.

4"-3,000 PSI CONCRETE SIDEWALK PER CITY OF CELINA STANDARDS. RAMPS PER CITY OF CELINA STANDARDS.

Texas 811

BENCHMARKS

BM #1
"X" CUT AT MIDDLE FACE OF CURB INLET ON THE SOUTH SIDE OF COUNTY ROAD NO. 98, APPROX. 60.5' EAST OF PRESTON ROAD.
ELEVATION: 723.96

BM #2
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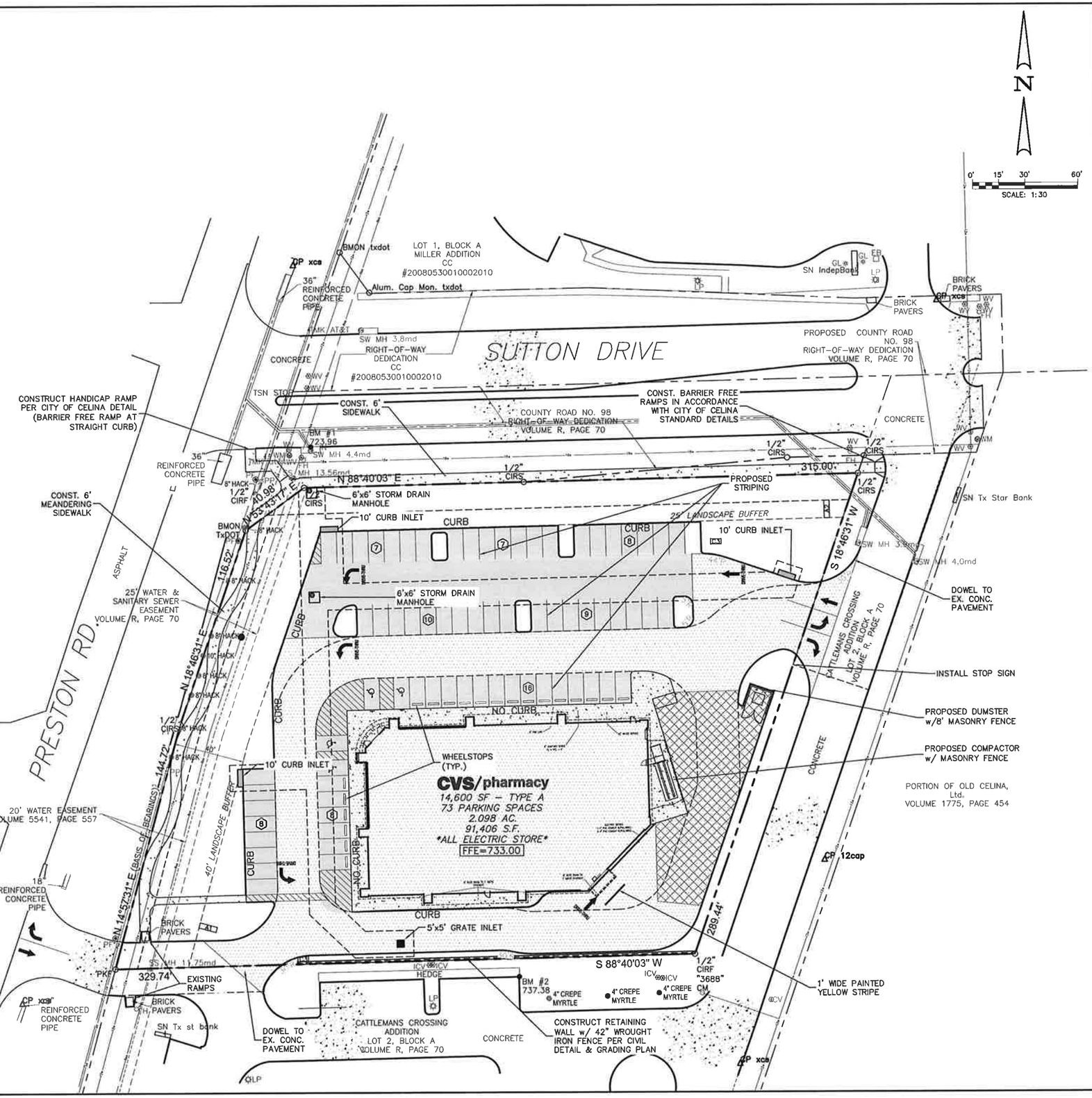
ELEVATION = 737.38



CVS pharmacy®

SOUTHERN 14,600-LEFT CHAMFER DRIVE-THRU

STORE NUMBER: 10413

SEC OF PRESTON RD. & SUTTON DRIVE
CELINA, TEXAS
PROJECT TYPE: NEW
DEAL TYPE: FEE FOR SERVICE

CS PROJECT NUMBER: 72532

CIVIL ENGINEER:

Winkelmann & Associates, Inc.
CONSULTING CIVIL ENGINEERS & SURVEYORS
6750 HILLCREST PLAZA DR., SUITE 315 DALLAS, TEXAS 75230
(972) 490-7090 (972) 490-7099 FAX
Contact: Michael Doggett
Texas Engineers Registration No. 89
Texas Surveyors Registration No. 100866-00

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CONSULTANT:

DEVELOPER:

Orange Development Inc.
1200 Corporate Drive
Suite G-50
BIRMINGHAM, AL 35242
TEL: (205)408-3443
FAX: (205)408-1850

SEAL:

REVISIONS:
1) 11/26/13 ISSUED FOR CONST.

FILE NAME: 70195-dim.dwg
JOB NUMBER: 70195.00
DATE: August 27, 2013

TITLE: PAVING PLAN

SHEET NUMBER: C-7

COMMENTS:

G:\701\95\ENGINEERING\Construction Plans\70195-dim.dwg

P-201311-03

BENCHMARKS

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ELEVATION: 723.96

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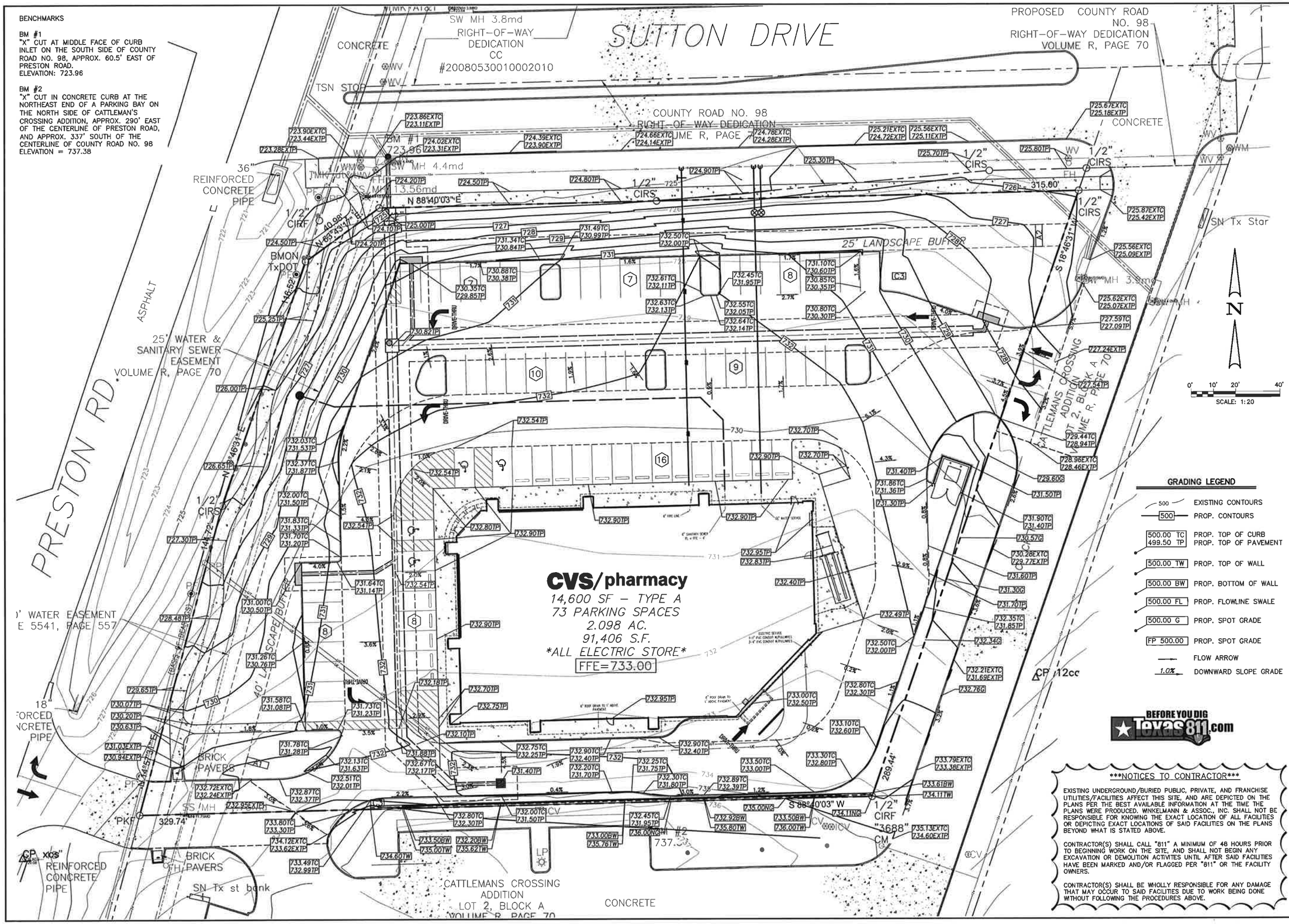
ELEVATION = 737.38



GRADING LEGEND

500	EXISTING CONTOURS
500	PROP. CONTOURS
500.00 TC / 499.50 TP	PROP. TOP OF CURB / PROP. TOP OF PAVEMENT
500.00 TW	PROP. TOP OF WALL
500.00 BW	PROP. BOTTOM OF WALL
500.00 FL	PROP. FLOWLINE SWALE
500.00 G	PROP. SPOT GRADE
FP 500.00	PROP. SPOT GRADE
	FLOW ARROW
1.0%	DOWNWARD SLOPE GRADE

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NOTICES TO CONTRACTOR

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CVS pharmacy®

SOUTHERN 14,600-LEFT CHAMFER DRIVE-THRU
STORE NUMBER: 10413
SEC OF PRESTON RD. & SUTTON DRIVE
CELINA, TEXAS
PROJECT TYPE: NEW
DEAL TYPE: FEE FOR SERVICE
CS PROJECT NUMBER: 72532

CIVIL ENGINEER:

Winkelmann & Associates, Inc.
CONSULTING CIVIL ENGINEERS ■ SURVEYORS
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Texas Engineers Registration No. 89
Texas Surveyors Registration No. 100566-00

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FAX: (205)408-1850

SEAL:

MICHAEL T. DOGGETT 98628 LICENSED PROFESSIONAL ENGINEER
11-26-13

REVISIONS:
1) 11/26/13 ISSUED FOR CONST.

FILE NAME: 70195-grd.dwg
JOB NUMBER: 70195.00
DATE: August 27, 2013
TITLE: GRADING PLAN
SHEET NUMBER: C-8.1
COMMENTS:

P-201311-03

BENCHMARKS

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ELEVATION: 723.96

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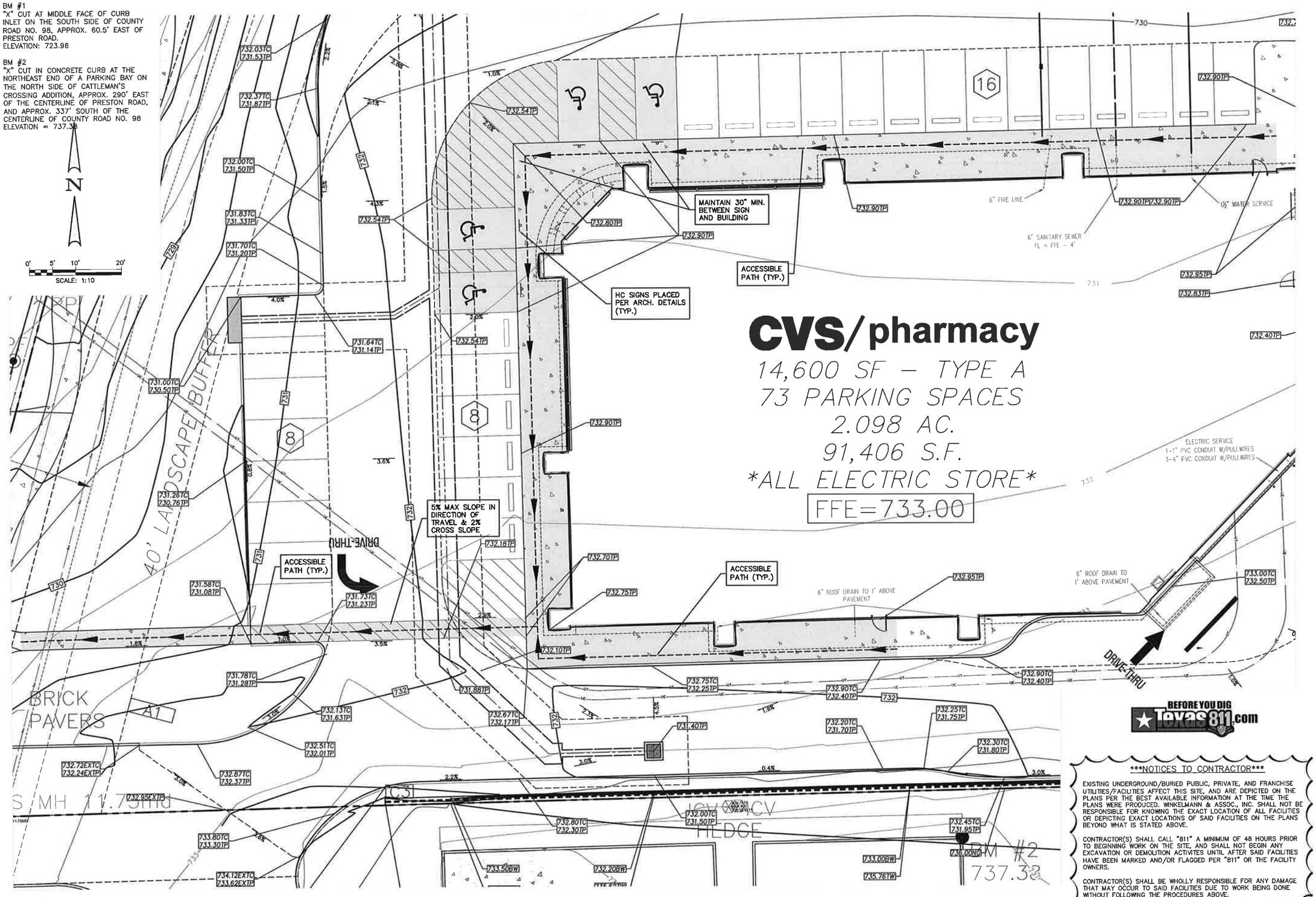
ELEVATION = 737.38

N

0' 5' 10' 20'
SCALE: 1:10



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CVS pharmacy®

SOUTHERN 14,600-LEFT CHAMFER DRIVE-THRU

STORE NUMBER: 10413

SEC OF PRESTON RD. & SUTTON DRIVE
CELINA, TEXAS
PROJECT TYPE: NEW
DEAL TYPE: FEE FOR SERVICE

CS PROJECT NUMBER: 72532

CIVIL ENGINEER:

Winkelmann & Associates, Inc.
CONSULTING CIVIL ENGINEERS ■ SURVEYORS
8750 HILLCREST PLAZA DR., SUITE 325 (972) 490-7080
DALLAS, TEXAS 75230 (972) 490-7069 FAX
Contact: Michael Doggett
Texas Engineers Registration No. 89
Texas Surveyors Registration No. 100866-00

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CONSULTANT:

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1200 Corporate Drive
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BIRMINGHAM, AL 35242
TEL: (205)408-3443
FAX: (205)408-1850

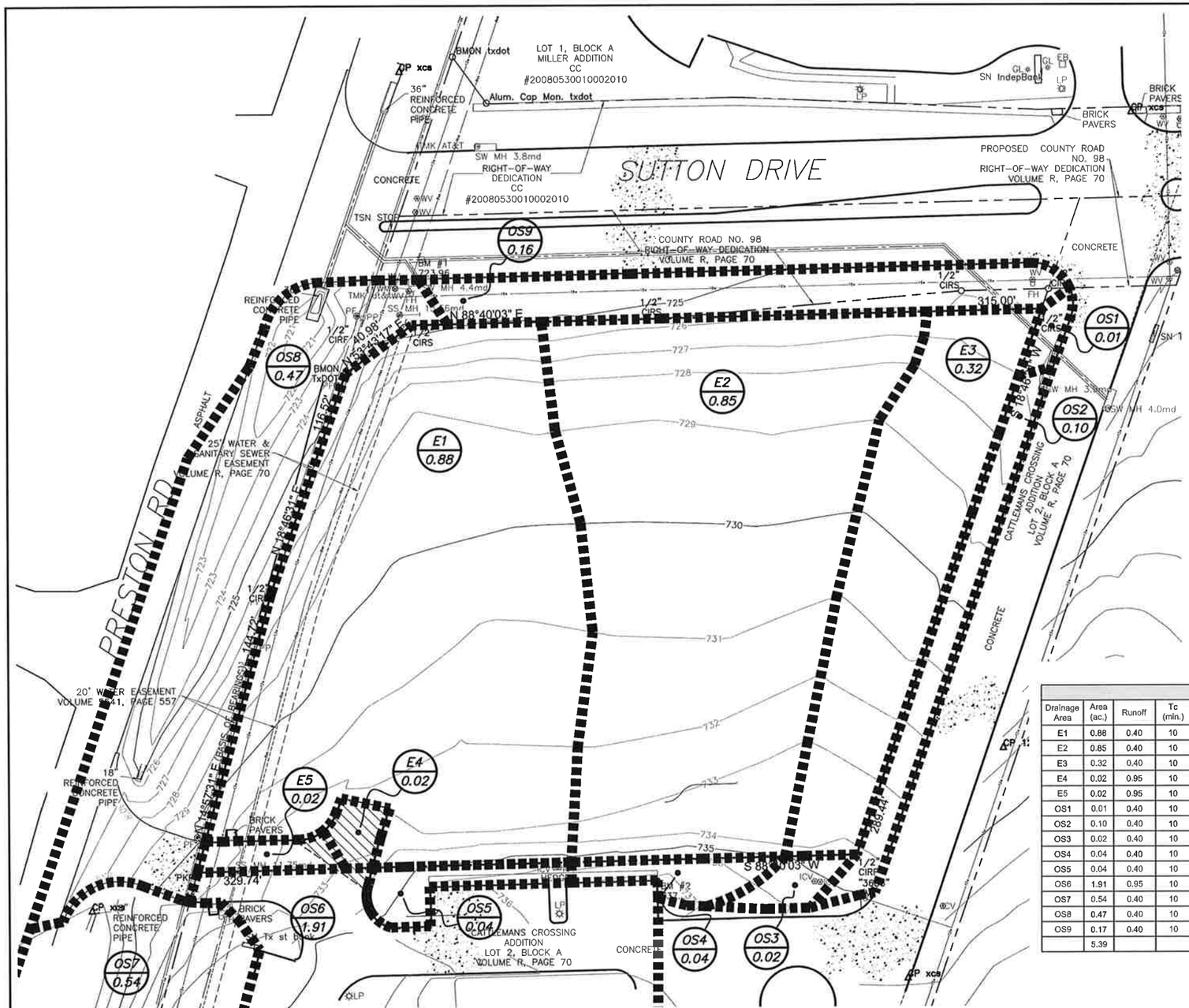
SEAL:

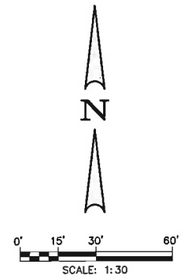
MICHAEL T. DOGGETT 98628 LICENSED PROFESSIONAL ENGINEER 11-26-13

REVISIONS:
1) 11/26/13 ISSUED FOR CONST.

FILE NAME: 70195-grd.dwg
JOB NUMBER: 70195.00
DATE: August 27, 2013
TITLE: ADA PLAN
SHEET NUMBER: C-8.2
COMMENTS:

P-201311-03



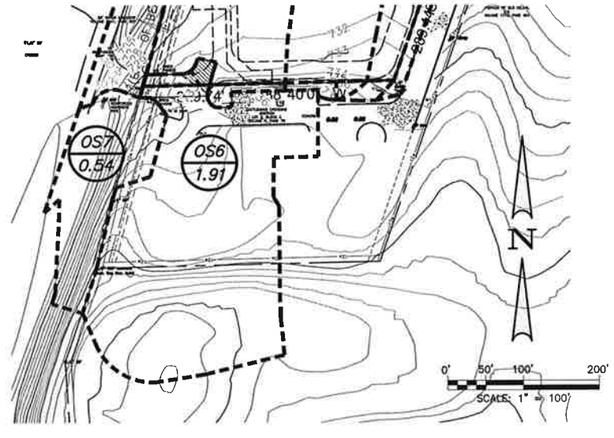


X/# AREA/BASIN ACREAGE

DRAINAGE DIVIDE

619 EXISTING CONTOURS

A# INLET NUMBER



EXISTING DISCHARGE CALCULATIONS															
Drainage Area	Area (ac.)	Runoff	Tc (min.)	I2 (in/hr)	Q2 (cfs)	I5 (in/hr)	Q5 (cfs)	I10 (in/hr)	Q10 (cfs)	I25 (in/hr)	Q25 (cfs)	I50 (in/hr)	Q50 (cfs)	I100 (in/hr)	Q100 (cfs)	Description
E1	0.88	0.40	10	4.91	1.73	5.74	2.02	6.36	2.24	7.29	2.57	8.01	2.82	8.74	3.08	Flow to Preston Road
E2	0.85	0.40	10	4.91	1.67	5.74	1.95	6.36	2.16	7.29	2.48	8.01	2.72	8.74	2.97	Flow to County Rd. 98
E3	0.32	0.40	10	4.91	0.63	5.74	0.73	6.36	0.81	7.29	0.93	8.01	1.03	8.74	1.12	Flow to County Rd. 98
E4	0.02	0.95	10	4.91	0.09	5.74	0.11	6.36	0.12	7.29	0.14	8.01	0.15	8.74	0.17	Flow to Area E1
E5	0.02	0.95	10	4.91	0.09	5.74	0.11	6.36	0.12	7.29	0.14	8.01	0.15	8.74	0.17	Flow to Area OS8
OS1	0.01	0.40	10	4.91	0.02	5.74	0.02	6.36	0.03	7.29	0.03	8.01	0.03	8.74	0.03	Flow to County Rd. 98
OS2	0.10	0.40	10	4.91	0.20	5.74	0.23	6.36	0.25	7.29	0.29	8.01	0.32	8.74	0.35	Flow to existing curb inlet
OS3	0.02	0.40	10	4.91	0.04	5.74	0.05	6.36	0.05	7.29	0.06	8.01	0.06	8.74	0.07	Flow to Area E3
OS4	0.04	0.40	10	4.91	0.08	5.74	0.09	6.36	0.10	7.29	0.12	8.01	0.13	8.74	0.14	Flow to Area E2
OS5	0.04	0.40	10	4.91	0.08	5.74	0.09	6.36	0.10	7.29	0.12	8.01	0.13	8.74	0.14	Flow to Area E1
OS6	1.91	0.95	10	4.91	8.91	5.74	10.42	6.36	11.54	7.29	13.23	8.01	14.53	8.74	15.86	Flow to Area E5
OS7	0.54	0.40	10	4.91	1.06	5.74	1.24	6.36	1.37	7.29	1.57	8.01	1.73	8.74	1.89	Flow to existing 18" RCP
OS8	0.47	0.40	10	4.91	0.92	5.74	1.08	6.36	1.20	7.29	1.37	8.01	1.51	8.74	1.64	Flow to existing 36" RCP
OS9	0.17	0.40	10	4.91	0.33	5.74	0.39	6.36	0.43	7.29	0.50	8.01	0.54	8.74	0.59	Flow to County Rd. 98
	5.39				15.85		18.53		20.53		23.54		25.86		28.22	

BENCHMARKS

BM #1
"X" CUT AT MIDDLE FACE OF CURB INLET ON THE SOUTH SIDE OF COUNTY ROAD NO. 98, APPROX. 60.5' EAST OF PRESTON ROAD.
ELEVATION: 723.96

BM #2
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ELEVATION = 737.38

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CVS pharmacy®

SOUTHERN 14,600-LEFT CHAMFER DRIVE-THRU

STORE NUMBER: 10413

SEC OF PRESTON RD. & SUTTON DRIVE
CELINA, TEXAS
PROJECT TYPE: NEW
DEAL TYPE: FEE FOR SERVICE

CS PROJECT NUMBER: 72532

CIVIL ENGINEER:

Winkelmann & Associates, Inc.
CONSULTING CIVIL ENGINEERS ■ SURVEYORS
6750 HILLCREST PLAZA DR., SUITE 325 (972) 490-7090
DALLAS, TEXAS 75230 (972) 490-7099 fax
Contact: Michael Doggett
Texas Engineers Registration No. 89
Texas Surveyors Registration No. 100866-00
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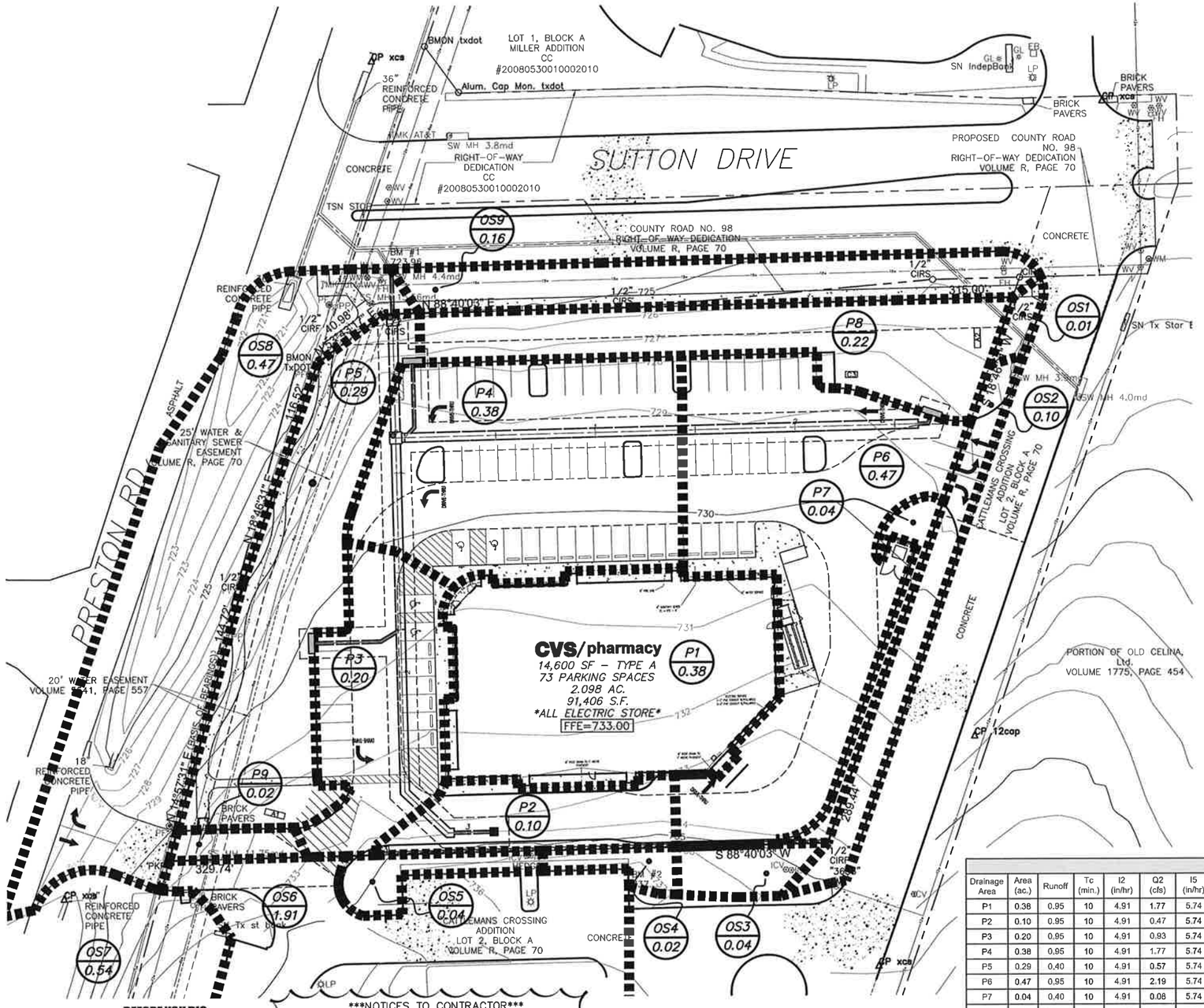
BIRMINGHAM, AL 35242
TEL: (205)408-3443
FAX: (205)408-1850

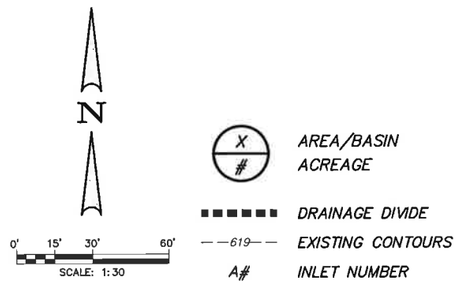
SEAL:

REVISIONS:
1) 11/26/13 ISSUED FOR CONST.

FILE NAME: 70195-STM.DWG
JOB NUMBER: 70195.00
DATE: August 27, 2013
TITLE: EXISTING DRAINAGE AREA MAP
SHEET NUMBER: C-9.1
COMMENTS:

P-201311-03





AREAS REQUIRING DETENTION: P1, P2, P3, P4, P6
(TOTAL ACREAGE = 1.53 Acres)

ALLOWABLE RELEASE RATES FROM DETENTION AREA:
C = 0.40
A = 1.53 Acres

I2 = 4.91 in/hr.
Q2 = 3.00 c.f.s.

I5 = 5.74 in/hr.
Q5 = 3.51 c.f.s.

I10 = 6.36 in/hr.
Q10 = 3.89 c.f.s.

I25 = 7.29 in/hr.
Q25 = 4.46 c.f.s.

I50 = 8.01 in/hr.
Q50 = 4.90 c.f.s.

I100 = 8.74 in/hr.
Q100 = 5.35 c.f.s.

PROPOSED CONDITIONS
TOTAL LENGTH OF 54" RCP (DETENTION) = 532 L.F.
CROSS SECTION AREA OF 54" RCP = 15.90 sq. ft.
54" VOLUME PROVIDED = 8,459 cu. ft.

TOTAL LENGTH OF 18" RCP (DETENTION) = 111 L.F.
CROSS SECTION AREA OF 18" RCP = 1.767 sq. ft.
18" VOLUME PROVIDED = 196 cu. ft.

TOTAL DETENTION VOLUME REQUIRED (100YR.) = 8,422 cu. ft.
TOTAL DETENTION VOLUME PROVIDED = 8,655 cu.ft.

PROPOSED DISCHARGE CALCULATIONS

Drainage Area	Area (ac.)	Runoff	Tc (min.)	I2 (in/hr)	Q2 (cfs)	I5 (in/hr)	Q5 (cfs)	I10 (in/hr)	Q10 (cfs)	I25 (in/hr)	Q25 (cfs)	I50 (in/hr)	Q50 (cfs)	I100 (in/hr)	Q100 (cfs)	Description
P1	0.38	0.95	10	4.91	1.77	5.74	2.07	6.36	2.30	7.29	2.63	8.01	2.89	8.74	3.16	Roof Drains to Area P2
P2	0.10	0.95	10	4.91	0.47	5.74	0.55	6.36	0.60	7.29	0.69	8.01	0.76	8.74	0.83	Sag - 3'x3' grate inlet
P3	0.20	0.95	10	4.91	0.93	5.74	1.09	6.36	1.21	7.29	1.39	8.01	1.52	8.74	1.66	Sag - 10' curb inlet
P4	0.38	0.95	10	4.91	1.77	5.74	2.07	6.36	2.30	7.29	2.63	8.01	2.89	8.74	3.16	Sag - 10' curb inlet
P5	0.29	0.40	10	4.91	0.57	5.74	0.67	6.36	0.74	7.29	0.85	8.01	0.93	8.74	1.01	Flow to Area OS8
P6	0.47	0.95	10	4.91	2.19	5.74	2.56	6.36	2.84	7.29	3.25	8.01	3.58	8.74	3.90	Sag - 10' curb inlet
P7	0.04	0.40	10	4.91	0.08	5.74	0.09	6.36	0.10	7.29	0.12	8.01	0.13	8.74	0.14	Flow to Area P6
P8	0.22	0.40	10	4.91	0.43	5.74	0.51	6.36	0.56	7.29	0.64	8.01	0.70	8.74	0.77	Flow to Area OS9
P9	0.02	0.95	10	4.91	0.09	5.74	0.11	6.36	0.12	7.29	0.14	8.01	0.15	8.74	0.17	Flow to Area OS8
OS1	0.01	0.40	10	4.91	0.02	5.74	0.02	6.36	0.03	7.29	0.03	8.01	0.03	8.74	0.03	Flow to County Rd. 98
OS2	0.10	0.40	10	4.91	0.20	5.74	0.23	6.36	0.25	7.29	0.29	8.01	0.32	8.74	0.35	Flow to existing curb inlet
OS3	0.02	0.40	10	4.91	0.04	5.74	0.05	6.36	0.05	7.29	0.06	8.01	0.06	8.74	0.07	Flow to Area OS2
OS4	0.04	0.40	10	4.91	0.08	5.74	0.09	6.36	0.10	7.29	0.12	8.01	0.13	8.74	0.14	Flow to Area P2
OS5	0.04	0.40	10	4.91	0.08	5.74	0.09	6.36	0.10	7.29	0.12	8.01	0.13	8.74	0.14	Flow to Area P2
OS6	1.91	0.95	10	4.91	8.91	5.74	10.42	6.36	11.54	7.29	13.23	8.01	14.53	8.74	15.86	Flow to Area P9
OS7	0.54	0.40	10	4.91	1.06	5.74	1.24	6.36	1.37	7.29	1.57	8.01	1.73	8.74	1.89	Flow to existing 18" RCP
OS8	0.47	0.40	10	4.91	0.92	5.74	1.08	6.36	1.20	7.29	1.37	8.01	1.51	8.74	1.64	Flow to existing 36" RCP
OS9	0.16	0.40	10	4.91	0.31	5.74	0.37	6.36	0.41	7.29	0.47	8.01	0.51	8.74	0.56	Flow to County Rd. 98
	5.39				19.93		23.30		25.82		29.59		32.51		35.48	

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BENCHMARKS

BM #1
"X" CUT AT MIDDLE FACE OF CURB INLET ON THE SOUTH SIDE OF COUNTY ROAD NO. 98, APPROX. 60.5' EAST OF PRESTON ROAD.
ELEVATION: 723.96

BM #2
"X" CUT IN CONCRETE CURB AT THE NORTHEAST END OF A PARKING BAY ON THE NORTH SIDE OF CATTLEMAN'S CROSSING ADDITION, APPROX. 290' EAST OF THE CENTERLINE OF PRESTON ROAD, AND APPROX. 337' SOUTH OF THE CENTERLINE OF COUNTY ROAD NO. 98
ELEVATION = 737.38

NOTICES TO CONTRACTOR

EXISTING UNDERGROUND/BURIED PUBLIC, PRIVATE, AND FRANCHISE UTILITIES/FACILITIES AFFECT THIS SITE, AND ARE DEPICTED ON THE PLANS PER THE BEST AVAILABLE INFORMATION AT THE TIME THE PLANS WERE PRODUCED. WINKELMANN & ASSOC., INC. SHALL NOT BE RESPONSIBLE FOR KNOWING THE EXACT LOCATION OF ALL FACILITIES OR DEPICTING EXACT LOCATIONS OF SAID FACILITIES ON THE PLANS BEYOND WHAT IS STATED ABOVE.

CONTRACTOR(S) SHALL CALL "811" A MINIMUM OF 48 HOURS PRIOR TO BEGINNING WORK ON THE SITE, AND SHALL NOT BEGIN ANY EXCAVATION OR DEMOLITION ACTIVITES UNTIL AFTER SAID FACILITIES HAVE BEEN MARKED AND/OR FLAGGED PER "811" OR THE FACILITY OWNERS.

CONTRACTOR(S) SHALL BE WHOLLY RESPONSIBLE FOR ANY DAMAGE THAT MAY OCCUR TO SAID FACILITIES DUE TO WORK BEING DONE WITHOUT FOLLOWING THE PROCEDURES ABOVE.

CVS pharmacy®

SOUTHERN 14,600-LEFT CHAMFER DRIVE-THRU

STORE NUMBER: 10413

SEC OF PRESTON RD. & SUTTON DRIVE
CELINA, TEXAS
PROJECT TYPE: NEW
DEAL TYPE: FEE FOR SERVICE

CS PROJECT NUMBER: 72532

CIVIL ENGINEER:

Winkelmann & Associates, Inc.
CONSULTING CIVIL ENGINEERS ■ SURVEYORS
8750 WILLCREST PLAZA DR., SUITE 325 (972) 490-7090
DALLAS, TEXAS 75320 (972) 490-7099 FAX
Contact: Michael Doggett
Texas Engineers Registration No. 89
Texas Surveyors Registration No. 100866-00

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CONSULTANT:

DEVELOPER:

Orange Development Inc.
1200 Corporate Drive
Suite G-50
BIRMINGHAM, AL 35242
TEL: (205)408-3443
FAX: (205)408-1850

SEAL:

MICHAEL Y. DOGGETT 98628 LICENSED PROFESSIONAL ENGINEER 11/26/13

REVISIONS:
1) 11/26/13 ISSUED FOR CONST.

FILE NAME: 70195-STM.DWG
JOB NUMBER: 70195.00
DATE: August 27, 2013

TITLE:
PROPOSED DRAINAGE AREA MAP

SHEET NUMBER:
C-9.2

COMMENTS:

P-201311-03

DETENTION AREA CALCULATIONS (2 year)

ALLOWABLE STORMWATER FLOW FROM DETENTION: 3.00 c.f.s.

STORM DURATION DATA:

MIN	I-2YR	C	AREA	TOTAL CFS	TOTAL FLOW	OUTFLOW	STORAGE
5	5.94	0.95	1.53	8.63	2590	900	1690
10	4.91	0.95	1.53	7.14	4282	1800	2482
15	4.20	0.95	1.53	6.10	5494	2700	2794
30	3.06	0.95	1.53	4.45	8006	4050	3956
60	1.88	0.95	1.53	2.73	9837	6750	3087
120	1.15	0.95	1.53	1.67	12035	12150	-115
180	0.83	0.95	1.53	1.21	13029	17550	-4521
360	0.49	0.95	1.53	0.71	15384	33750	-18366
						3956	Cu. Ft. Storage Required
						0.091	Ac.-Ft.

DETENTION AREA CALCULATIONS (25 year)

ALLOWABLE STORMWATER FLOW FROM DETENTION: 4.46 c.f.s.

STORM DURATION DATA:

MIN	I-25YR	C	AREA	TOTAL CFS	TOTAL FLOW	OUTFLOW	STORAGE
5	8.76	0.95	1.53	12.73	3820	1338	2482
10	7.29	0.95	1.53	10.60	6358	2676	3682
15	6.26	0.95	1.53	9.10	8189	4014	4175
30	4.74	0.95	1.53	6.89	12401	6021	6380
60	3.17	0.95	1.53	4.61	16587	10035	6552
120	2.09	0.95	1.53	3.04	21872	18063	3809
180	1.52	0.95	1.53	2.21	23861	26091	-2230
360	0.92	0.95	1.53	1.34	28884	50175	-21291
						6552	Cu. Ft. Storage Required
						0.150	Ac.-Ft.

DETENTION AREA CALCULATIONS (5 year)

ALLOWABLE STORMWATER FLOW FROM DETENTION: 3.51 c.f.s.

STORM DURATION DATA:

MIN	I-5YR	C	AREA	TOTAL CFS	TOTAL FLOW	OUTFLOW	STORAGE
5	6.92	0.95	1.53	10.06	3017	1053	1964
10	5.74	0.95	1.53	8.34	5006	2106	2900
15	4.92	0.95	1.53	7.15	6436	3159	3277
30	3.66	0.95	1.53	5.32	9576	4739	4837
60	2.35	0.95	1.53	3.42	12297	7898	4399
120	1.50	0.95	1.53	2.18	15698	14216	1482
180	1.10	0.95	1.53	1.60	17268	20534	-3266
360	0.66	0.95	1.53	0.96	20721	39488	-18766
						4837	Cu. Ft. Storage Required
						0.111	Ac.-Ft.

DETENTION AREA CALCULATIONS (50 year)

ALLOWABLE STORMWATER FLOW FROM DETENTION: 4.90 c.f.s.

STORM DURATION DATA:

MIN	I-50YR	C	AREA	TOTAL CFS	TOTAL FLOW	OUTFLOW	STORAGE
5	9.63	0.95	1.53	14.00	4199	1470	2729
10	8.01	0.95	1.53	11.64	6986	2940	4046
15	6.89	0.95	1.53	10.01	9013	4410	4603
30	5.25	0.95	1.53	7.63	13736	6615	7121
60	3.54	0.95	1.53	5.15	18523	11025	7498
120	2.36	0.95	1.53	3.43	24698	19845	4853
180	1.72	0.95	1.53	2.50	27000	28665	-1665
360	1.05	0.95	1.53	1.53	32965	55125	-22160
						7498	Cu. Ft. Storage Required
						0.172	Ac.-Ft.

DETENTION AREA CALCULATIONS (10 year)

ALLOWABLE STORMWATER FLOW FROM DETENTION: 3.89 c.f.s.

STORM DURATION DATA:

MIN	I-10YR	C	AREA	TOTAL CFS	TOTAL FLOW	OUTFLOW	STORAGE
5	7.66	0.95	1.53	11.13	3340	1167	2173
10	6.36	0.95	1.53	9.24	5547	2334	3213
15	5.46	0.95	1.53	7.94	7142	3501	3641
30	4.10	0.95	1.53	5.96	10727	5252	5475
60	2.69	0.95	1.53	3.91	14076	8753	5323
120	1.78	0.95	1.53	2.59	18628	15755	2874
180	1.30	0.95	1.53	1.89	20407	22757	-2349
360	0.78	0.95	1.53	1.13	24489	43763	-19274
						5475	Cu. Ft. Storage Required
						0.126	Ac.-Ft.

DETENTION AREA CALCULATIONS (100 year)

ALLOWABLE STORMWATER FLOW FROM DETENTION: 5.35 c.f.s.

STORM DURATION DATA:

MIN	I-100YR	C	AREA	TOTAL CFS	TOTAL FLOW	OUTFLOW	STORAGE
5	10.49	0.95	1.53	15.25	4574	1605	2969
10	8.74	0.95	1.53	12.70	7622	3210	4412
15	7.52	0.95	1.53	10.93	9837	4815	5022
30	5.75	0.95	1.53	8.36	15044	7223	7821
60	3.91	0.95	1.53	5.68	20459	12038	8422
120	2.62	0.95	1.53	3.81	27419	21668	5751
180	1.91	0.95	1.53	2.78	29983	31298	-1315
360	1.15	0.95	1.53	1.67	36105	60188	-24083
						8422	Cu. Ft. Storage Requlred
						0.193	Ac.-Ft.

TOTAL DISCHARGE RELEASE FROM PROPOSED PIPE =
Qallow = 5.35 c.f.s.

SLOT OPENING DESIGN:

$Q = (Cd)x(A)x\sqrt{2gh}$

$5.35 = (0.61)(A)\sqrt{2 \times 32.2 \times 4.5'}$
A = 0.52 S.F.
USING 1.0'(H)x0.52'(V) RECTANGULAR SHAPED WEIR OPENING

CVS pharmacy®

SOUTHERN 14,600-LEFT CHAMFER DRIVE-THRU

STORE NUMBER: 10413

SEC OF PRESTON RD. & SUTTON DRIVE
CELINA, TEXAS
PROJECT TYPE: NEW
DEAL TYPE: FEE FOR SERVICE

CS PROJECT NUMBER: 72532

CIVIL ENGINEER:

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FAX: (205)408-1850

SEAL:

REVISIONS:
1) 11/26/13 ISSUED FOR CONST.

FILE NAME: 70195-STM.DWG
JOB NUMBER: 70195.00
DATE: August 27, 2013
TITLE: DETENTION CALCULATIONS
SHEET NUMBER: C-9.3
COMMENTS:

P-201311-03

BENCHMARKS

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ELEVATION: 723.96

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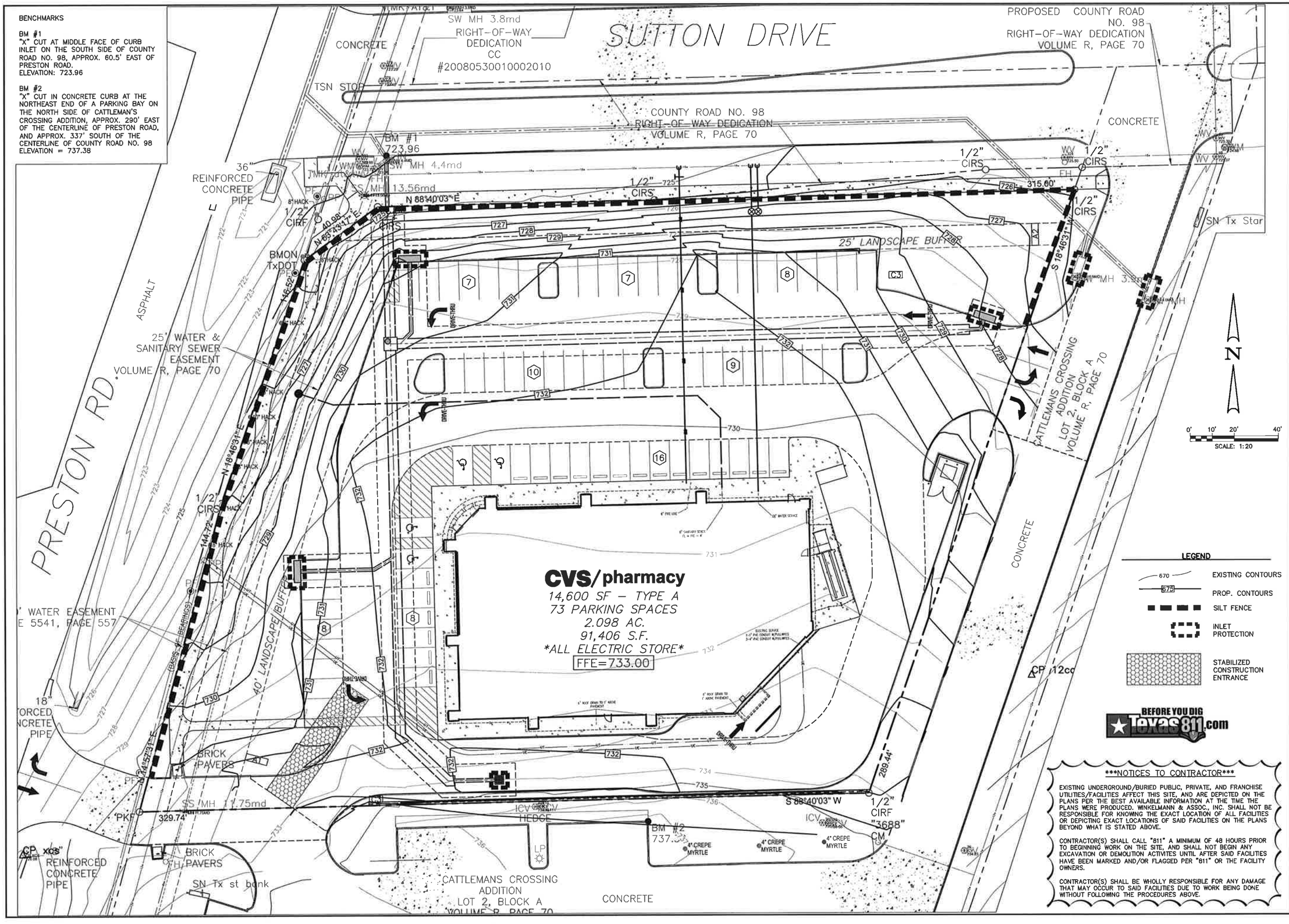
ELEVATION = 737.38



LEGEND

- 670 — EXISTING CONTOURS
- 675 — PROP. CONTOURS
- SILT FENCE
- INLET PROTECTION
- STABILIZED CONSTRUCTION ENTRANCE

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CVS pharmacy®

SOUTHERN 14,600-LEFT CHAMFER DRIVE-THRU

STORE NUMBER: 10413

SEC OF PRESTON RD. & SUTTON DRIVE
CELINA, TEXAS
PROJECT TYPE: NEW
DEAL TYPE: FEE FOR SERVICE

CS PROJECT NUMBER: 72532

CIVIL ENGINEER:

Winkelmann & Associates, Inc.
CONSULTING CIVIL ENGINEERS & SURVEYORS
6750 HILLCREST PLAZA DR., SUITE 325 (972) 490-7090
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DEVELOPER:

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TEL: (205)408-3443
FAX: (205)408-1850

SEAL:

STATE OF TEXAS
MICHAEL T. DOGGETT
98628
LICENSED
PROFESSIONAL ENGINEER
11/26/13

REVISIONS:
1) 11/26/13 ISSUED FOR CONST.

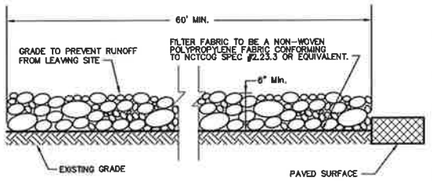
FILE NAME: 70195-grd.dwg
JOB NUMBER: 70195.00
DATE: August 27, 2013

TITLE:
EROSION CONTROL PLAN

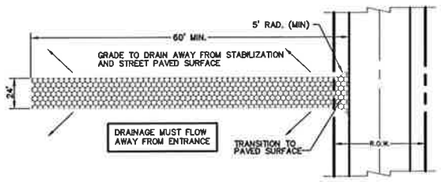
SHEET NUMBER:
C-10.1

COMMENTS:

P-201311-03



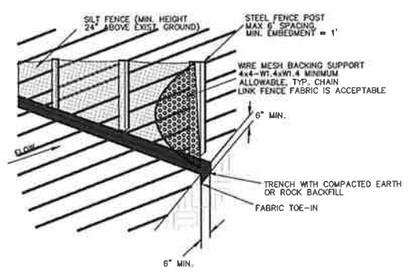
PROFILE VIEW



PLAN VIEW

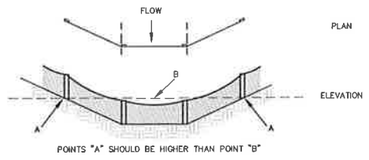
STABILIZED CONSTRUCTION ENTRANCE

N.T.S.



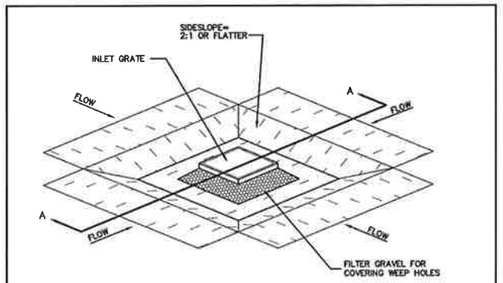
CONSTRUCTION OF A FILTER BARRIER (SILT FENCE)

N.T.S.

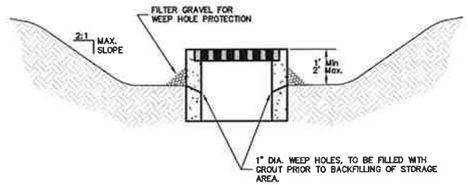


PROPER PLACEMENT OF A FILTER BARRIER IN A DRAINAGE WAY

N.T.S.



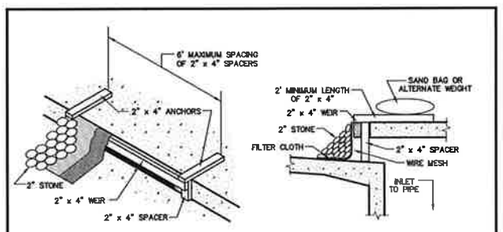
ISOMETRIC PLAN VIEW



SECTION A-A

INLET PROTECTION EXCAVATED IMPOUNDMENT

N.T.S.



CURB INLET PROTECTION DETAIL

N.T.S.

EROSION CONTROL GENERAL NOTES

1. STEEL POSTS WHICH SUPPORT THE SILT FENCE SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE.
2. THE TOE OF THE SILT FENCE SHALL BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER SO THAT THE DOWNSLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW.
3. THE TRENCH SHOULD BE A MINIMUM OF 6 INCHES DEEP AND 6 INCHES WIDE TO ALLOW FOR THE SILT FENCE TO BE LAID IN THE GROUND AND BACKFILLED.
4. SILT FENCE SHOULD BE SECURELY FASTENED TO EACH STEEL SUPPORT POST OR TO WOVEN WIRE, WHICH IS IN TURN ATTACHED TO THE STEEL FENCE POSTS.
5. INSPECTION SHALL BE FREQUENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
6. SILT FENCE SHALL BE REMOVED WHEN IT HAS SERVED ITS USEFULNESS, SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.
7. SEDIMENT TRAPPED BY THIS PRACTICE SHALL BE DISPOSED OF IN AN APPROVED SITE IN A MANNER THAT WILL NOT CONTRIBUTE TO ADDITIONAL SILTATION.
8. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 6 INCHES AND DISPOSED OF IN AN APPROVED SPOIL SITE OR AS IN NO. 7 ABOVE.
9. EROSION PROTECTION WILL BE DELETED OR ADDED PER THE CITY.
10. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL EROSION, CONSERVATION, AND SILTATION ORDINANCES. THE CONTRACTOR SHALL REMOVE ALL TEMPORARY EROSION CONTROL DEVICES UPON COMPLETION OF PERMANENT DRAINAGE FACILITIES AND THE ESTABLISHMENT OF A STAND OF GRASS OR OTHER GROWTH TO PREVENT EROSION.
11. ALL SEEDING AND FERTILIZATION OF DISTURBED AREAS WILL BE THE RESPONSIBILITY OF THE GRADING CONTRACTOR.

STANDARDS FOR SILT FENCE

DEFINITION

TEMPORARY BARRIER FENCE MADE OF BURLAP OR POLYPROPYLENE MATERIAL WHICH IS WATER PERMEABLE BUT WILL TRAP WATERBORNE SEDIMENT.

PURPOSE

TO INTERCEPT AND DETAIN WATERBORNE SEDIMENT FROM UNPROTECTED AREAS OF LIMITED EXTENT.

CONDITIONS WHERE PRACTICE APPLIES

SILT FENCE IS USED DURING THE PERIOD OF CONSTRUCTION NEAR THE PERIMETER OF A DISTURBED AREA TO INTERCEPT SEDIMENT WHILE ALLOWING WATER TO PERCOLATE THROUGH. THIS FENCE SHALL REMAIN IN PLACE UNTIL THE DISTURBED AREA IS PERMANENTLY STABILIZED. SILT FENCE SHOULD NOT BE USED WHERE THERE IS A CONCENTRATION OF WATER IN A CHANNEL OR OTHER DRAINAGE WAY.

DESIGN CRITERIA

SILT FENCE IS CONSTRUCTED NEAR THE PERIMETER OF A DISTURBED SITE WITHIN THE DEVELOPING AREA. IT IS NOT TO BE CONSTRUCTED OUTSIDE THE PROPERTY LINES WITHOUT OBTAINING A LETTER OF PERMISSION FROM THE AFFECTED ADJACENT PROPERTY OWNERS.

A DESIGN IS NOT REQUIRED FOR THE INSTALLATION OF THE SILT FENCE. HOWEVER, THE FOLLOWING CRITERIA SHALL BE OBSERVED :

DRAINAGE AREA –	LESS THAN TWO ACRES
HEIGHT –	24 INCHES MINIMUM HEIGHT MEASURED FROM EXISTING OR GRADED GROUND.
MATERIAL –	BURLAP, POLYPROPYLENE FABRIC, OR NYLON REINFORCED WITH POLYESTER NETTING. THE MULLEN BURST STRENGTH SHALL BE GREATER THAN 150 PSI. THE EDGES SHALL BE TREATED TO RESIST UNRAVELING.
SUPPORT –	STEEL FENCE POSTS SPACED A MAXIMUM OF 6 FEET APART. WOVEN WIRE WILL BE USED TO SUPPORT THE MATERIAL.

OUTLET

SILT FENCE SHALL BE PLACED AND CONSTRUCTED IN SUCH A MANNER THAT RUNOFF FROM A DISTURBED SURFACE OR EXPOSED UPLAND AREA SHALL BE INTERCEPTED, SEDIMENT TRAPPED, AND THE SURFACE RUNOFF ALLOWED TO PERCOLATE THROUGH THE STRUCTURE.

SILT FENCE SHALL BE PLACED IN SUCH A MANNER THAT SURFACE RUNOFF WHICH PURCOLATES THROUGH WILL FLOW ONTO AN UNDISTURBED STABILIZED AREA OR STABILIZED OUTLET.

STORM DRAIN INLET PROTECTION CONSTRUCTION SPECIFICATIONS

1. WOODEN FRAME IS TO BE CONSTRUCTED OF 2" X 4" CONSTRUCTION GRADE LUMBER.
2. WIRE MESH MUST BE OF SUFFICIENT STRENGTH TO SUPPORT FILTER FABRIC, AND STONE FOR CURB INLETS, WITH WATER FULLY IMPOUNDED AGAINST IT.
3. FILTER CLOTH MUST BE OF A TYPE APPROVED FOR THIS PURPOSE; RESISTANT TO SUNLIGHT WITH SIEVE SIZE, EOS, 40-85, TO ALLOW SUFFICIENT PASSAGE OF WATER AND REMOVAL OF SEDIMENT.
4. STONE IS TO BE 2" IN SIZE AND CLEAN, SINCE FINES WOULD CLOG THE CLOTH.
5. THE ASSEMBLY SHALL BE PLACED SO THAT THE END SPACERS ARE A MINIMUM 1' BEYOND BOTH ENDS OF THE THROAT OPENING.
6. FORM THE WIRE MESH AND FILTER CLOTH TO THE CONCRETE GUTTER AND AGAINST THE FACE OF CURB ON BOTH SIDES OF THE INLET. PLACE CLEAN 2" STONE OVER THE WIRE MESH AND FILTER FABRIC IN SUCH A MANNER AS TO PREVENT WATER FROM ENTERING THE INLET UNDER OR AROUND THE FILTER CLOTH.
7. THIS TYPE OF PROTECTION MUST BE INSPECTED FREQUENTLY AND THE FILTER CLOTH AND STONE REPLACED WHEN CLOGGED WITH SEDIMENT.
8. ASSURE THAT STORM FLOW DOES NOT BYPASS INLET BY INSTALLING TEMPORARY EARTH OR ASPHALT DIKES DIRECTING FLOW INTO INLET.

STABILIZED CONSTRUCTION ENTRANCE

1. STONE SHALL BE 3 TO 5 INCH DIAMETER CRUSHED ROCK OR ACCEPTABLE CRUSHED PORTLAND CEMENT CONCRETE.
2. LENGTH SHALL BE SHOWN ON PLANS, WITH A MINIMUM LENGTH OF 30 FEET FOR LOTS WHICH ARE LESS THAN 150 FEET FROM EDGE OF PAVEMENT. THE MINIMUM DEPTH IN ALL OTHER CASES SHALL BE 60 FEET.
3. THE THICKNESS SHALL NOT BE LESS THAN 6 INCHES.
4. THE WIDTH SHALL BE NO LESS THAN THE FULL WIDTH OF ALL POINTS OF INGRESS OR EGRESS.
5. WHEN NECESSARY, VEHICLES SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO A PUBLIC ROADWAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE WITH DRAINAGE FLOWING AWAY FROM BOTH THE STREET AND THE STABILIZED ENTRANCE. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM, DITCH, OR WATERCOURSE USING APPROVED METHODS.
6. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PAVED SURFACES. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND. ALL SEDIMENT SPILLED, DROPPED, WASHED, OR TRACKED ONTO PAVED SURFACES, MUST BE REMOVED IMMEDIATELY.
7. THE ENTRANCE MUST BE PROPERLY GRADED OR INCORPORATE A DRAINAGE SWALE TO PREVENT RUNOFF FROM LEAVING THE CONSTRUCTION SITE.

CHECK DAMS

1. USE ONLY OPEN GRADED ROCK 4-8 INCHES IN DIAMETER FOR STREAM FLOW CONDITIONS. USE OPEN GRADED ROCK 3-5 INCHES IN DIAMETER FOR OTHER CONDITIONS.
2. THE CHECK DAM SHALL BE SECURED WITH A WOVEN WIRE SHEATHING HAVING A MAXIMUM OPENING OF 1 INCH AND A MINIMUM WIRE SIZE OF 20 GAUGE AND SHALL BE BURIED IN A TRENCH APPROXIMATELY 3 TO 4 INCHES DEEP.
3. THE CHECK DAM SHALL BE INSPECTED WEEKLY OR AFTER EACH RAIN EVENT AND SHALL BE REPLACED WHEN THE STRUCTURE CEASES TO FUNCTION AS INTENDED DUE TO SILT ACCUMULATION AMONG THE ROCKS, WASHOUT, CONSTRUCTION TRAFFIC DAMAGE, ETC.
4. WHEN SILT REACHES A DEPTH EQUAL TO ONE-THIRD OF THE HEIGHT OF THE CHECK DAM OR ONE FOOT, WHICHEVER IS LESS, THE SILT SHALL BE REMOVED AND DISPOSED OF PROPERLY.
5. WHEN THE SITE IS COMPLETELY STABILIZED, THE CHECK DAM AND ACCUMULATED SILT SHALL BE REMOVED AND DISPOSED OF IN AN APPROPRIATE MANNER.

CVS pharmacy®

SOUTHERN 14,600-LEFT CHAMFER DRIVE-THRU

STORE NUMBER: 10413

SEC OF PRESTON RD. & SUTTON DRIVE
CELINA, TEXAS
PROJECT TYPE: NEW
DEAL TYPE: FEE FOR SERVICE

CS PROJECT NUMBER: 72532

CIVIL ENGINEER:

Winkelmann & Associates, Inc.
CONSULTING CIVIL ENGINEERS & SURVEYORS
8750 NORTH CENTRAL EXPWY., SUITE 325 (972) 490-7090
DALLAS, TEXAS 75231 (972) 490-7099 FAX
Contact: Michael Doggett
Texas Engineers Registration No. 89
Texas Surveyors Registration No. 100866-00
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CONSULTANT:

DEVELOPER:

Orange Development Inc.
1200 Corporate Drive
Suite G-50
BIRMINGHAM, AL 35242
TEL: (205)408-3443
FAX: (205)408-1850

SEAL:

MICHAEL T. DOGGETT 98028 LICENSED PROFESSIONAL ENGINEER
11/26/13

REVISIONS:
1) 11/26/13 ISSUED FOR CONST.

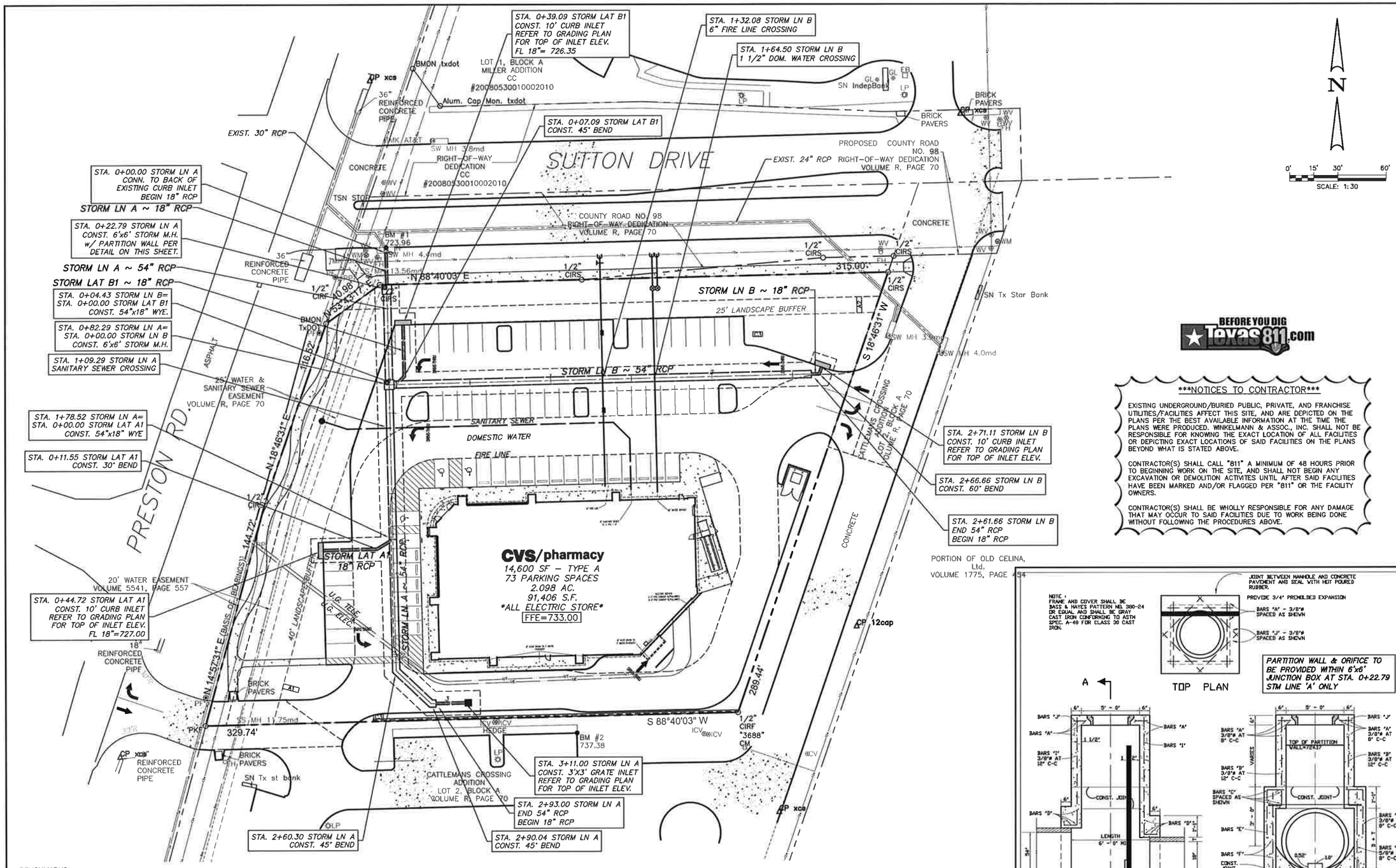
FILE NAME: 70195-grd.dwg
JOB NUMBER: 70195.00
DATE: August 27, 2013

TITLE:
EROSION CONTROL DETAILS

SHEET NUMBER:
C-10.2

COMMENTS:

P-201311-03



BENCHMARKS

BM #1
"X" CUT AT MIDDLE FACE OF CURB INLET ON THE SOUTH SIDE OF COUNTY ROAD NO. 98, APPROX. 60.5' EAST OF PRESTON ROAD.
ELEVATION: 723.96

BM #2
"X" CUT IN CONCRETE CURB AT THE NORTHEAST END OF A PARKING BAY ON THE NORTH SIDE OF CATTLEMAN'S CROSSING ADDITION, APPROX. 290' EAST OF THE CENTERLINE OF PRESTON ROAD, AND APPROX. 337' SOUTH OF THE CENTERLINE OF COUNTY ROAD NO. 98
ELEVATION = 737.38

0' 15' 30' 60'
SCALE: 1:30

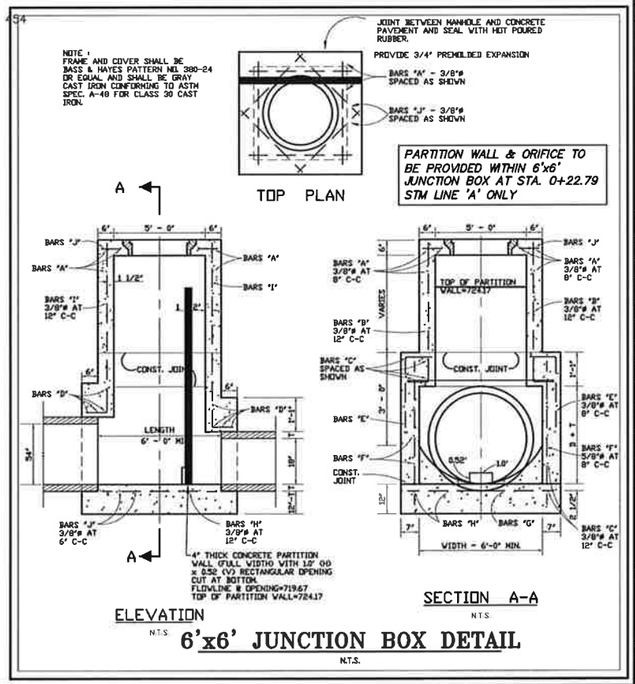
BEFORE YOU DIG Texas811.com

NOTICES TO CONTRACTOR

EXISTING UNDERGROUND/BURIED PUBLIC, PRIVATE, AND FRANCHISE UTILITIES/FACILITIES AFFECT THIS SITE, AND ARE DEPICTED ON THE PLANS PER THE BEST AVAILABLE INFORMATION AT THE TIME THE PLANS WERE PRODUCED. WINKELMANN & ASSOC., INC. SHALL NOT BE RESPONSIBLE FOR KNOWING THE EXACT LOCATION OF ALL FACILITIES OR DEPICTING EXACT LOCATIONS OF SAID FACILITIES ON THE PLANS BEYOND WHAT IS STATED ABOVE.

CONTRACTOR(S) SHALL CALL "811" A MINIMUM OF 48 HOURS PRIOR TO BEGINNING WORK ON THE SITE, AND SHALL NOT BEGIN ANY EXCAVATION OR DEMOLITION ACTIVITES UNTIL AFTER SAID FACILITIES HAVE BEEN MARKED AND/OR FLAGGED PER "811" OR THE FACILITY OWNERS.

CONTRACTOR(S) SHALL BE WHOLLY RESPONSIBLE FOR ANY DAMAGE THAT MAY OCCUR TO SAID FACILITIES DUE TO WORK BEING DONE WITHOUT FOLLOWING THE PROCEDURES ABOVE.



CVS pharmacy®

SOUTHERN 14,600-LEFT CHAMFER DRIVE-THRU

STORE NUMBER: 10413

SEC OF PRESTON RD. & SUTTON DRIVE
CELINA, TEXAS
PROJECT TYPE: NEW
DEAL TYPE: FEE FOR SERVICE

CS PROJECT NUMBER: 72532

CIVIL ENGINEER:

Winkelmann & Associates, Inc.
CONSULTING CIVIL ENGINEERS ■ SURVEYORS
8750 MacCREST PLAZA DR., SUITE 215 (972) 490-7090
DALLAS, TEXAS 75231 (972) 490-7099 FAX
Contact: Michael Doggett
Texas Engineers Registration No. 89
Texas Surveyors Registration No. 100866-00

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1200 Corporate Drive
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TEL: (205)408-3443
FAX: (205)408-1850

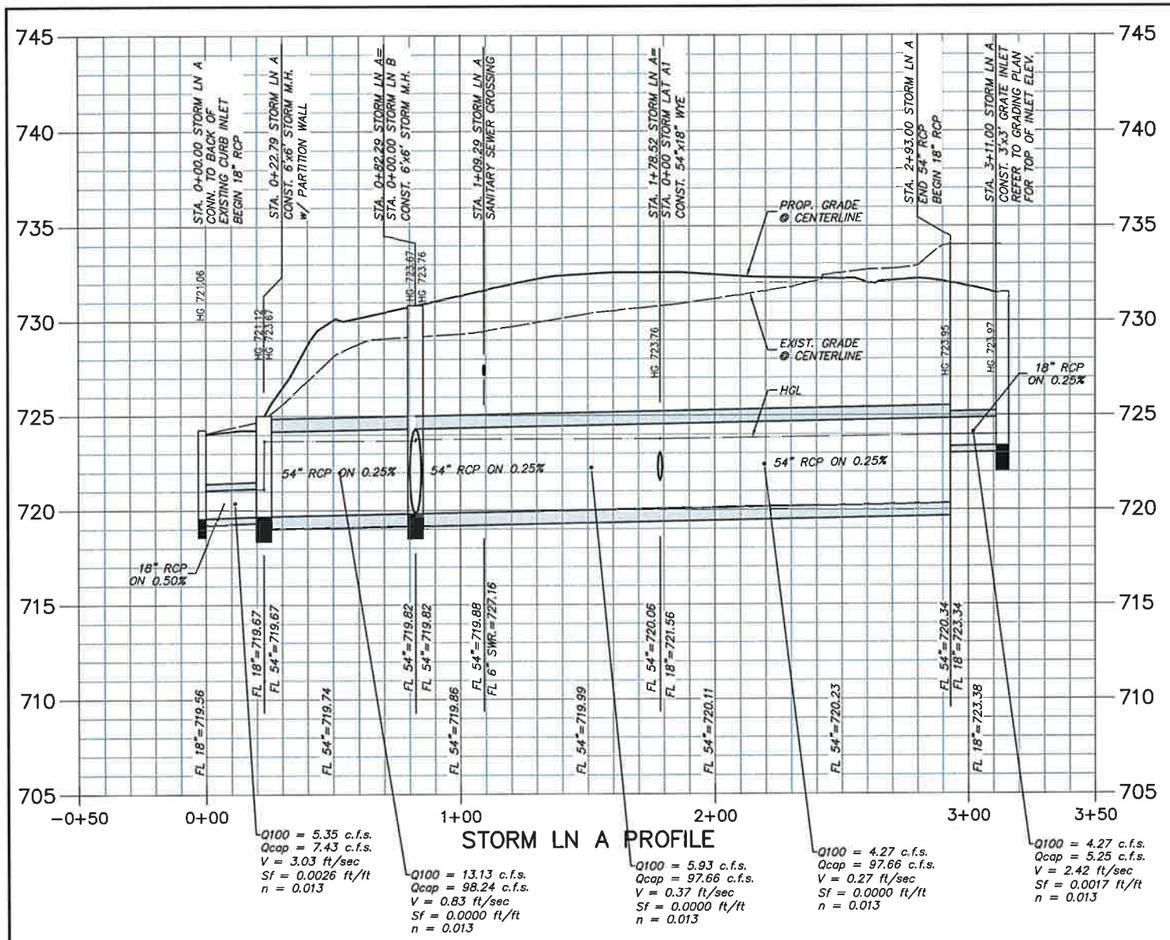
SEAL:

MICHAEL T. DOGGETT
98628
LICENSED
PROFESSIONAL ENGINEER
11-26-13

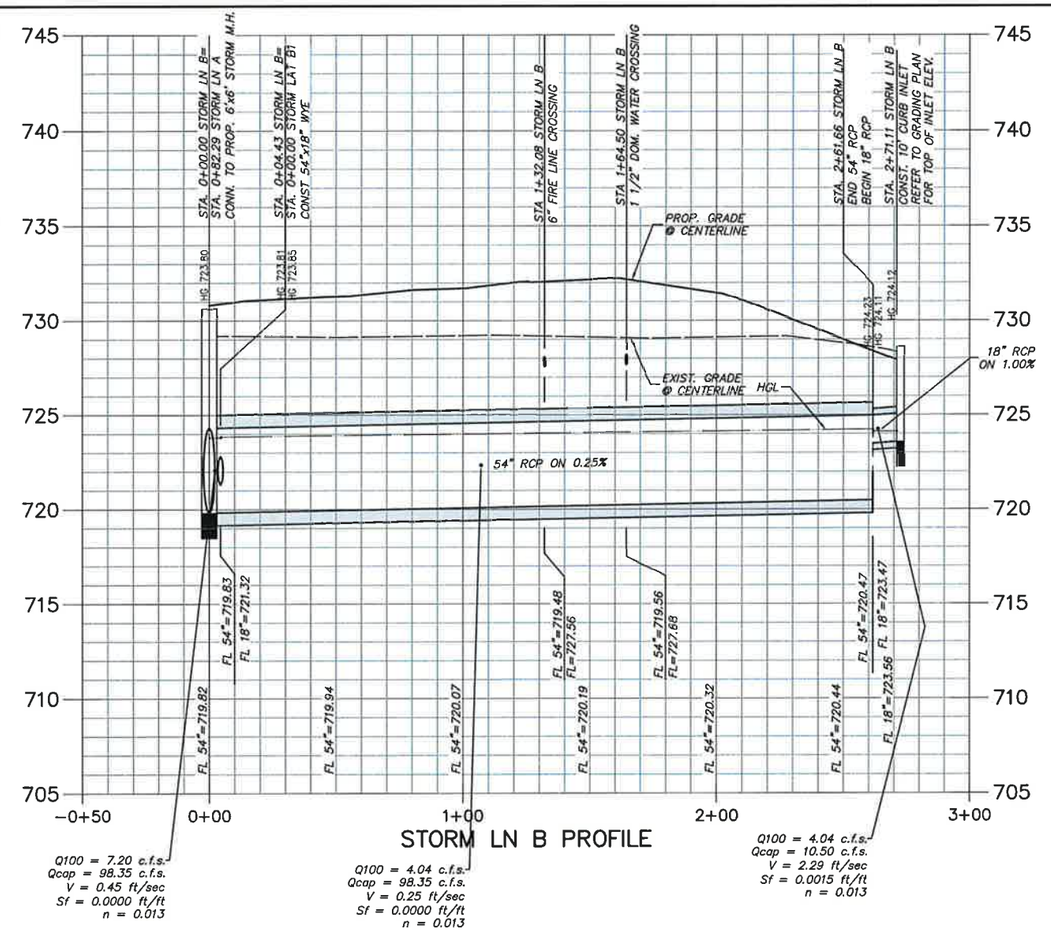
REVISIONS:
1) 11/26/13 ISSUED FOR CONST.

FILE NAME: 70195-STM.DWG
JOB NUMBER: 70195.00
DATE: August 27, 2013
TITLE: STORM PLAN
SHEET NUMBER: C-11.1
COMMENTS:

P-201311-03



STORM LN A PROFILE



STORM LN B PROFILE

BENCHMARKS

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ELEVATION: 723.96

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ELEVATION = 737.38

0' 15' 30' 60'
SCALE: 1:30

BEFORE YOU DIG Texas811.com

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CVS pharmacy®

SOUTHERN 14,600-LEFT CHAMFER DRIVE-THRU

STORE NUMBER: 10413

SEC OF PRESTON RD. & SUTTON DRIVE
CELINA, TEXAS
PROJECT TYPE: NEW
DEAL TYPE: FEE FOR SERVICE

CS PROJECT NUMBER: 72532

CIVIL ENGINEER:

Winkelmann & Associates, Inc.
CONSULTING CIVIL ENGINEERS ■ SURVEYORS
8750 HILLCREST PLAZA DR., SUITE 325 (972) 490-7090
DALLAS, TEXAS 75230 (972) 490-7099 FAX
Contact: Michael Doggett
Texas Engineers Registration No. 89
Texas Surveyors Registration No. 100866-00
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Orange Development Inc.
1200 Corporate Drive
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BIRMINGHAM, AL 35242
TEL: (205)408-3443
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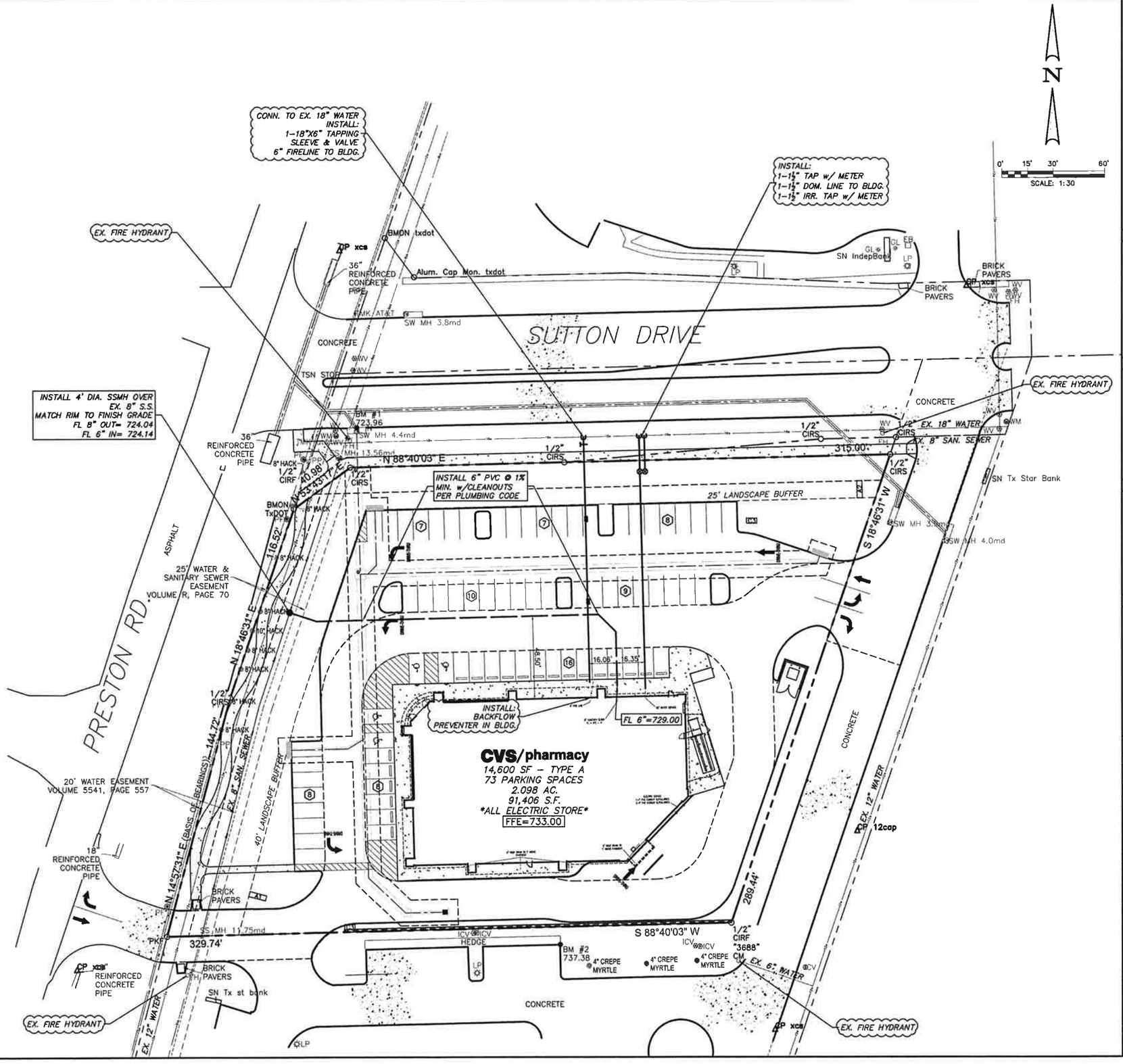
SEAL:

MICHAEL T. DOGGETT 98628 LICENSED PROFESSIONAL ENGINEER
11-26-13

REVISIONS:
1) 11/26/13 ISSUED FOR CONST.

FILE NAME: 70195-STM.DWG
JOB NUMBER: 70195.00
DATE: August 27, 2013
TITLE: STORM PROFILE
SHEET NUMBER: C-11.2
COMMENTS:

P-201311-03



NOTICES TO CONTRACTOR

THE CONTRACTOR(S) SHALL BE RESPONSIBLE FOR CONFIRMING THE LOCATION (HORIZONTAL & VERTICAL) OF ANY BURIED CABLES, CONDUITS, PIPES AND STRUCTURES (STORM SEWER, SANITARY SEWER, WATER, GAS, TELEVISION, ETC.) WHICH IMPACT THE CONSTRUCTION SITE. THE CONTRACTOR(S) SHALL NOTIFY THE OWNER OF ANY DISCREPANCIES FOUND BETWEEN THE ACTUAL CONDITIONS VERSUS THE DATA CONTAINED IN THE CONSTRUCTION PLANS. ANY COSTS INCURRED AS THE RESULT OF NOT CONFIRMING THE ACTUAL LOCATION (HORIZONTAL AND VERTICAL)OF SAID CABLES, CONDUITS, PIPES AND STRUCTURES SHALL BE BORNE BY THE CONTRACTOR(S). IF THE CONTRACTOR(S) DOES NOT ACCEPT THE EXISTING TOPOGRAPHY AS SHOWN ON THESE PLANS, WITHOUT EXCEPTION, HE SHALL HAVE MADE AT HIS EXPENSE A TOPOGRAPHIC SURVEY BY A REGISTERED PROFESSIONAL ENGINEER OR A REGISTERED PROFESSIONAL LAND SURVEYOR AND SUBMIT IT TO THE OWNER FOR REVIEW.

THE CONTRACTOR(S) SHALL CALL "811" FOR UTILITY LOCATIONS AND MARKING AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION OR CONSTRUCTION ON THE SITE.

Texas 811

BENCHMARKS

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ELEVATION = 737.38

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CVS pharmacy®

SOUTHERN 14,600-LEFT CHAMFER DRIVE-THRU

STORE NUMBER: 10413

SEC OF PRESTON RD. & SUTTON DRIVE
CELINA, TEXAS
PROJECT TYPE: NEW
DEAL TYPE: FEE FOR SERVICE

CS PROJECT NUMBER: 72532

CIVIL ENGINEER:

Winkelmann & Associates, Inc.
CONSULTING CIVIL ENGINEERS ■ SURVEYORS
8750 HILLCREST PLAZA DR., SUITE 335
DALLAS, TEXAS 75330
(972) 490-7090
(972) 490-7098 FAX
Contact: Michael Doggett
Texas Engineers Registration No. 89
Texas Surveyors Registration No. 100865-00

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CONSULTANT:

DEVELOPER:

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1200 Corporate Drive
Suite G-50
BIRMINGHAM, AL 35242
TEL: (205)408-3443
FAX: (205)408-1850

SEAL:

REVISIONS:
1) 11/26/13 ISSUED FOR CONST.

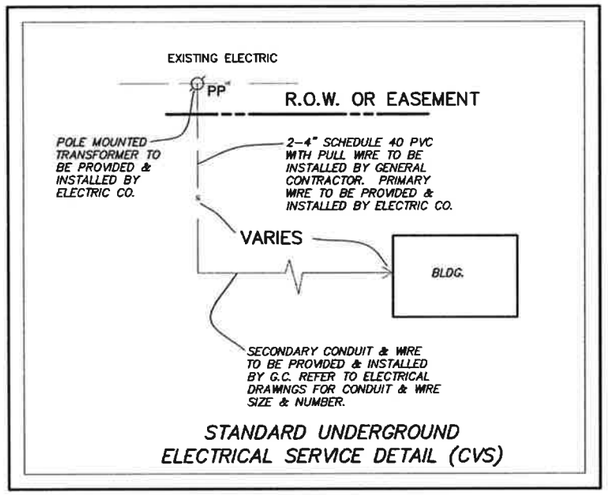
FILE NAME:	70195-utl.dwg
JOB NUMBER:	70195.00
DATE:	August 27, 2013

TITLE: **WATER & SEWER PLAN**

SHEET NUMBER: **C-12**

COMMENTS:

P-201311-03



STANDARD UNDERGROUND ELECTRICAL SERVICE DETAIL (CVS)

NOTICES TO CONTRACTOR

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Texas 811

BENCHMARKS

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ELEVATION: 723.96

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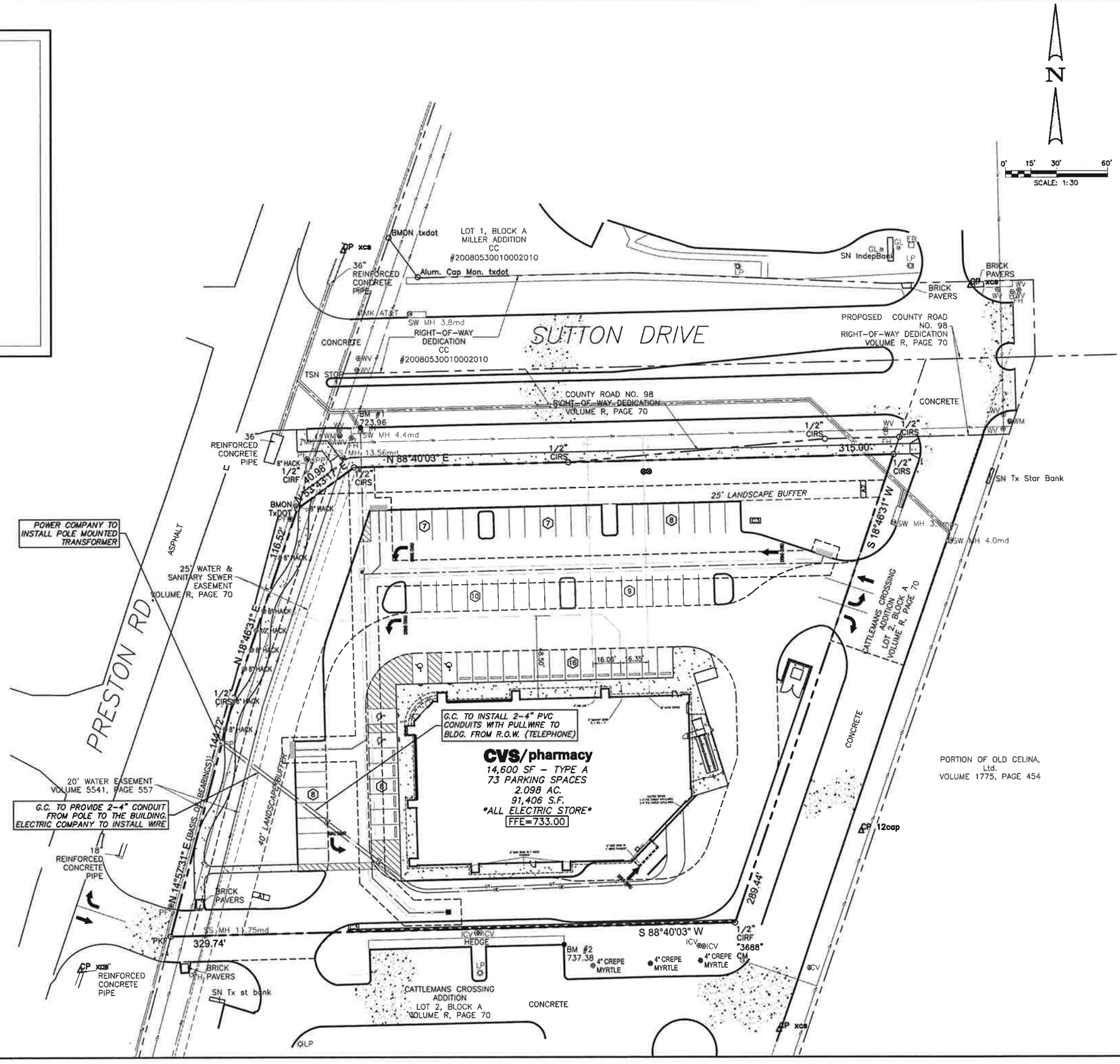
ELEVATION = 737.38



CVS pharmacy®
SOUTHERN 14,600-LEFT CHAMFER DRIVE-THRU
STORE NUMBER: 10413
SEC OF PRESTON RD. & SUTTON DRIVE
CELINA, TEXAS
PROJECT TYPE: NEW
DEAL TYPE: FEE FOR SERVICE
CS PROJECT NUMBER: 72532

CIVIL ENGINEER:
Winkelmann & Associates, Inc.
CONSULTING CIVIL ENGINEERS & SURVEYORS
8750 HILLCREST PLAZA BVL, SUITE 325
DALLAS, TEXAS 75230
(972) 490-7000
(972) 490-7099 FAX
Gurtech Mahmud Pagarkl
Texas Engineers Registration No. 89
Texas Surveyors Registration No. 100865-00
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CONSULTANT:

DEVELOPER:
Orange Development Inc.
1200 Corporate Drive
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BIRMINGHAM, AL 35242
TEL: (205)408-3443
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SEAL:
MICHAEL T. DOGGETT
98628
LICENSED
PROFESSIONAL ENGINEER
11-26-13

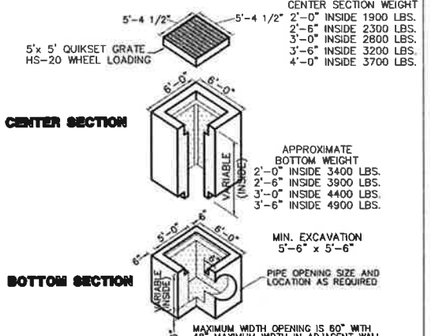
REVISIONS:
1) 11/26/13 ISSUED FOR CONST.

FILE NAME: 70195-utl.dwg
JOB NUMBER: 70195.00
DATE: August 27, 2013
TITLE: FRANCHISE UTILITY PLAN
SHEET NUMBER: C-13
COMMENTS:

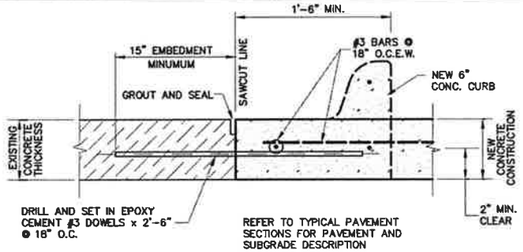
C:\70195\ENGINEERING\Construction Plans\70195-utl.dwg

P-201311-03

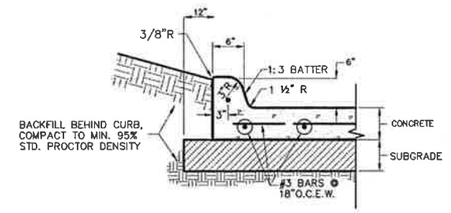
ALL CONCRETE SHALL HAVE A 28 DAY COMPRESSIVE STRENGTH OF 4500 psi. REINFORCING STEEL SHALL COMPLY WITH ASTM A615 GRADE 60, A706 GRADE 60 OR A497 GRADE 70. BAR BENDING AND PLACEMENT SHALL COMPLY WITH THE LATEST ACI STANDARDS. STANDARD STRUCTURAL DESIGN IS BASED ON AASHTO HS 20 WHEEL LOADING. WATER TABLE IS AT 3'-0" BELOW GRADE FOR STANDARD STRUCTURAL DESIGN. THE STANDARD DESIGN IS BASED ON THE TOP AT GRADE AND THE BASE AT 8'-0" MAX. BELOW GRADE. THE STRUCTURAL SHALL BE PLACED ON OTHER LOADINGS OR DEEPER INSTALLATION DEPTHS ARE AVAILABLE UPON REQUEST. KNOCKOUTS OR PIPE OPENINGS CAN BE PROVIDED IN THE SIZE AND LOCATIONS REQUIRED.



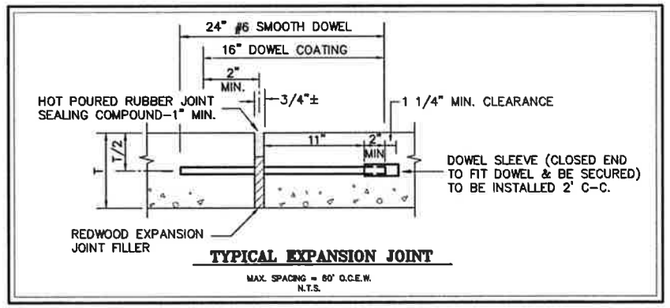
5'0"x 5'0" QUICKSET GRATE INLET
N.T.S.



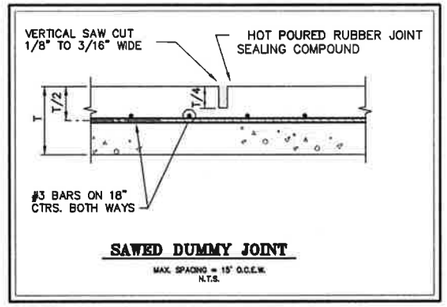
PAVEMENT CONNECTION DETAIL
N.T.S.



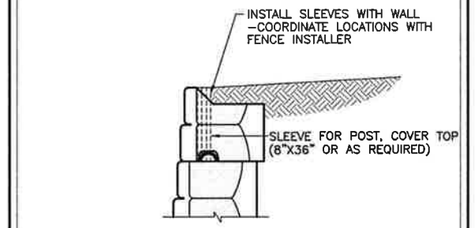
TYPICAL CONCRETE PAVEMENT AND INTEGRAL CONCRETE CURB SECTION
N.T.S.



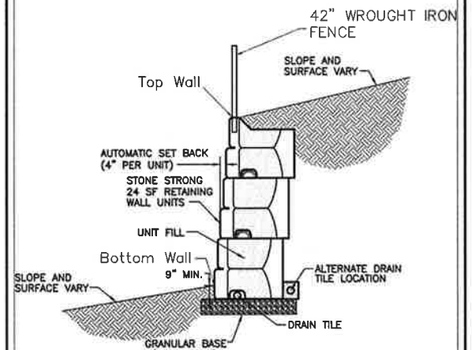
TYPICAL EXPANSION JOINT
MAX. SPACING = 60' O.C.E.W.
N.T.S.



SAWED DUMMY JOINT
MAX. SPACING = 15' O.C.E.W.
N.T.S.



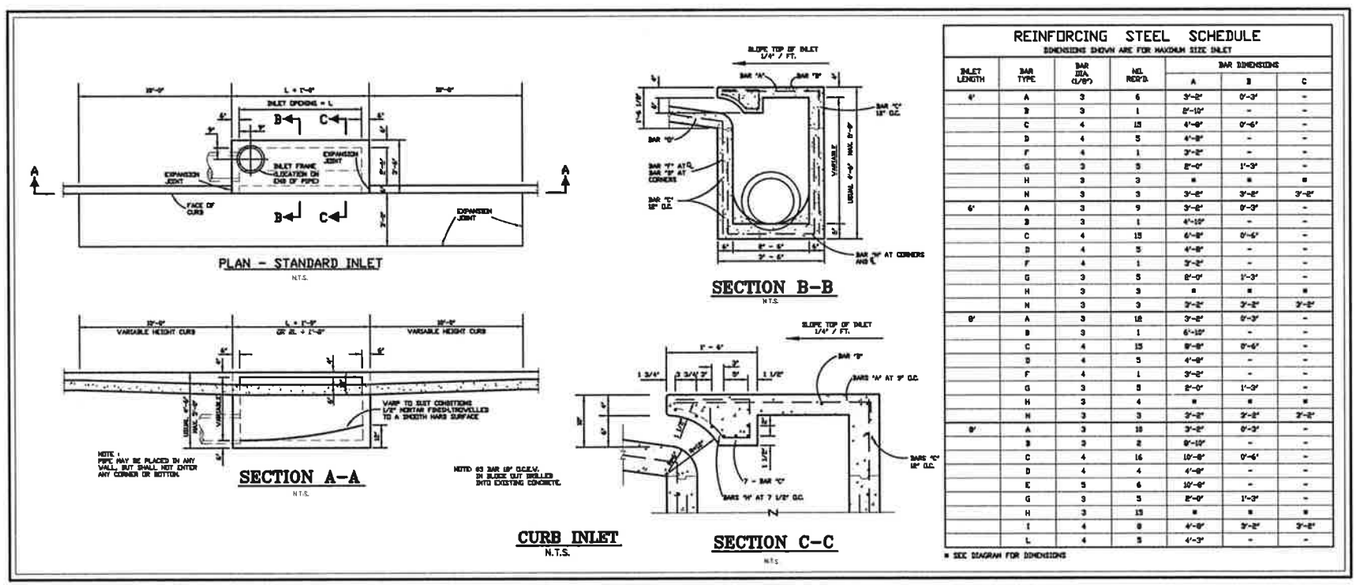
FENCE POST EMBED DETAIL

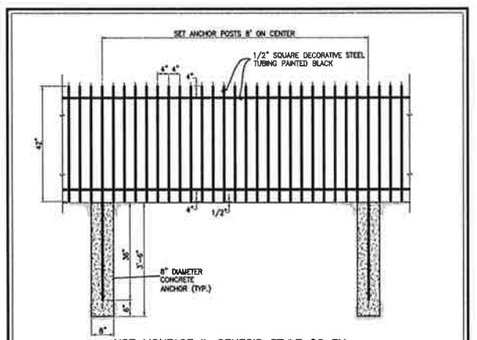


PREMIERCRETE RETAINING WALL SECTION
N.T.S.

RETAINING WALLS 2'-4' IN HEIGHT REQUIRE A SEPARATE PERMIT FROM THE BUILDING INSPECTIONS DEPARTMENT. RETAINING WALLS OVER 4' MUST BE DESIGNED BY AN ENGINEER REGISTERED IN THE STATE OF TEXAS. THE DESIGN MUST BE REVIEWED AND PERMITTED BY BUILDING INSPECTIONS.

CONTACT PREMIERCRETE AT (940) 648-5602





USE MONTAGE II, GENESIS STYLE G2 BY 'AMERISTAR' (LOCAL VENDORS: MASTER HALCO, 214-398-3225 & JAMIESON FENCE CO., 214-339-8384).
INSTALL FENCE PER MANUFACTURER'S PRINTED INSTRUCTION.

WROUGHT IRON FENCE DETAIL
N.T.S.

CVS pharmacy®

SOUTHERN 14,600-LEFT CHAMFER DRIVE-THRU

STORE NUMBER: 10413

SEC OF PRESTON RD. & SUTTON DRIVE
CELINA, TEXAS
PROJECT TYPE: NEW
DEAL TYPE: FEE FOR SERVICE

CS PROJECT NUMBER: 72532

CIVIL ENGINEER:

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CONSULTING CIVIL ENGINEERS ■ SURVEYORS
6750 HILLCREST PLAZA DR., SUITE 335 (972) 490-7090
DALLAS, TEXAS 75230 (972) 490-7099 FAX
Contact: Michael Doggett
Texas Engineers Registration No. 89
Texas Surveyors Registration No. 100866-00
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CONSULTANT:

DEVELOPER:

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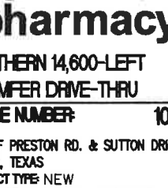
1200 Corporate Drive
Suite G-50
BIRMINGHAM, AL 35242
TEL: (205)408-3443
FAX: (205)408-1850

SEAL:



REVISIONS:
1) 11/26/13 ISSUED FOR CONST.

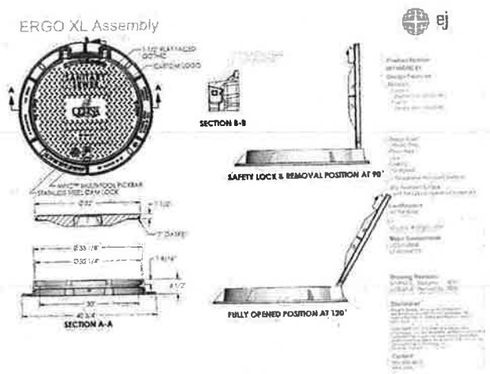
FILE NAME: 70195-gen.dwg
JOB NUMBER: 70195.00
DATE: August 27, 2013

TITLE: CIVIL DETAILS

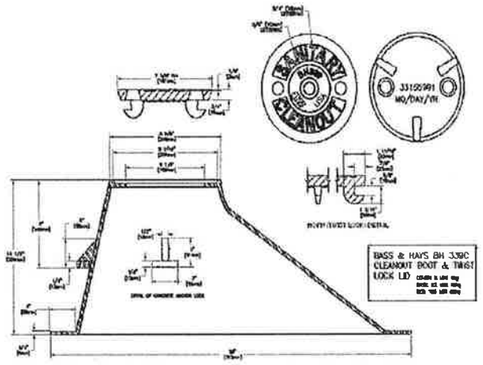
SHEET NUMBER: C-14.1

COMMENTS:

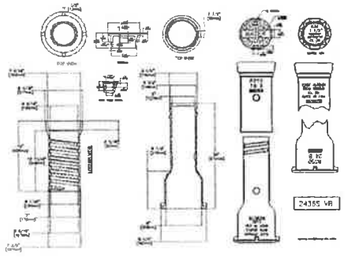
P-201311-03



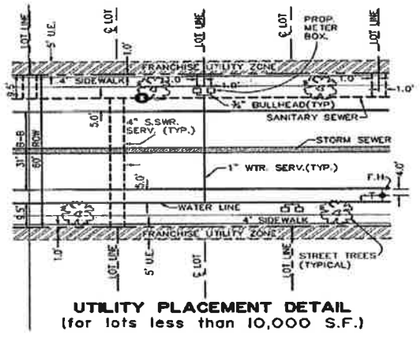
Cleanout



Valve box

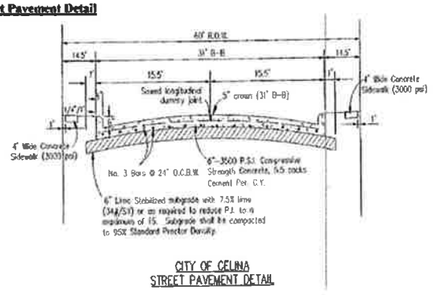


Utility Placement Detail



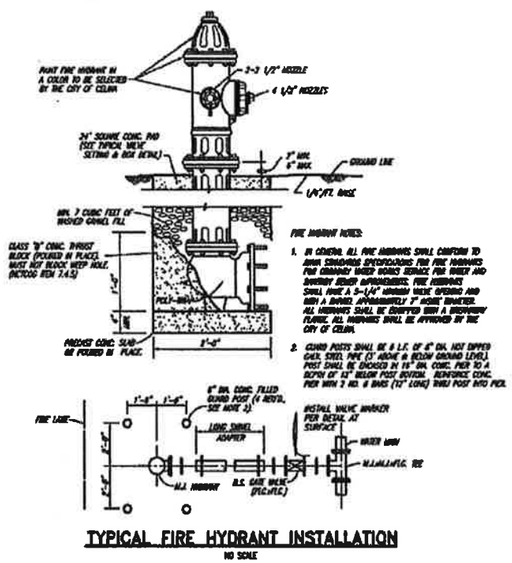
UTILITY PLACEMENT DETAIL
(for lots less than 10,000 S.F.)

Street Pavement Detail



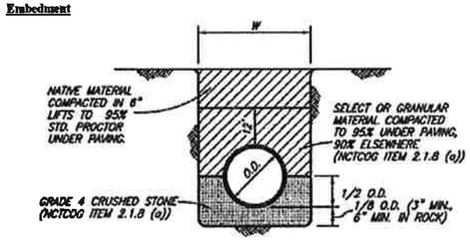
CITY OF CELINA
STREET PAVEMENT DETAIL

Fire Hydrant Installation
Note: Watcrous or approved equal

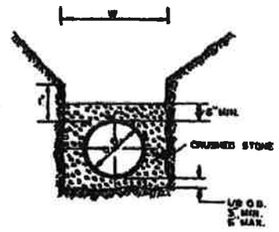


TYPICAL FIRE HYDRANT INSTALLATION
NO SCALE

Embedment



CLASS B+ EMBEDMENT
STD PVC WATER OR D.I.P.



CLASS H EMBEDMENT
P.V.C. PIPE ONLY
STD. PVC. SEWER INSTALLATION
STD. PVC., R.C.C.P. & DUCTILE WATER INSTALLATION.

CVS pharmacy®

SOUTHERN 14,600-LEFT CHAMFER DRIVE-THRU

STORE NUMBER: 10413

SEC OF PRESTON RD. & SUTTON DRIVE
CELINA, TEXAS
PROJECT TYPE: NEW
DEAL TYPE: FEE FOR SERVICE

CS PROJECT NUMBER: 72532

CIVIL ENGINEER:

Winkelmann & Associates, Inc.
CONSULTING CIVIL ENGINEERS ■ SURVEYORS
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Comcast Method Support
Texas Engineers Registration No. 89
Texas Surveyors Registration No. 100965-00
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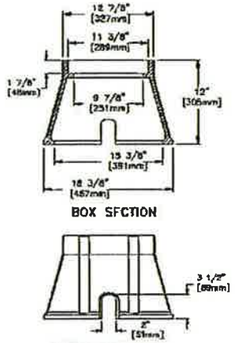
FILE NAME: 70195-gen.dwg
JOB NUMBER: 70195.00
DATE: August 27, 2013
TITLE: CITY CIVIL DETAILS
SHEET NUMBER: C-14.2
COMMENTS:

P-201311-03

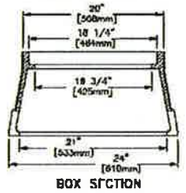
USED IN ASSEMBLIES

32131105	1118 WTR MTR CV MSBC 1118-12 M
32131107	1118 FT WRTH CV MSBC 1118-12 M
32513697	MSBC 1118-12 MSCBC 1118 R DI C
32513699	MSBC 1118-12 BC PLASTIC BOX AS
32513701	BCF1118-12 PLASTIC MTR BOX SW



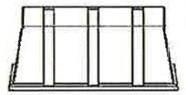
BOX SECTION

BOX TOP VIEW



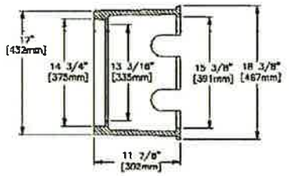
BOX SECTION

SHORT SIDE VIEW

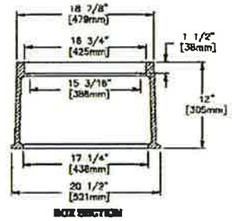


LONG SIDE VIEW

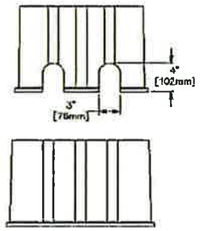
PLAN VIEW



BOX SECTION

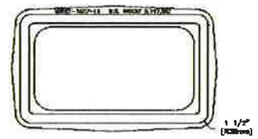


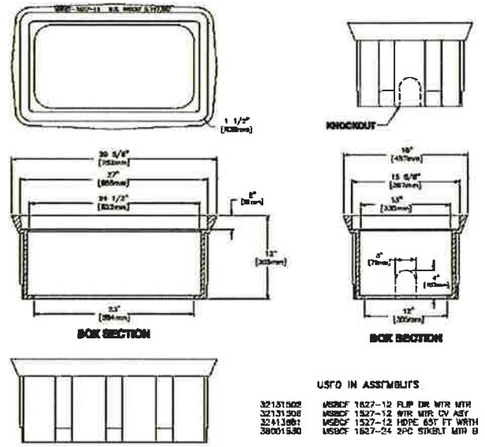
BOX SECTION



USED IN ASSEMBLIES

37413603	MSBC 1416-17 BC-7 4SLT 1416 FT



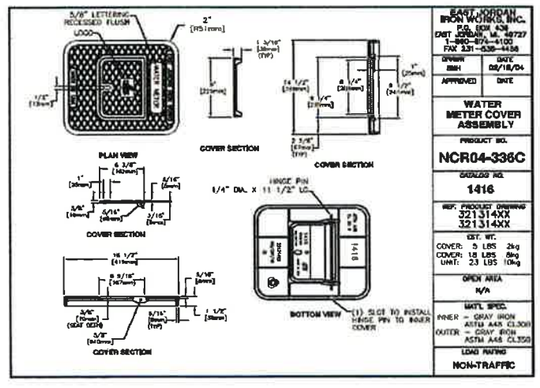


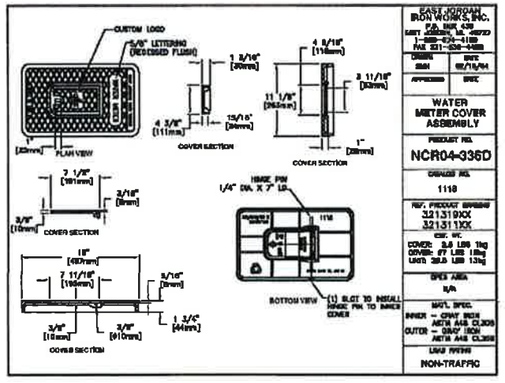
BOX SECTION

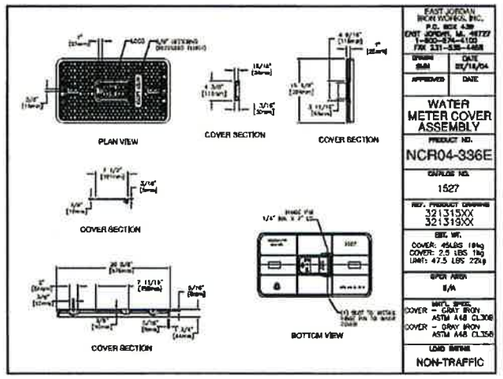
BOX SECTION

USED IN ASSEMBLIES

32131502	MSBCF 1627-12 FLIP DR MTR MTR
32131308	MSBCF 1627-12 WTR MTR CV ASY
32413681	MSBCF 1627-12 HDPE 657 FT WRTH
38001530	MSBCF 1627-24 2PC STKBLT MTR B







CELINA EST. 1876

CVS pharmacy®

SOUTHERN 14,600-LEFT CHAMFER DRIVE-THRU

STORE NUMBER: 10413

SEC OF PRESTON RD. & SUTTON DRIVE
CELINA, TEXAS
PROJECT TYPE: NEW
DEAL TYPE: FEE FOR SERVICE

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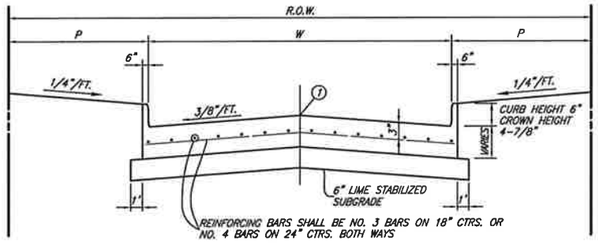
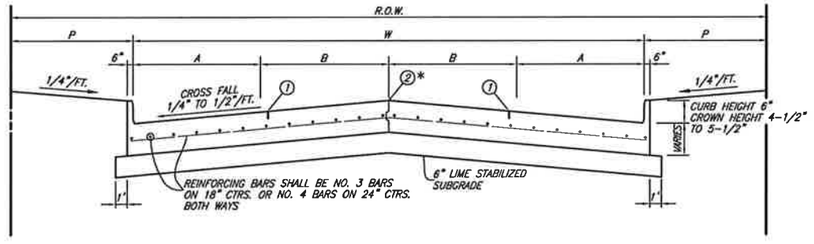
FILE NAME: 70195-gen.dwg
JOB NUMBER: 70195.00
DATE: August 27, 2013
TITLE: CITY CIVIL DETAILS
SHEET NUMBER: C-14.3
COMMENTS:

P-201311-03



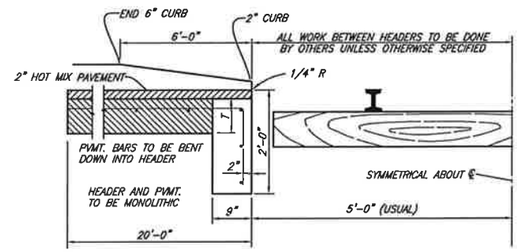
REGULAR SECTION

R2U
C2U



REGULAR SECTION

C4U
M4U
M5U



RAIL HEADER

(RR-HEADER)

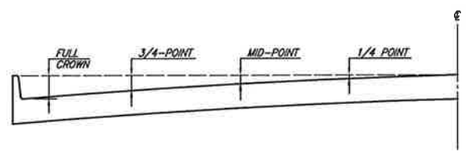
(PARA_SECT)

LEGEND

① – SAWED LONGITUDINAL DUMMY JOINT

② – CONSTRUCTION JOINT (FULL WIDTH PVMT. IS ALLOWED WHERE APPROVED BY CITY)

(LEGEND_PVMT2)



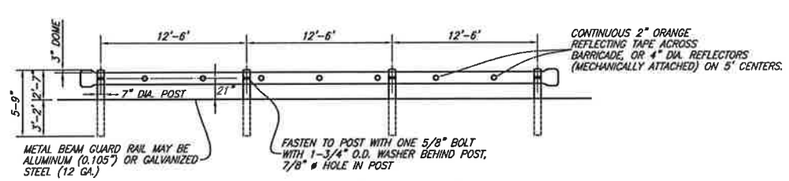
ROADWAY WIDTH (W)	TOTAL CROWN HEIGHT	3/4 POINT	MID-POINT	1/4 POINT
26'	4"	2-1/4"	1"	1/4"
36'	6"	3-3/8"	1-1/2"	3/8"
44'	6"	3-3/8"	1-1/2"	3/8"

TABLE OF CROWN HEIGHTS AND ORDINATES FOR VARIOUS PARABOLIC SECTIONS

SLIP-FORM PAVEMENT MUST MEET CROWN GRADES AT GUTTERS, AT MID-POINTS & ℄

PARABOLIC ROADS ONLY TO BE CONSTRUCTED WITH SLIP FORM PAVERS

(PARA-TABLE)

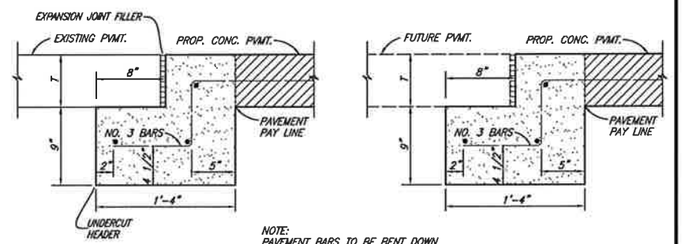


NON CONSTRUCTION BARRICADES (PERMANENT BARRICADES) SHALL CONSIST OF TxDOT GF(TD)-87 METAL BEAM GUARD FENCE WITH TERMINAL CONNECTOR SECTIONS AT EACH END. PERMANENT BARRICADES SHALL BE MANUFACTURED AND CONSTRUCTED IN ACCORDANCE WITH TxDOT DETAILS. BARRICADE SHALL EXTEND FROM OUTSIDE CURB TO OUTSIDE CURB.

TYPICAL PERMANENT BARRICADE DETAIL

(PERM-BARRICADE)

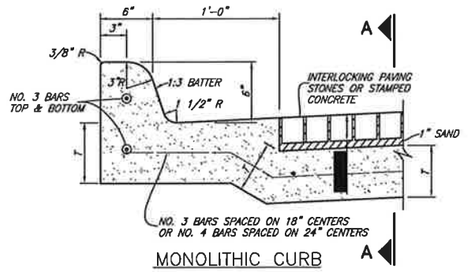
R2U, C2U, C4U, M4U & M5U PAVING SECTIONS SHALL HAVE A MINIMUM PAVEMENT THICKNESS OF 6 INCHES.



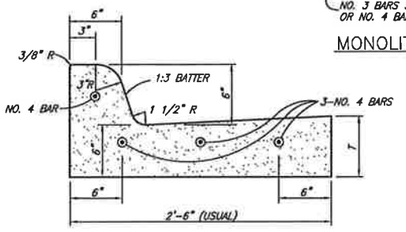
NOTE:
PAVEMENT BARS TO BE BENT DOWN INTO HEADER. PAVEMENT AND HEADER SHALL BE MONOLITHIC.

STREET HEADER

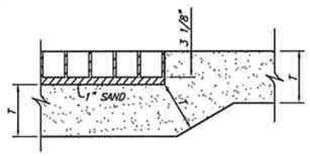
(HEADER)



MONOLITHIC CURB



SEPARATE CURB AND GUTTER



SECTION A-A

PAVING STONES SHALL BE PER NCTCOG ITEMS 2.3.7 AND 5.8 OF SPECIAL PROVISIONS

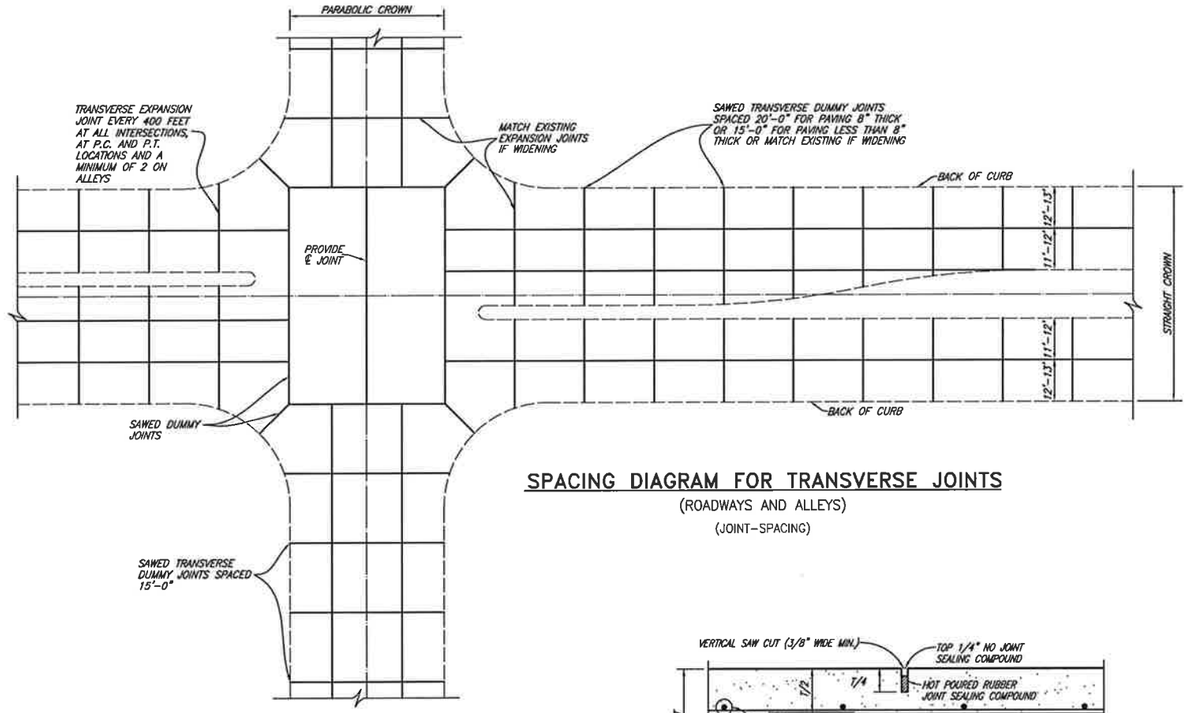
CURB AND CURB AND GUTTER

(CURB-GUT)

CITY OF CELINA, TEXAS

PAVING
STANDARD DETAILS – CS1

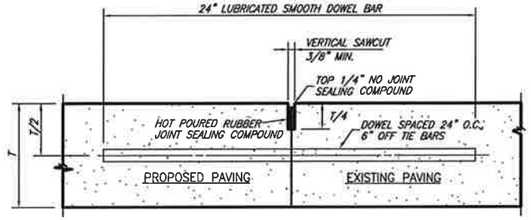
P-201311-03



SPACING DIAGRAM FOR TRANSVERSE JOINTS

(ROADWAYS AND ALLEYS)

(JOINT-SPACING)

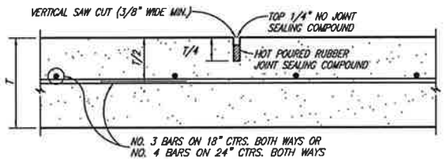


NOTE:

1. T-8" AND GREATER NO. 6 BAR, T-6" AND LESS NO. 5 BAR
2. LONGITUDINAL BUTT CONSTRUCTION MAY BE UTILIZED IN PLACE OF LONGITUDINAL HINGED (KEYWAY) JOINT AT CONTRACTORS OPTION.
3. DOWEL BARS SHALL BE DRILLED INTO PAVEMENT HORIZONTALLY BY USE OF A MECHANICAL RIG. HAND DRILLING NOT ACCEPTABLE. DAMAGE TO EXISTING PAVEMENT SHALL BE REMOVED BY CONTRACTOR AND JOINT CONSTRUCTED AT CONTRACTORS EXPENSE.
4. DOWEL BAR SHOWN IS IN ADDITION TO TIE BARS (12" O.C.-6" OFF DOWELS).
5. TIE BARS SHALL BE NO. 5 BAR DEFORMED. TIE BAR SHALL HAVE A LENGTH OF 24 INCHES.

LONGITUDINAL BUTT JOINT

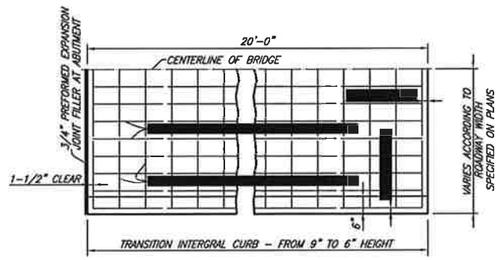
(BUTTJNT)



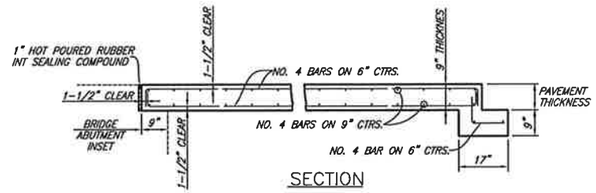
TRANSVERSE JOINTS SPACED 15 FT. C.-C. (MAX.)
LONGITUDINAL JOINTS SPACED 20 FT. C.-C. (MAX.)

SAWED DUMMY JOINT

(DUMMYJNT)



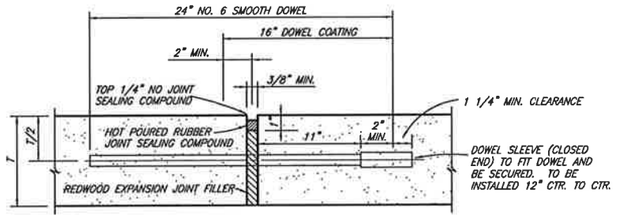
PLAN



SECTION

BRIDGE APPROACH SLAB

(APPROACHSLAB)

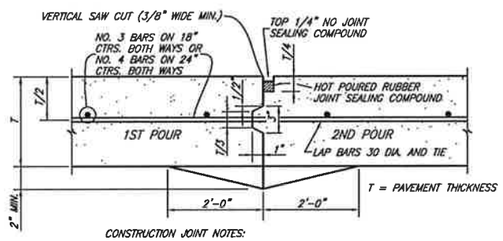


TRANSVERSE EXPANSION JOINT NOTES:

1. DOWELS AND REINFORCING BARS SHALL BE SUPPORTED BY AN APPROVED DEVICE.
2. TRANSVERSE EXPANSION JOINTS SHALL BE SPACED AT 400 FT. MAXIMUM AND AT ALL INTERSECTIONS.

TRANSVERSE EXPANSION JOINT

(EXPJNT)



CONSTRUCTION JOINT NOTES:

1. CONTRACTOR SHALL PROTECT KEYWAY PRIOR TO SECOND POUR. IF LONGITUDINAL KEYWAY IS DAMAGED, CONTRACTOR SHALL REPAIR WITH THE USE OF LONGITUDINAL BUTT JOINT (DRILL DOWELS INTO FIRST POUR).
2. THICKENED EDGES ARE REQUIRED FOR FUTURE WIDENING ONLY.

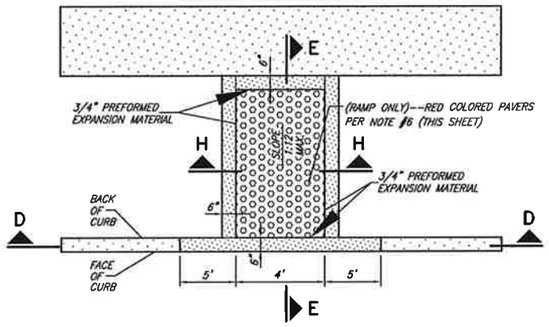
CONSTRUCTION JOINT

(CONSTJNT)

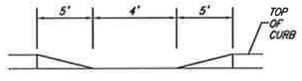
CITY OF CELINA, TEXAS

PAVING

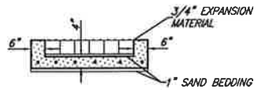
STANDARD DETAILS - CS2



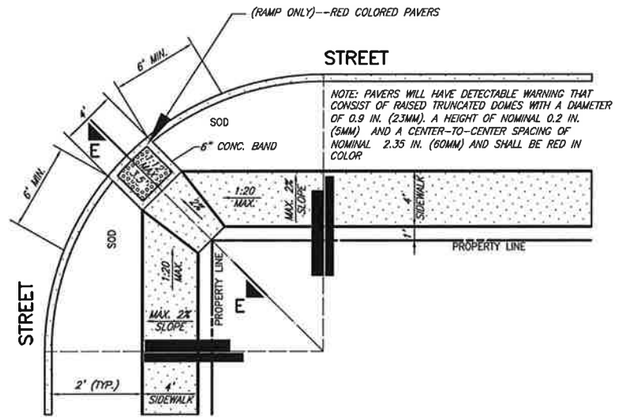
BARRIER FREE RAMP @ STRAIGHT CURB



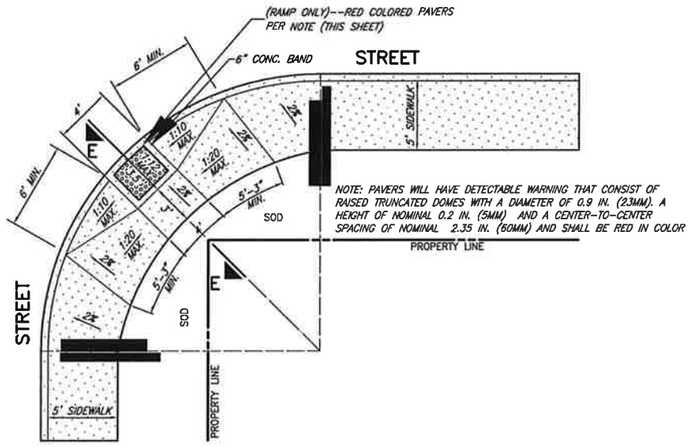
SECTION D-D



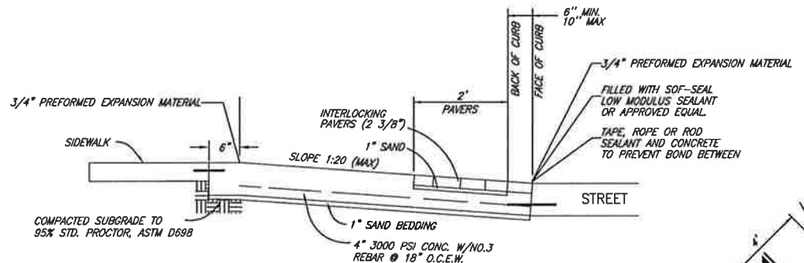
SECTION H-H



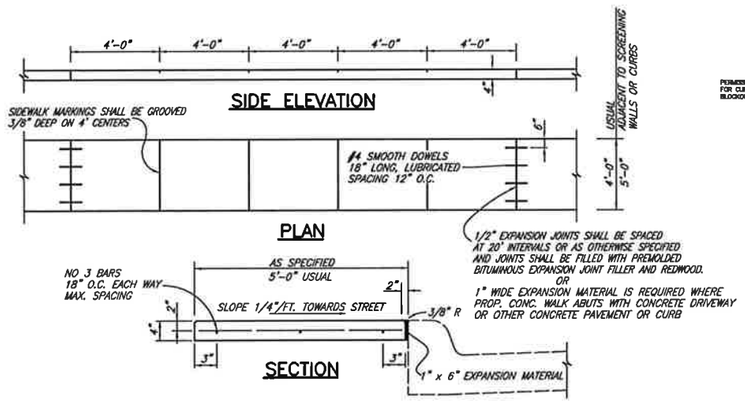
RAMP FOR 4 FEET SIDEWALK AWAY FROM CURB



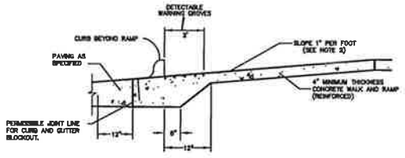
RAMP FOR 5 FEET SIDEWALK NEXT TO CURB



SECTION E-E
(BARRIER_FREE)



REINFORCED CONCRETE SIDEWALK
(SIDEWALK)

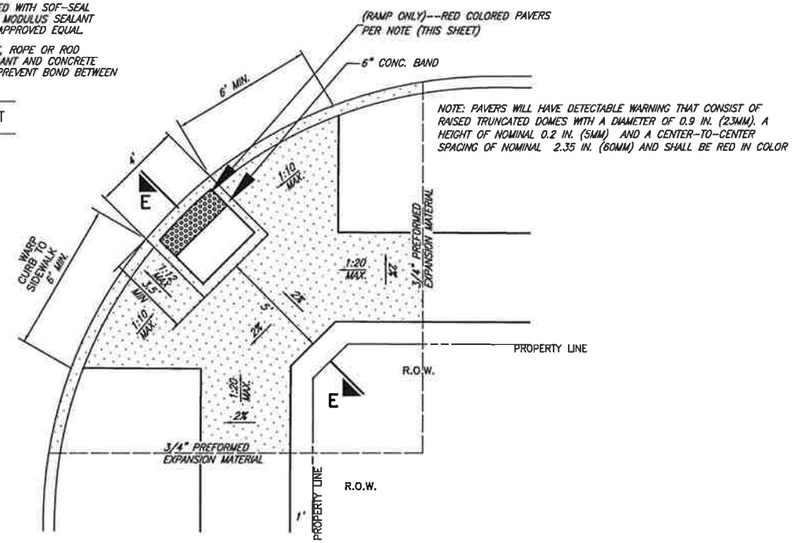


BARRIER FREE RAMP
TYPICAL SECTION THRU RESIDENTIAL RAMP
NTS

GENERAL NOTES:

1. BARRIER FREE RAMPS SHALL BE CONSTRUCTED AS EXTENSIONS OF STANDARD CONCRETE SIDEWALKS EXCEPT AS NOTED IN THESE DETAILS.
2. MAXIMUM SLOPE ON BARRIER FREE RAMPS SHALL NOT EXCEED 1" PER FOOT AT ANY LOCATION.
3. DESIGNS SHOWN ARE FOR 6" CURBS. FOR CURBS WITH HEIGHT GREATER THAN 6", DIMENSIONS SHALL BE INCREASED PROPORTIONATELY.
4. STREETS ON STEEP GRADE WILL REQUIRE LONGER TRANSITIONS ON UPGRADE SIDE.
5. LOCATION OF BARRIER FREE RAMP MAY BE SHIFTED TO CLEAR OBSTRUCTIONS WITH THE APPROVAL OF THE CITY ENGINEER.
6. ACCESS RAMP FROM STREET GRADE SHALL HAVE DETECTABLE WARNING GROVES THAT SHALL BE 1/4" TO 3/4" WIDE, 1/8" DEEP, SPACED 2" APART.
7. ALL LANDINGS ARE TO BE 5'X5' AREAS WITH 2% (MAX) SLOPES IN ANY DIRECTION

RAMP WITH DOMES

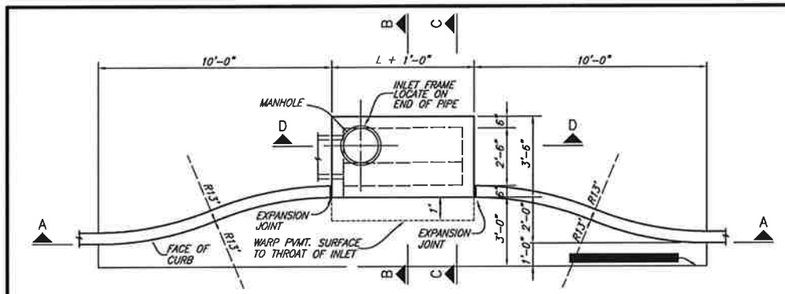


DETAIL 'A'
BARRIER FREE RAMP
STREET INTERSECTION
PLAN VIEW
NTS

CITY OF CELINA, TEXAS

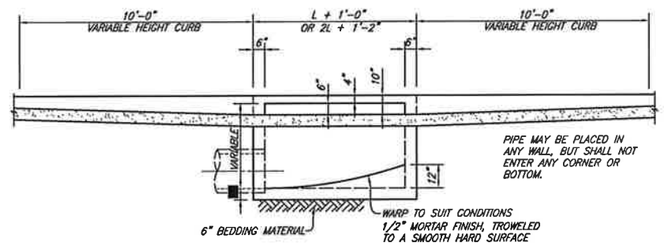
PAVING
STANDARD DETAILS – CS3

P-201311-03



PLAN – RECESSED INLET

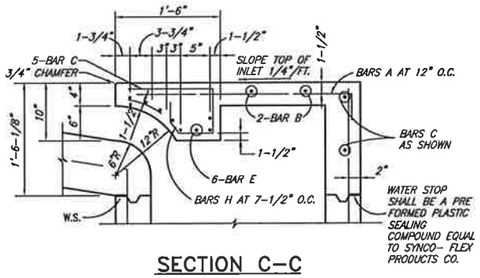
(REC–INT1)



SECTION A–A–RECESSED AND STANDARD INLETS

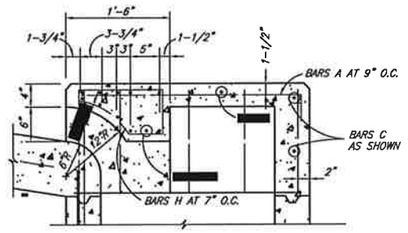
4, 6, 8, AND 10 FOOT INLETS

(PLAN–10)



SECTION C–C

(SECT_C–C)



NOTE: FOR ADDITIONAL INFORMATION SEE SECTION C–C

SECTION E–E

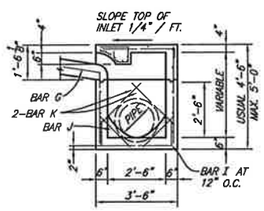
(SECT_E–E)

NOTES:

THE FLOOR OF THE EXCAVATION FOR INLET BOX MUST PROVIDE A FIRM, LEVEL BED FOR THE BASE SECTION TO REST UPON.

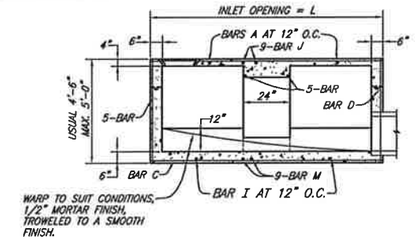
A MINIMUM OF 6 INCHES OF 1" DIAMETER (MAXIMUM) ROCK OR GRAVEL SHALL BE USED TO PREPARE THE BEDDING TO FINAL GRADE OR LIEU OF THIS, AT LEAST 6 INCHES OF 2–SACK CEMENT STABILIZED SAND SHALL BE USED TO PREPARE THE BEDDING TO GRADE. CEMENT STABILIZED–SAND SHALL BE ALLOWED TO SET BY KEEPING HOLE PUMPED DRY.

AFTER CASING HAS BEEN INSTALLED ON THE PROPER BEDDING, THE BACKFILL MATERIAL, WHICH IS FREE FLOWING AND CLEAR OF ROCKS, IN EXCESS OF 4" DIAMETER AND OTHER LUMPS WHICH WOULD PROHIBIT PROPER COMPACTION, SHALL BE COMMENCED IN LIFTS OF NO MORE THAN 18". THE MATERIAL USED FOR BACKFILL SHOULD BE A TYPE SUITABLE TO OBTAIN THE DENSITY REQUIREMENTS FOR THE SPECIFIC JOB.



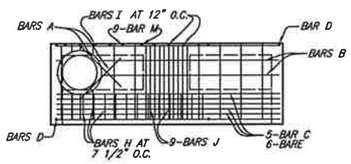
SECTION B–B

(SECT_B–B)



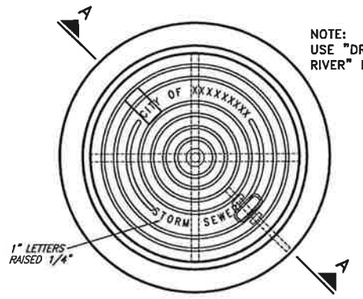
SECTION A–A – STANDARD AND RECESSED INLETS

(SECT_A–A1)



PLAN – STANDARD INLET

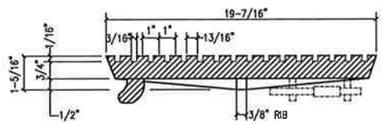
(PLAN_STDINL)

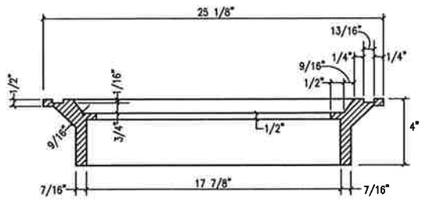


NOTE: USE "DRAIN TO RIVER" LID

NOTE: MANHOLE COVER TO INCLUDE LOCKING DEVICE

PLAN OF COVER



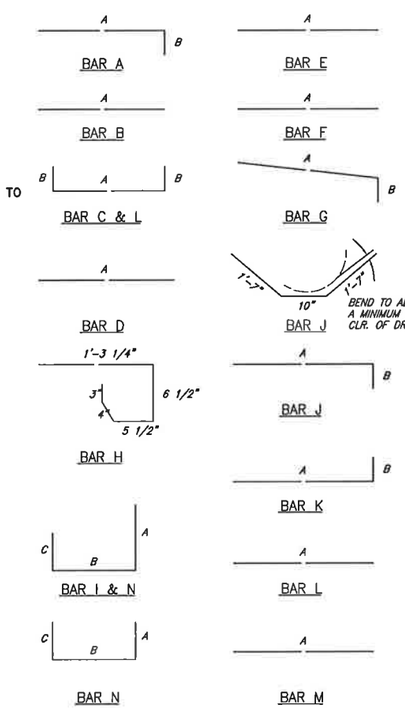


SECTION OF FRAME AND COVER SECTION A–A

INLET FRAME AND COVER

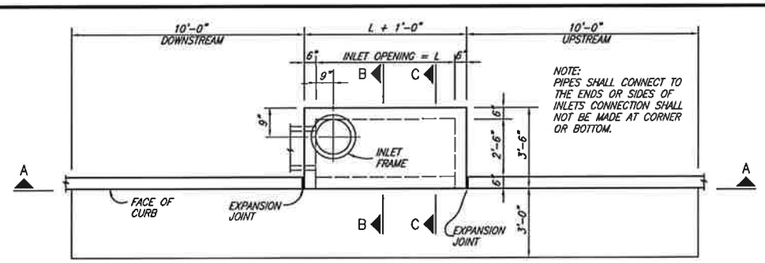
BASS & HAYS COVER 55#, FRAME 45# OR EQUAL

(MH–COV4)



BAR DIAGRAMS

(BARDIAG)



PLAN – STANDARD INLET

4, 6, 8 AND 10 FOOT INLETS

(STDINLT1)

REINFORCING STEEL SCHEDULE

DIMENSIONS SHOWN ARE FOR MAXIMUM SIZE INLETS

INLET LENGTH	BAR TYPE	BAR DIA. (1/8 IN.)	NO. REQ'D	BAR DIMENSIONS A	B	C
4	A	3	6	3'–2"	0'–3"	–
	B	3	1	2'–10"	–	–
	C	4	15	4'–8"	0'–6"	–
	D	4	5	4'–8"	–	–
	F	4	1	3'–2"	–	–
	G	3	5	2'–0"	1'–3"	–
	H	3	6	*	*	*
	N	3	3	3'–2"	3'–2"	3'–2"
6	A	3	9	3'–2"	0'–3"	–
	B	3	1	4'–10"	–	–
	C	4	15	6'–8"	0'–6"	–
	D	4	5	4'–8"	–	–
	F	4	1	3'–2"	–	–
	G	3	5	2'–0"	1'–3"	–
	H	3	9	*	*	*
	N	3	3	3'–2"	3'–2"	3'–2"
8	A	3	12	3'–2"	0'–3'	–
	B	4	1	6'–10"	–	–
	C	4	15	8'–8"	0'–6"	–
	D	4	5	4'–8"	–	–
	F	4	1	3'–2"	–	–
	G	3	5	2'–0'	1'–3"	–
	H	3	12	*	*	*
	N	3	3	3'–2"	3'–2"	3'–2"
10	A	3	13	3'–2"	0'–3'	–
	B	3	2	8'–10"	–	–
	C	4	16	10'–8"	0'–6"	–
	D	4	4	4'–8"	–	–
	E	5	6	10'–8"	–	–
	G	3	5	2'–0"	1'–3"	–
	H	3	14	*	*	*
	I	4	8	4'–8"	3'–2"	3'–2"
	L	4	5	4'–3"	–	–

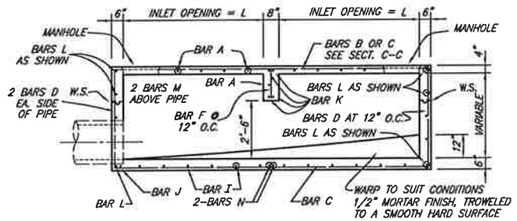
* SEE DIAGRAM FOR DIMENSIONS. 4', 6', 8' AND 10' INLETS

CITY OF CELINA, TEXAS

DRAINAGE

STANDARD DETAILS – CS4

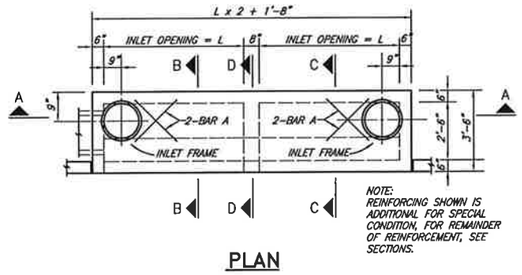
P-201311-03



SECTION A–A

12, 14, 16 AND 20 FOOT INLETS

(SECT_A–A)

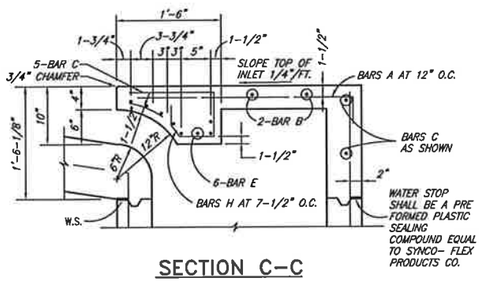


NOTE: REINFORCING SHOWN IS ADDITIONAL FOR SPECIAL CONDITION, FOR REMAINDER OF REINFORCEMENT, SEE SECTIONS.

PLAN

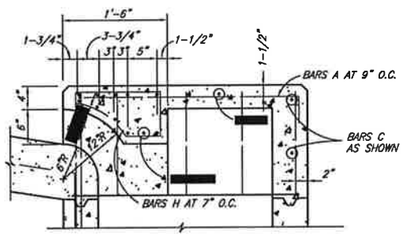
20 FOOT INLETS

(PLAN_20)



SECTION C–C

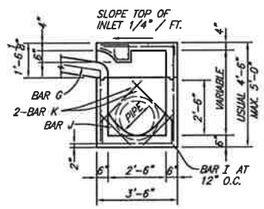
(SECT_C–C)



NOTE: FOR ADDITIONAL INFORMATION SEE SECTION C–C

SECTION D–D

(SECT_D–D)



SECTION B–B

(SECT_B–B)

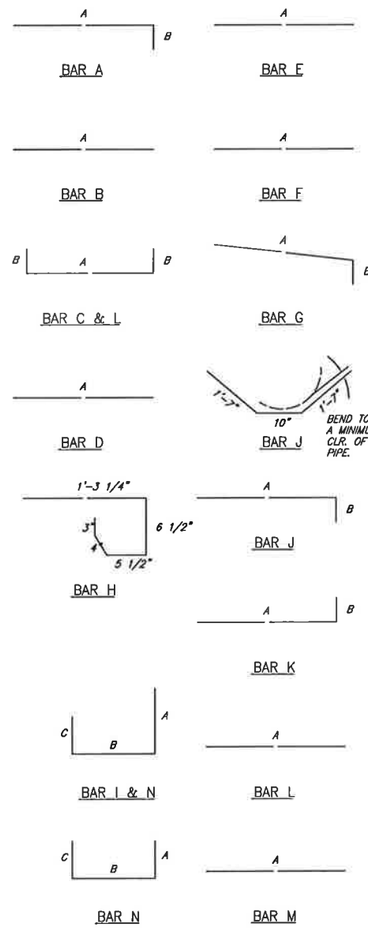
DOUBLE INLETS

DIMENSIONS SHOWN ARE FOR MAXIMUM SIZE INLETS

INLET LENGTH	BAR TYPE	BAR DIA. (1/8 IN.)	NO. REQ'D	BAR DIMENSIONS A	B	C
6 FT.	A	3	15	3'-2"	0'-6"	–
	B	3	2	11'-6"	–	–
	C	4	16	13'-4"	0'-6"	–
	D	4	9	4'-8"	–	–
	E	5	6	13'-4"	–	–
	F	4	5	1'-2"	–	–
	G	3	12	2'-0"	1'-3"	–
	H	3	26	*	*	*
	I	4	12	4'-8"	3'-2"	3'-2"
	J	5	1	*	*	*
	K	5	6	3'-2"	0'-6"	–
	L	4	11	3'-2"	0'-6"	–
	M	4	2	3'-0" **	–	–
	N	4	2	4'-8"	3'-2"	4'-8"
7 FT.	A	3	17	3'-2"	0'-6"	–
	B	3	2	13'-6"	–	–
	C	4	16	15'-4"	0'-3'	–
	D	4	9	4'-8"	–	–
	E	5	6	15'-4"	–	–
	F	4	5	1'-2"	–	–
	G	3	15	2'-0"	1'-3"	–
	H	3	32	*	*	*
	I	4	14	4'-8"	3'-2"	3'-2"
	J	5	1	*	*	*
	K	5	6	3'-2"	0'-6"	–
	L	4	11	3'-2"	0'-6"	–
	M	4	2	3'-0" **	–	–
	N	4	2	4'-8"	3'-2"	4'-8"
8 FT.	A	3	19	3'-2"	0'-6"	–
	B	3	2	15'-6"	–	–
	C	4	16	17'-4"	0'-6"	–
	D	4	9	4'-8"	–	–
	E	5	6	17'-4"	–	–
	F	4	5	1'-2"	–	–
	G	3	12	2'-0"	1'-3"	–
	H	3	26	*	*	*
	I	4	16	4'-8"	3'-2"	3'-2"
	J	5	1	*	*	*
	K	5	6	3'-2"	0'-6"	–
	L	4	11	3'-2"	0'-6"	–
	M	4	2	3'-0" **	–	–
	N	4	2	4'-8"	3'-2"	4'-8"
10 FT.	A	3	23	3'-2"	0'-6"	–
	B	3	2	19'-6"	–	–
	C	4	16	21'-4"	0'-6"	–
	D	4	9	4'-8"	–	–
	E	5	6	21'-4"	–	–
	F	4	5	1'-2"	–	–
	G	3	15	2'-0"	1'-3"	–
	H	3	32	*	*	*
	I	4	20	4'-8"	3'-2"	3'-2"
	J	5	1	*	*	*
	K	5	6	3'-2"	0'-6"	–
	L	4	11	3'-2"	0'-6"	–
	M	4	2	3'-0" **	–	–
	N	4	2	4'-8"	3'-2"	4'-8"

* SEE DIAGRAM FOR DIMENSIONS.
** FIELD CUT AS REQUIRED TO ACCOMMODATE DRAIN PIPE 16' AND 20' INLETS

REINFORCING STEEL SCHEDULE



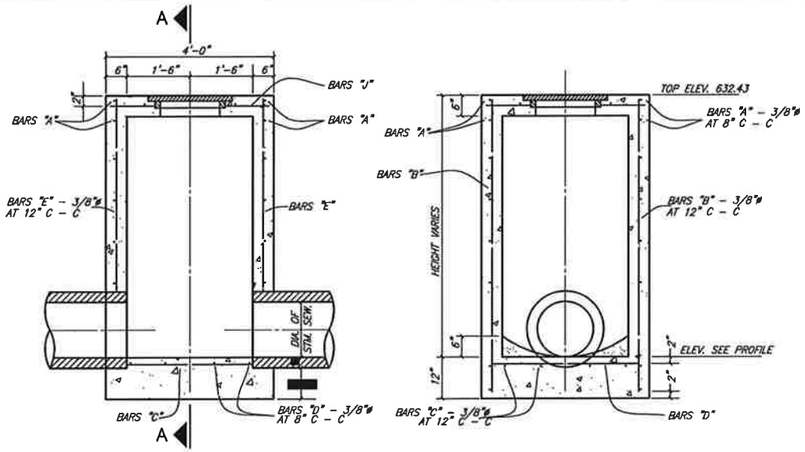
△ BEND TO ALLOW A MINIMUM 1 1/2" CIR. OF DRAIN PIPE
* SEE DIAGRAMS FOR DIMENSIONS
** FIELD CUT AS REQUIRED TO ACCOMODATE DRAIN PIPE

BAR BENDING DIAGRAMS

(BARLIST2)

CITY OF CELINA, TEXAS

DRAINAGE
STANDARD DETAILS – CS5



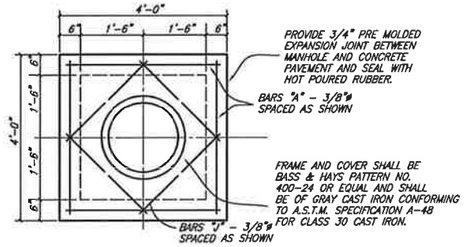
ELEVATION

SECTION A–A

STORM SEWER TYPE A MANHOLE

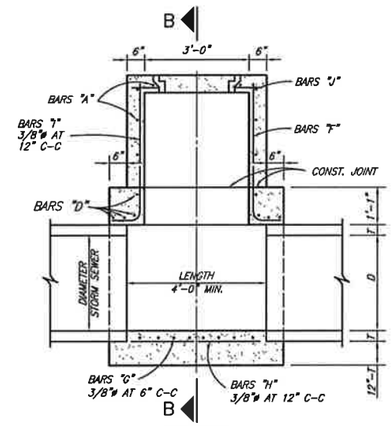
MAX. PIPE SIZE 30"

(TYPEAMH)

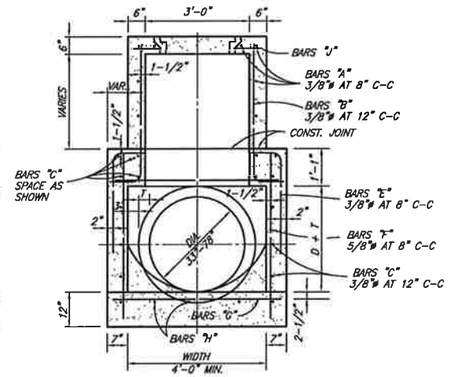


TOP PLAN
TYPE A & TYPE B
STORM SEWER MANHOLE

(MH_TOP)



ELEVATION

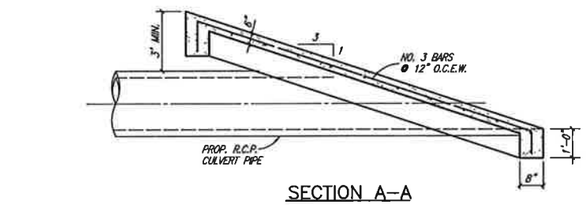


SECTION B–B

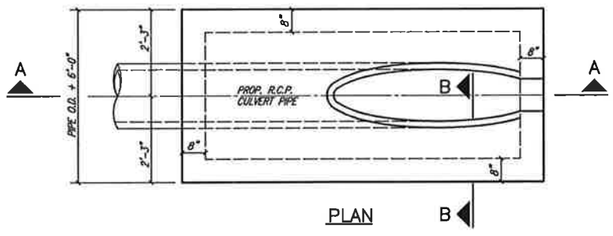
TYPE B STORM SEWER MANHOLE

MAX. PIPE SIZE 78"

(TYPEBMH)

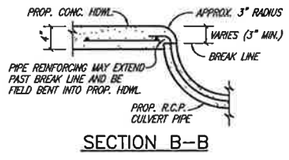


SECTION A–A

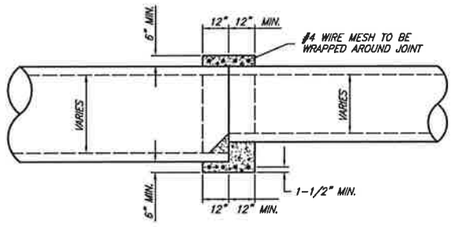


SLOPED CONCRETE HEADWALL

(SLOPEHWL)



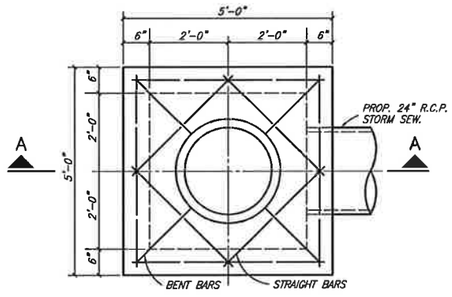
SECTION B–B



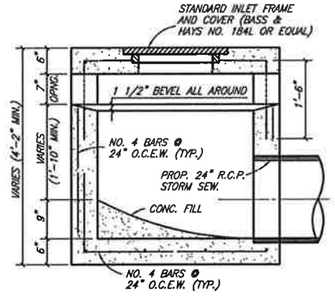
DETAIL OF CONCRETE COLLAR
FOR R.C.P. OR R.C.A.P. CONNECTIONS

INSIDE JOINT SHALL BE CONCRETE MORTAR

(CONCCOL)



PLAN



SECTION A–A

STANDARD DROP INLET

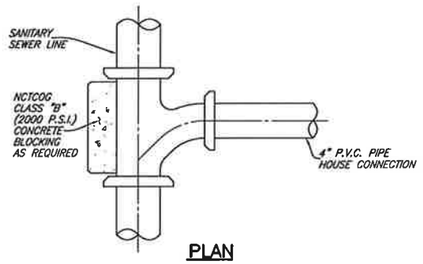
(DROPINLET)

CITY OF CELINA, TEXAS

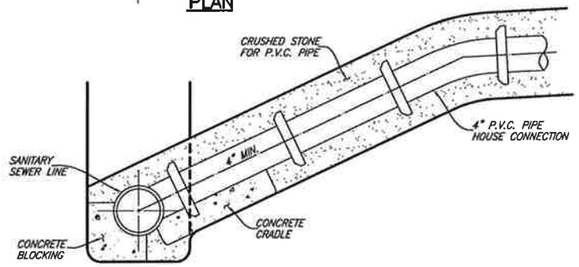
DRAINAGE

STANDARD DETAILS – CS6

P-201311-03



PLAN

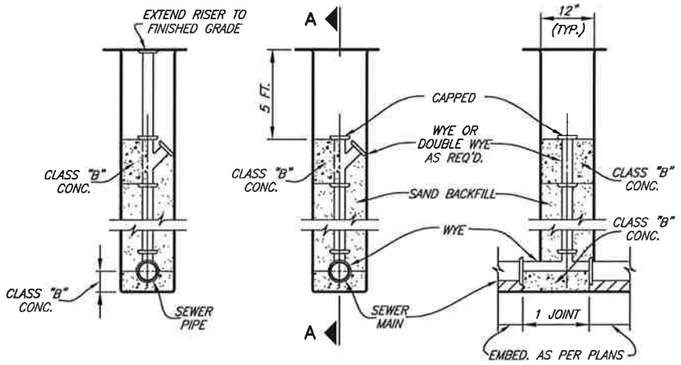


SECTION

TYPICAL SEWER HOUSE SERVICE CONNECTION

SANITARY SEWER CLEANOUT BOOTS SHALL BE BASS & HAYS # 339 OR APPROVED EQUAL.

(HOUSE_SERVICE)

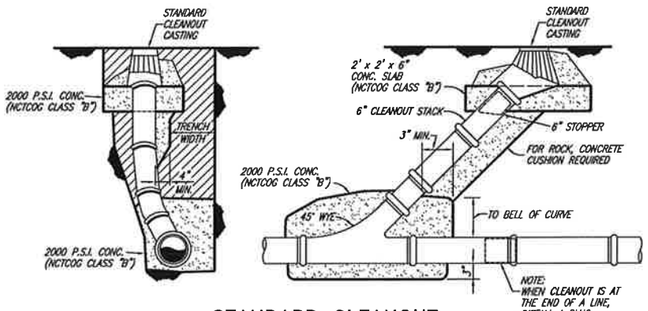


WITH CLEAN OUT

SECTION "A–A"

DEEP CUT CLEANOUT

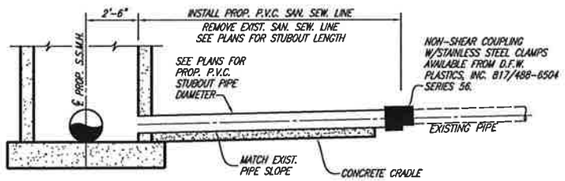
(DEEPCUT–CO)



STANDARD CLEANOUT

NO SCALE

(CLEANOUT)

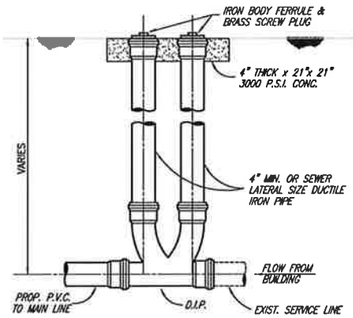


TYPICAL STUBOUT CONNECTION

NO SCALE

NOTE:
MATCH SOFFITS UPSTREAM OF MANHOLE
MATCH FLOW LINES DOWNSTREAM OF MANHOLE

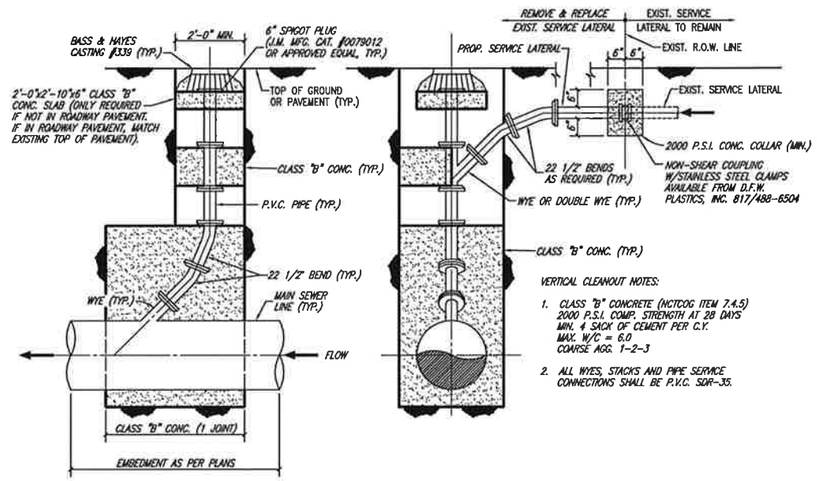
(STUBOUT)



TYPICAL TWO WAY CLEANOUT

NO SCALE

(2–WAY–CO)



VERTICAL CLEANOUT CONNECTION

(CONNECTION, WYE, CONCRETE, BENDS, CASTING, ETC. ALL SUBSIDIARY TO CLEANOUT)

(VERT–CO)

CITY OF CELINA, TEXAS

SANITARY SEWER SYSTEM
STANDARD DETAILS – CS7

P-201311-03

CITY OF CELINA, TEXAS

SANITARY SEWER SYSTEM

STANDARD DETAILS – CSB

REFER TO SHEET C-14.2
FOR MANHOLE RING DETAIL

NOTE:
CONTRACTOR SHALL USE "CIW" MANHOLE COVER PRODUCT NUMBER 002024Z9 WITH CITY OF CELINA LOGO OR APPROVED EQUAL.

SANITARY SEWER MANHOLE (CAST IN PLACE)
(MANHOLE)

4', 5' & 6' DIAMETER MANHOLES

5' & 6' DIAMETER MANHOLES
(MIN. 5' DIA.)

MANHOLE WITH DROP CONNECTION

- 12" NCTCOG GRADE 4 CRUSHED STONE
- DROP CONNECTION FLOWLINE = MAIN LINE TOP OF PIPE FOR MAIN LINE I.D. < 24"; DROP CONNECTION FLOWLINE = MAIN LINE FLOWLINE + 24" FOR MAIN LINE I.D. > 24"
- STUBOUT TO BE FITTED W/ STOPPER OR CAP; STUBOUTS SHALL BE A MIN. OF 5' LONG OR 3' LONG W/ CONCRETE CRADLE (FROM SAME POUR AS BASE) UNDER ENTIRE LENGTH.
- DROP CONNECTION PIPE (I.D. SAME AS MAIN SAN. SEW. PIPE, MAX. 12" I.D.)
- CONCRETE ENCASEMENT (6" MIN. AROUND DROP PIPE)
- COUPLING W/ O-RING RUBBER GASKET
- MIN. 3" THICK 3000 P.S.I. CONCRETE
- TYPICAL DROP TEE

STANDARD MANHOLE ELEVATION

- 12" NCTCOG GRADE 4 CRUSHED STONE
- 12" MIN.
- COUPLING WITH "O" RING RUBBER GASKET WITH P.V.C. PIPE (KOR-N-SEAL OR APPROVED EQUAL)
- 12" MIN.
- 8" MIN. DIAMETER
- 5'-0" OR 6'-0"
- 4'-0"
- RUNGS
- CONCRETE CONE (SEE DETAIL ABOVE FOR MANHOLE 5' AND 6' DIA. MANHOLE CONE TRANSITION)
- 4200 P.S.I. CONC. (NCTCOG CLASS 'F' MONOLITHIC POUR)
- 24" OR 36"
- CAST IRON M.H. FRAME & COVER (M.H. FRAME CAST IN CONCRETE.
- PRECAST CONCRETE ADJUSTMENT GRADE RINGS (SET IN MORTAR BED AND BRING TO GRADE). MAXIMUM ADJUSTMENT 18 INCHES. FURNISH & INSTALL INTERNAL CHIMNEY SEALS.

CONE TRANSITION
5', & 6' DIAMETER MANHOLES ONLY

- 8" MIN.
- DIAMETER
- 5'-0" & 6'-0"
- 4'-0"
- 24" DIA.
- 12" MAX.
- 15" (5' DIA. M.H.) 30" (6' DIA. M.H.)
- 24" OR 36"

MANHOLE CONE NOTE:
FOR MANHOLES 48" DIAMETER OR LARGER THAN 48" I.D., A PRE-CAST FLAT TOP MANHOLE COVER AS PER A.S.T.M. C478 SHALL BE INSTALLED, AND SHALL BE INSTALLED.

MANHOLE CONSTRUCTION JOINT
KEYWAY WITH WATERSTOP

- 4" HEAVY DUTY POLYVINYL CHLORIDE WATERSTOP AT ALL CONSTRUCTION JOINTS
- CONSTRUCTION JOINT
- STANDARD 2"x4" KEYWAY ROUGHEN EDGES PRIOR TO SECOND POUR.
- WALL THICKNESS

PICK BAR DETAIL
(NTS)

- 1" DIA SS BAR
- 2 13/16"
- 3 3/4"
- 1 7/8"

STACK DETAIL
(NTS)

- 1/8"
- 1 1/16"

MANHOLE ABANDONMENT
OUTSIDE PAVEMENT AREA
(MHABAN)

- REMOVE RING, COVER & CONE, BACKFILL IN 8" LOOSE LIFTS WITH TOP SOIL (90% STD. PROCTOR); PLACE SOLID SOD IN DISTURBED AREA.
- NATIVE BACKFILL 8" LOOSE LIFTS MECHANICALLY COMPACTED TO 90% STD. PROCTOR.
- NCTCOG CLASS 'B' (2000 P.S.I.) CONCRETE 12" ABOVE HIGHEST TOP OF PIPE

PRESSURE TYPE MANHOLE FRAME AND COVER
(MH-PRES-COV)

SECTION A-A

NOTE
FOR SEAL BETWEEN FRAME & COVER WITH A 1/4" DIA. NEOPRENE O-RING GASKET. (LOCATION OF O-RING GASKET IS LEFT TO MANUFACTURER, BUT SUBJECT TO APPROVAL BY OWNER)

- R = 15 1/2"
- R = 14 3/8"
- R = 12 1/8"
- R = 10 5/16"
- 1 1/8"
- 3 7/8"
- 3 3/8"
- GASKET
- 1" DIA. 6" LONG STAINLESS STEEL ANCHOR BOLTS W/ HEX. HEAD NUT & REQUIRED
- 1/4"
- MACHINE BOTH SURFACES
- 2 3/4"
- 1"
- R=1/4"
- R=1/2"
- 6"
- 4 1/16"
- 1/2"
- 5/8"
- 1/16"
- 1 1/4"
- 5/8"
- 6-5/8" DIA 1 1/2" LONG STAINLESS STEEL BOLTS
- TYP. 1-1/2"
- 3/4"
- 1/2"
- R = 11 1/4"
- R = 10 5/16"
- R = 12 1/8"
- 8"
- 1/16"
- 7/8"
- 5/8"
- 1/16"

PLAN

- INDEX MARKS ON FRAME AND COVER INGRAVED INTO CASTING 1/8" DEEP
- 45°
- 15°
- 1 3/4"
- 7/8"
- 1" LETTERS, RAISED 1/4"
- 2-3 3/4"x2" PICK SLOTS WITH 1-1" DIA. STEEL ROD EACH
- SANITARY SEWER
- CITY OF XXXXXXXXXX, TEXAS
- 6-5/8" DIA. CORES AS SHOWN
- 1" LETTERS, RAISED 1/4"

MANHOLE RING AND COVER
WITH LOCKING DEVICE & PICK SLOTS
(MHCOV)

- 31"
- 29"
- 26"
- 5 1/2"
- 1" LETTERS, RAISED 1/4"
- 1" LETTERS, RAISED 1/4"
- SANITARY SEWER
- CITY OF XXXXXXXXXX, TEXAS
- (PRECASTMH)

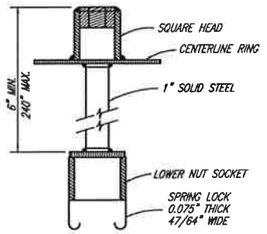
BASS AND HAYES FOUNDRY, INC.
TRAFFIC BEARING MANHOLE: 400-24
NON TRAFFIC BEARING MANHOLES: 300-24

NOTE:
ALL JOINTS IN PRECAST MANHOLE SHALL BE SEALED ON OUTSIDE OF MANHOLE WITH AQUAGARD SHRINK SEAL.

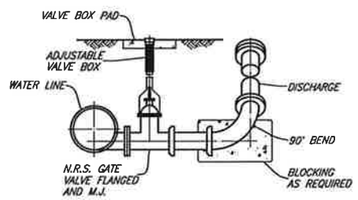
PRECAST CONCRETE MANHOLE

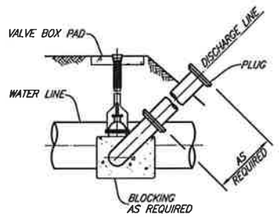
- 12"
- PIPE I.D.
- VARIES
- 12"
- 12" NCTCOG GRADE 4 CRUSHED STONE MAY TO BE LAID ON FIRM NATURAL OR ROCK FOUNDATION
- COUPLING WITH O-RING RUBBER GASKET WITH P.V.C. PIPE (KOR-N-SEAL) OR APPROVED EQUAL.
- NCTCOG CLASS F CONCRETE BASE
- GROUT
- STUBOUTS TO BE FITTED W/ STOPPER OR CAP; STUBOUTS SHALL BE A MIN. OF 5' LONG (TYP.) W/ CONCRETE CRADLE UNDER ENTIRE LENGTH.
- BASE RISER WITH "BUTT END" SET IN RAM-NEK (OR APPROVED EQUAL) FLEXIBLE GASKET MATERIAL
- PRECAST MANHOLE RISER SHALL BE IN ACCORDANCE WITH A.S.T.M. C-478
- USE O-RING RUBBER GASKETS AND PRE-FORMED JOINT SEALING COMPOUND TO FILL EXTERIOR JOINT SPACES
- CONCENTRIC MANHOLE CONE (SEE CONE TRANSITION DETAIL FOR LARGER THAN 48" DIA.)
- 22"
- REINFORCED CONCRETE GRADE RINGS (SET IN MORTAR BED AND BRING TO GRADE) RINGS 18" MAXIMUM) FURNISH AND INSTALL INTERNAL CHIMNEY SEAL.
- CAST IRON MANHOLE FRAME AND COVER SUITABLE FOR HEAVY TRAFFIC (SEE DETAIL)
- MORTAR COATING
- MANHOLE CONE NOTE: FOR MANHOLES WITH DIAMETER LARGER THAN 48" I.D., A PRE-CAST FLAT TOP MANHOLE COVER AS PER A.S.T.M. C478 SHALL BE INSTALLED.
- BOTTOM SECTION OF MANHOLE IN RISER PIPE LENGTHS OF ONE (1), TWO (2) OR THREE (3) FEET TO BE SET ON 1' OF HIGH STRENGTH, NON-SHRINK, LEVEL GROUT.
- 6" MIN.
- VARIES
- 8" x 24" DIA. PRECAST

P-201311-03

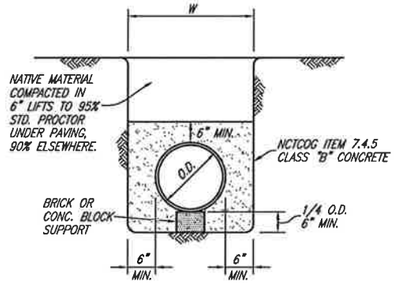


SPRING LOCK VALVE EXTENSION



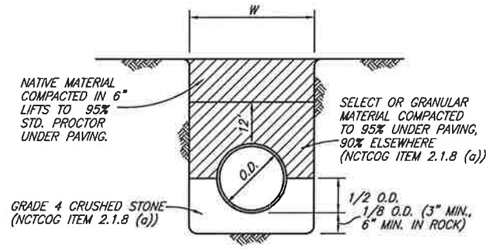


BLOW OFF VALVE



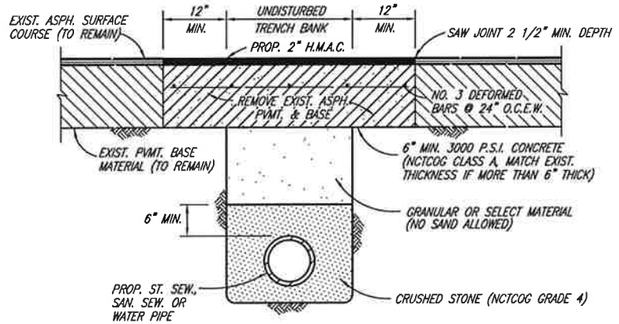
CLASS G EMBEDMENT

CONCRETE ENCASEMENT
NO SCALE



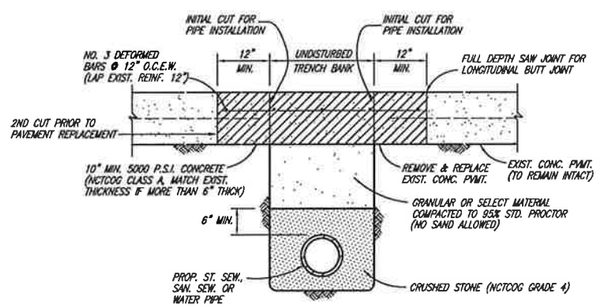
CLASS B+ EMBEDMENT

STD PVC WATER



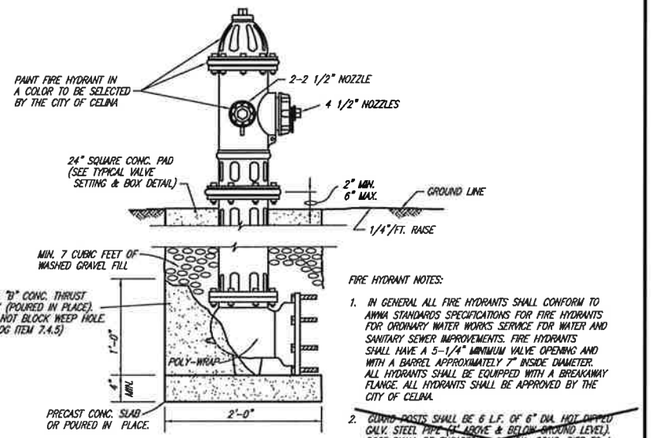
ASPHALT STREET REPAIR

NO SCALE



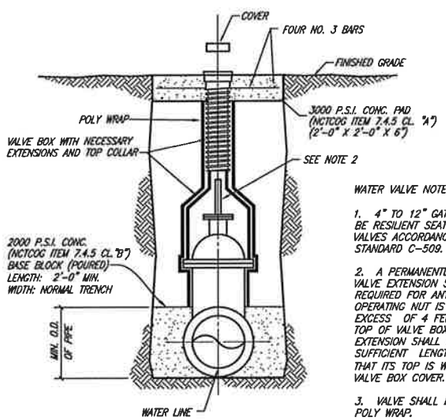
CONCRETE STREET REPAIR

NO SCALE



TYPICAL FIRE HYDRANT INSTALLATION

NO SCALE

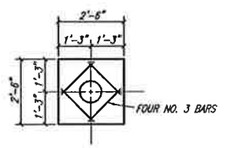


VALVE SETTING & BOX

NO SCALE

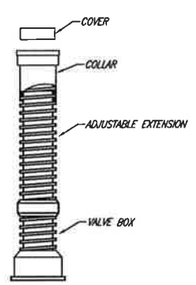
WATER VALVE NOTES:

1. 4" TO 12" GATE VALVE SHALL BE RESILIENT SEATED WEDGE GATE VALVES ACCORDANCE WITH AWWA STANDARD C-509.
2. A PERMANENTLY ATTACHED VALVE EXTENSION STEM SHALL BE REQUIRED FOR ANY VALVE WHOSE OPERATING NUT IS LOCATED IN EXCESS OF 4 FEET BELOW THE TOP OF VALVE BOX. THIS EXTENSION SHALL BE OF SUFFICIENT LENGTH TO INSURE THAT ITS TOP IS WITHIN 4" OF THE VALVE BOX COVER.
3. VALVE SHALL BE WRAPPED IN POLY WRAP.



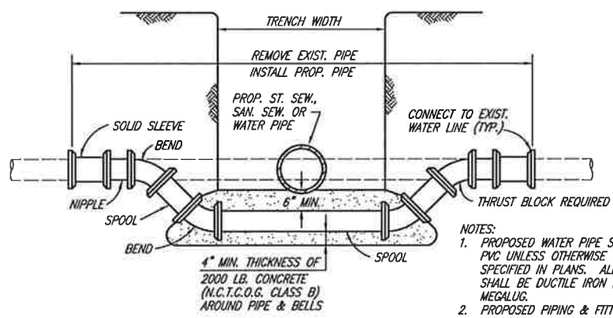
VALVE BOX PAD PLAN

NO SCALE



VALVE BOX WITH EXTENSION

NO SCALE



WATER MAIN LOWERING

NOTES:

1. PROPOSED WATER PIPE SHALL BE PVC UNLESS OTHERWISE SPECIFIED IN PLANS. ALL FITTINGS SHALL BE DUCTILE IRON (M.J.-P.E.) MEGALUG.
2. PROPOSED PIPING & FITTINGS ARE SYMMETRIC ABOUT CENTER OF PROP. SAN. SEW. OR ST. SEW. PIPE AND SHALL RETAIN TEST PRESSURES.
3. ALL THRUST BLOCKING SHALL BE SUBSIDIARY TO UNIT PRICE.
4. CROSSING OF SANITARY SEWER SHALL BE IN ACCORDANCE WITH T.N.R.C.C. REQUIREMENTS. (CHAPTER 317.13 APPENDIX E)

CITY OF CELINA, TEXAS

WATER DISTRIBUTION SYSTEM
STANDARD DETAILS – CS9

P-201311-03

NOTE: ALL CALCULATIONS ARE BASED ON A WATER LINE PRESSURE OF 150 PSI AND AN ALLOWABLE SOIL BEARING VALUE OF 2,500 POUNDS PER SQUARE FOOT. THESE ARE MINIMUM REQUIREMENTS. INCREASE AREA FOR CONDITIONS OTHER THAN THESE VALUES.

HORIZONTAL BLOCKING TABLE

PIPE SIZE	"X" DIA. IN FT.	11-1/4 DEGREES "A"	MIN. AREA	22-1/2 DEGREES "B"	MIN. AREA	45 DEGREES "C"	MIN. AREA	90 DEGREES "D"	MIN. AREA	TEE & PLUG "E"	MIN. AREA
4"	1.5	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.06	1.00	1.00
6"	1.5	1.00	1.00	1.00	1.00	1.14	1.30	1.85	2.40	1.30	1.70
8"	1.5	1.00	1.00	1.08	1.18	1.62	2.31	2.07	4.27	1.74	3.02
10"	1.5	1.00	1.00	1.35	1.84	1.92	3.61	2.58	6.66	2.17	4.71
12"	1.8	1.00	1.33	1.63	2.65	1.86	6.15	3.10	9.60	2.61	6.78
14"	1.5	1.03	1.81	1.90	3.60	2.66	7.07	3.61	13.06	3.04	9.24
16"	2.0	1.19	2.35	2.11	5.71	3.04	9.23	4.13	17.08	3.47	12.08
18"	2.0	1.33	2.99	2.44	5.96	3.42	11.69	4.66	21.69	3.91	15.27
20"	2.0	1.48	3.70	2.71	7.35	3.80	14.43	5.15	25.65	4.34	18.85
21"	2.0	1.55	4.07	2.85	8.11	3.99	15.81	5.42	29.19	4.56	20.78
24"	2.0	1.77	5.32	3.25	10.09	4.56	20.77	6.20	38.39	5.21	27.14
27"	2.5	1.99	6.73	3.66	13.42	5.13	25.29	6.97	48.58	5.86	34.55
30"	2.5	2.22	8.31	4.07	16.55	5.70	32.48	7.74	59.98	6.51	42.61
33"	2.5	2.44	10.06	4.47	20.02	6.27	39.26	8.52	72.67	7.16	51.31
36"	2.5	2.66	11.97	4.88	23.83	6.84	46.74	9.29	86.37	7.81	61.07
39"	3.0	2.88	14.05	5.28	27.97	7.41	54.86	10.07	101.36	8.47	71.68
42"	3.0	3.10	16.30	5.69	32.43	7.98	63.62	10.85	117.56	9.12	83.13

NOTE: CLASS "B" CONCRETE 2,000 PSI SHALL BE USED FOR ALL BLOCKING UNLESS OTHERWISE NOTED ON STANDARD DETAILS AND / OR PLANS.

THE MINIMUM VERTICAL DIMENSION OF ALL BLOCKING SHALL BE 1.5 TIMES THE PIPE DIAMETER WITH AT LEAST 0.75 TIMES THE PIPE DIAMETER EXTENDING BOTH ABOVE AND BELOW THE PIPE CENTERLINE. THIS DIMENSION DETERMINES THE "A" DIMENSION FOR 11-1/4° BENDS.

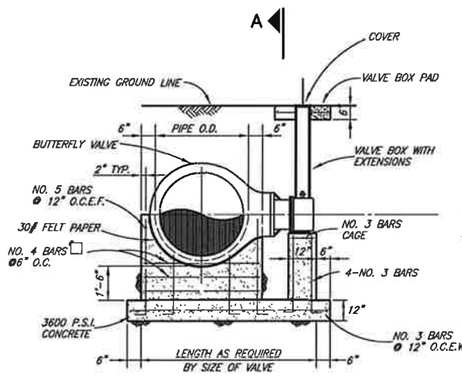
FOR 22-1/2°, 45°, 90° AND TEES AND PLUGS, THE VERTICAL DIMENSION SHALL BE EQUAL TO THE HORIZONTAL DIMENSION SHOWN TO PRODUCE THE REQUIRED MINIMUM AREA.

ALL MINIMUM AREAS ARE IN SQUARE FEET.

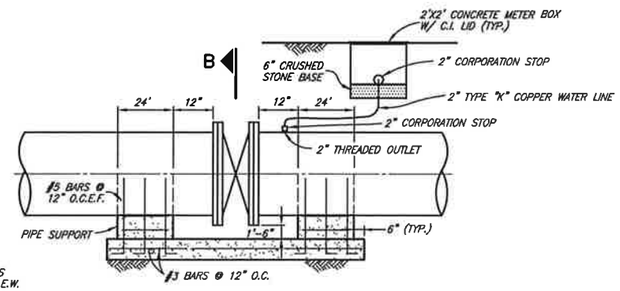
BLOCKING TO BE AGAINST UNDISTURBED TRENCH WALLS AND BOTTOM.

HORIZONTAL THRUST BLOCKING DETAIL

NO SCALE

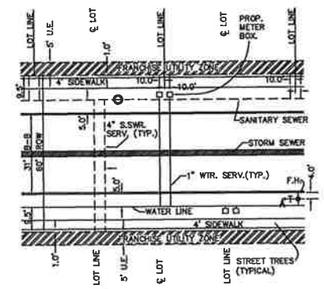


SECTION B–B



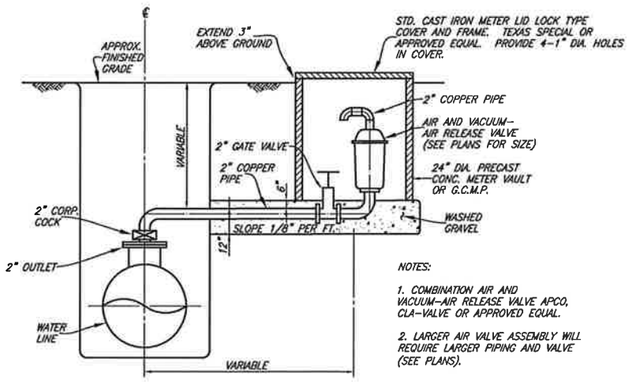
SECTION A–A

BUTTERFLY VALVE INSTALLATION



UTILITY PLACEMENT DETAIL

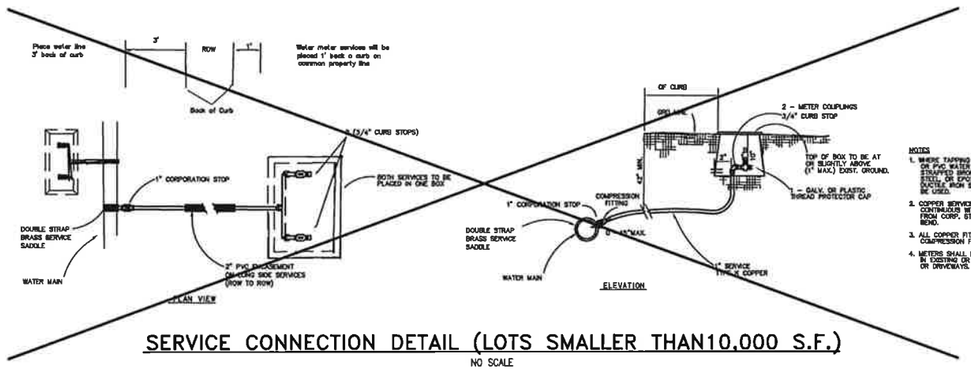
NO SCALE



NOTES:

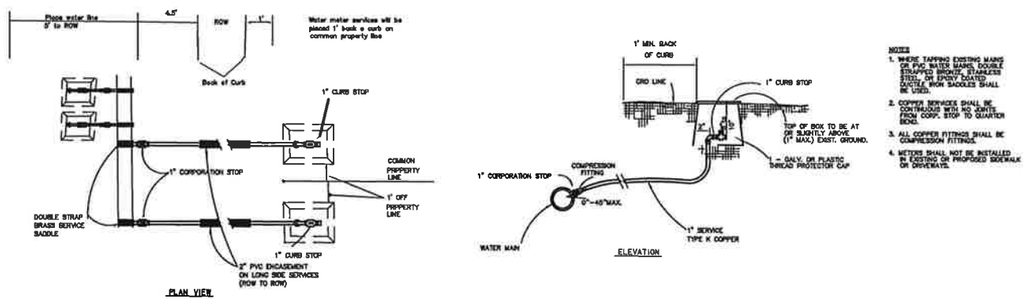
1. COMBINATION AIR AND VACUUM–AIR RELEASE VALVE APCO, CLA–VALVE OR APPROVED EQUAL.
2. LARGER AIR VALVE ASSEMBLY WILL REQUIRE LARGER PIPING AND VALVE (SEE PLANS).

AIR AND VACUUM – AIR RELEASE VALVE INSTALLATION



SERVICE CONNECTION DETAIL (LOTS SMALLER THAN10,000 S.F.)

NO SCALE

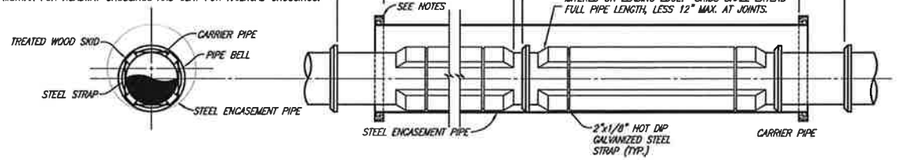


SERVICE CONNECTION DETAIL (LOTS10,000 S.F. OR LARGER)

NO SCALE

BORING NOTES:

1. 2 MORTAR BANDS FOR R.C.C.P. AND CEMENT LINED & COATED STEEL PIPE MAY BE USED IN LIEU OF SKIDS & STRAPS.
2. CONTRACTOR SHALL PROVIDE SUPPORT UNDER CARRIER PIPE TO HAVE MIN. 1" CLEARANCE BETWEEN PIPE BELL AND ENCASEMENT PIPE.
3. ENDS OF ENCASEMENT PIPE SHALL BE PLUGGED WITH BRICK AND MORTAR FOR ROADWAY CROSSINGS AND CLAY FOR RAILROAD CROSSINGS.



ENCASED ROAD OR RAILROAD BORE

CITY OF CELINA, TEXAS

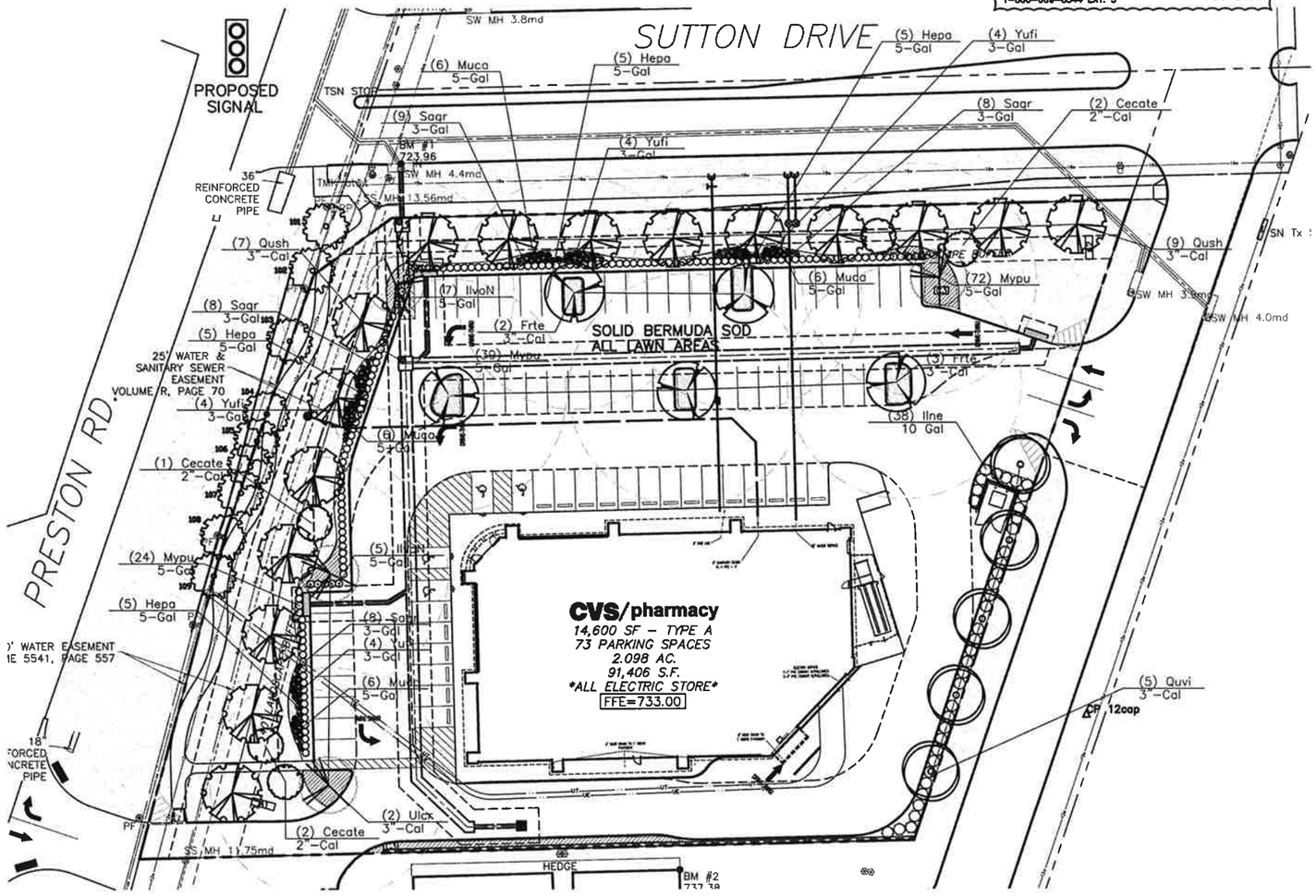
WATER DISTRIBUTION SYSTEM
STANDARD DETAILS -- CS10

P-201311-03

NOTE:
NO LANDSCAPE PLANTINGS WITHIN 18" OF PARKING LOT CURBS.

TEMPORARY IRRIGATION WILL BE REQUIRED TO ESTABLISH TURF IN ALL DISTURBED AREAS WITHOUT A PERMANENT IRRIGATION SYSTEM. SOD TURF IN ALL DISTURBED AREAS AS IDENTIFIED ON GRADING AND EROSION CONTROL PLANS.

CAUTION!!!
UNDERGROUND UTILITIES ARE LOCATED IN THIS AREA. 48 HOURS PRIOR TO ANY CONSTRUCTION ACTIVITIES, CONTACT LINE LOCATES FOR FRANCHISE UTILITY INFO. CALL BEFORE YOU DIG:
TEXAS EXCAVATION SAFETY SYSTEM (TESS)
1-800-344-8377
TEXAS ONE CALL SYSTEMS
1-800-245-4545
LONE STAR NOTIFICATION CENTER
1-800-669-8344 EXT. 5
BEFORE YOU DIG...



TREE SURVEY

NO.	DBH	SPECIES	COMMENT
101	8"	HACKBERRY	PRESERVE
102	8"	HACKBERRY	PRESERVE
103	8"	HACKBERRY	PRESERVE
104	8"	HACKBERRY	PRESERVE
105	10"	HACKBERRY	PRESERVE
106	8"	HACKBERRY	PRESERVE
107	8"	HACKBERRY	PRESERVE
108	8"	HACKBERRY	PRESERVE
109	8"	HACKBERRY	PRESERVE

LEGEND

499 — EXISTING TREE TO BE PRESERVED/PROTECTED

499 — EXISTING TREE TO BE REMOVED BY PERMIT

N

0' 15' 30' 60'
SCALE: 1:30

CITY OF CELINA LANDSCAPE ORDINANCE COMPLIENCE MANDATORY REQUIREMENTS		
FRONT YARD LANDSCAPING AREA	AT LEAST 50% OF LANDSCAPING SHALL BE IN FRONT YARD	
	REQUIRED	PROVIDED
	26,213 SF X 50% = 13,107 SF	24,913 SF
VEHICULAR AREA SCREENING	VEHICULAR AREA SCREEN FROM ADJACENT PROPERTY AND R.O.W.	
	REQUIRED	PROVIDED
	SOLID SCREEN	SOLID SCREEN
INTERIOR LANDSCAPE	AT LEAST 10% OF GROSS PARKING AREA MUST BE LANDSCAPED	
	REQUIRED	PROVIDED
	27,971 SF X 10% = 2,797 SF	2,950 SF
INTERIOR LANDSCAPE TREES	AT LEAST 1 TREE PLANTED PER 400 SF OF REQUIRED INTERIOR LANDSCAPE	
	REQUIRED	PROVIDED
	2,797 SF / 400 = 7 TREES	7 TREES
PARKING ISLANDS	NO ISLANDS FURTHER APART THAN 12 SPACES AND AT TERMINUS OF ROW	
	REQUIRED	PROVIDED
	NA	NA
PERIMETER LANDSCAPE	PERIMETER LANDSCAPE AREA OF 15' BETWEEN PARKING AND R.O.W.	
	REQUIRED	PROVIDED
	15'	15'
	PERIMETER LANDSCAPE SHALL HAVE 1 TREE PER 50 LF	
	REQUIRED	PROVIDED
	189 LF/50 = 10 TREES	10 TREES
OPEN SPACE TREES	TREES SHALL BE PLANTED AT 1/4000 SF OF REMAINING OPEN SPACE	
	REQUIRED	PROVIDED
	1,297 / 4000 = 1 TREES	1 TREES
ALL REQUIRED LANDSCAPE AREAS SHALL BE IRRIGATED W/ UNDERGROUND AUTOMATIC SPRINKLER W/ FREEZE AND MOISTURE SENSORS.		

CITY OF CELINA LANDSCAPE ORDINANCE COMPLIENCE PRESTON ROAD OVERLAY REQUIREMENTS		
LARGE TREES	1 LARGE TREE PER 40 LF OF STREET FRONTAGE	
	REQUIRED	PROVIDED
	605 LF / 40 = 16 TREES	16 TREES
SMALL TREES	1 SMALL TREE PER 5000 SF OF FRONT YARD AREA	
	REQUIRED	PROVIDED
	24,913 SF / 5000 = 5 TREES	5 TREES
SHRUBS	16 EVERGREEN SHRUBS PER 50 LF OF STREET FRONTAGE	
	REQUIRED	PROVIDED
	(605 LF / 50) X 16 = 194 SHRUBS	214 SHRUBS

PLANTING NOTES:

1. PLANT SIZE, TYPE, AND CONDITION SUBJECT TO APPROVAL OF OWNER'S REPRESENTATIVE.
2. ALL PLANT MATERIAL TO BE NURSERY GROWN STOCK.
3. CONTRACTOR RESPONSIBLE FOR MAINTENANCE OF ALL PLANT MATERIAL UNTIL PROJECT ACCEPTANCE.
4. ALL CONTAINER GROWN PLANTS TO HAVE FULL, VIGOROUS ROOT SYSTEM, COMPLETELY ENCOMPASSING CONTAINER.
5. ALL PLANTS WELL ROUNDED AND FULLY BRANCHED. ALL TREES WITH SPREAD 2/3 OF HEIGHT.
6. CONTRACTOR TO PROVIDE OWNER WITH PREFERRED MAINTENANCE SCHEDULE OF ALL PLANTS AND LAWNS.
7. MAINTAIN/PROTECT VISIBILITY TRIANGLE WITH PLANT MATERIAL PER CITY STANDARDS AT ALL ENTRANCES TO SITE.
8. PREP ENTIRE WIDTH OF ALL DEFINED PLANTING BEDS WITH MIX AS OUTLINED IN SPECS. WHERE SHRUBS ARE LOCATED ALONG CURB, SET SHRUBS BACK FROM CURB 3 FT.
9. SEE DETAIL SHEET FOLLOWING FOR PLANTING DETAILS.
10. CONTRACTOR RESPONSIBLE FOR LOCATION OF ALL UTILITIES, INCLUDING BUT NOT LIMITED TO TELEPHONE, TELECABLE, ELECTRIC, GAS, WATER AND SEWER. ANY DAMAGE TO UTILITIES TO BE REPAIRED BY CONTRACTOR AT NO COST TO OWNER.
11. EXISTING TREES ARE SHOWN TO REMAIN, CONTRACTOR SHALL PRUNE ONLY ON APPROVAL OF CITY ARBORIST. WORK TO INCLUDE REMOVAL OF ALL SUCKER GROWTH; DEAD AND DISEASED BRANCHES AND LIMBS; VINES, BRIARS AND OTHER INVASIVE GROWTH, LIMBS INTERFERING WITH VISIBILITY; AND ALL INTERFERING BRANCHES. MAKE ALL CUTS FLUSH TO REMAINING LIMB. RETAIN NATURAL SHAPE OF PLANT. ALL WORK SUBJECT TO APPROVAL OF OWNER'S REPRESENTATIVE.
12. QUANTITIES ARE PROVIDED AS A COURTESY AND NOT INTENDED FOR BID PURPOSES. CONTRACTOR TO VERIFY PRIOR TO PRICING.
13. INSTALL EDGING BETWEEN LAWN AND PLANTING BEDS. REFER TO SPECIFICATIONS. FILE ALL CORNERS SMOOTH.
14. INSTALL CURLEX BLANKET (OR EQUAL) PER MANUFACTURES INSTRUCTIONS ON ALL GROUNDCOVER/SHRUB BEDS WITH A SLOPE OF 4:1 OR GREATER.
15. AT TIME OF PLAN PREPARATION, SEASONAL PLANT AVAILABILITY CANNOT BE DETERMINED. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO SECURE AND RESERVE ALL B&B PLANTS WHEN AVAILABLE IN CASE ACTUAL INSTALLATION OCCURS DURING THE OFF-SEASON. PURCHASE AND HOLD B&B PLANTS FOR LATE SEASON INSTALLATION.
16. BERM ALL PARKING LOT ISLANDS AS SHOWN ON ENCLOSED DETAIL SHEET. (BERMS MAY NOT BE SHOWN ON GRADING PLAN.)
17. PRIOR TO PLANTING, CONTRACTOR SHALL STAKE TREE LOCATIONS FOR APPROVAL BY OWNER.

REF SHEET L-2 FOR PLANT LEGEND

DFL Group, LLC
PARKS + OPEN SPACE PLANNING · LANDSCAPE ARCHITECTURE
8229B MID CITIES BLVD, NORTH RICHLAND HILLS, TX 76180 817-479-0720

REGISTERED LANDSCAPE ARCHITECT JOHN R. FAIN 805 STATE OF TEXAS
08/06/13

THIS ELECTRONIC DRAWING FILE IS RELEASED UNDER THE AUTHORITY OF JOHN R. FAIN, LANDSCAPE ARCHITECT REGISTRATION NUMBER 805 ON 08/06/13, WHO MAINTAINS THE ORIGINAL FILE. THIS ELECTRONIC DRAWING FILE MAY BE USED AS A BACKGROUND DRAWING. PURSUANT TO RULE 3.103(F) OF THE RULES AND REGULATIONS OF THE TEXAS BOARD OF ARCHITECTURAL EXAMINERS, THE USER OF THIS ELECTRONIC DRAWING FILE AGREES TO ASSUME ALL RESPONSIBILITY FOR ANY MODIFICATION TO OR USE OF THIS DRAWING FILE THAT IS INCONSISTENT WITH THE REQUIREMENTS OF THE RULES AND REGULATIONS OF THE TEXAS BOARD OF ARCHITECTURAL EXAMINERS. NO PERSON MAY MAKE MODIFICATIONS TO THIS ELECTRONIC DRAWING FILE WITHOUT THE LANDSCAPE ARCHITECT'S EXPRESS WRITTEN PERMISSION.

CVS pharmacy®
SOUTHERN 14,600-LEFT CHAMFER DRIVE-THRU
STORE NUMBER: 10413
SEC OF PRESTON RD. & SUTTON DRIVE
CELINA, TEXAS
PROJECT TYPE: NEW
DEAL TYPE: FEE FOR SERVICE
CS PROJECT NUMBER: 72532

CIVIL ENGINEER:
Winkelmann & Associates, Inc.
CONSULTING CIVIL ENGINEERS & SURVEYORS
6750 HILLCREST PLAZA DR., SUITE 325 (972) 490-7690
DALLAS, TEXAS 75230 (972) 490-7698 FAX
Geoffrey Michael Doggett
Texas Engineers Registration No. 88
Texas Surveyors Registration No. 100866-00
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DEVELOPER:
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1200 Corporate Drive
Suite G-50
BIRMINGHAM, AL 35242
TEL: (205)408-3443
FAX: (205)408-1850

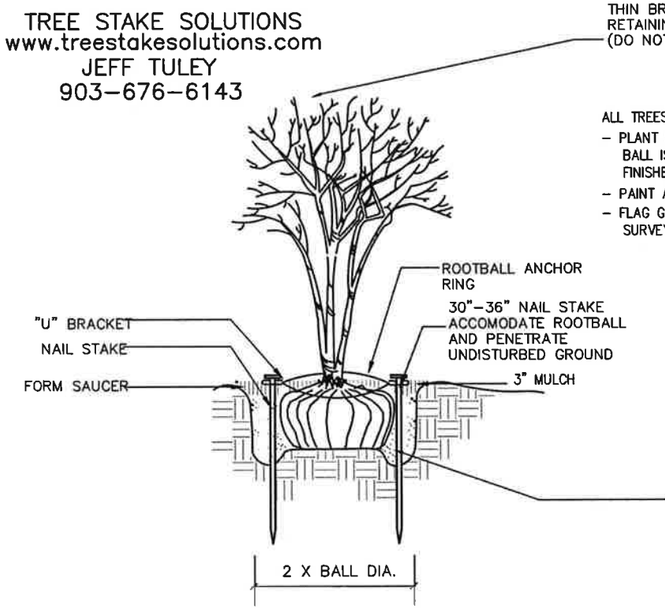
SEAL:

REVISIONS:
1) 11/26/13 ISSUED FOR CONST.

FILE NAME: 70195-lan.dwg
JOB NUMBER: 70195.00
DATE: August 27, 2013
TITLE: LANDSCAPE PLAN
SHEET NUMBER: L-1
COMMENTS:

P-201311-03

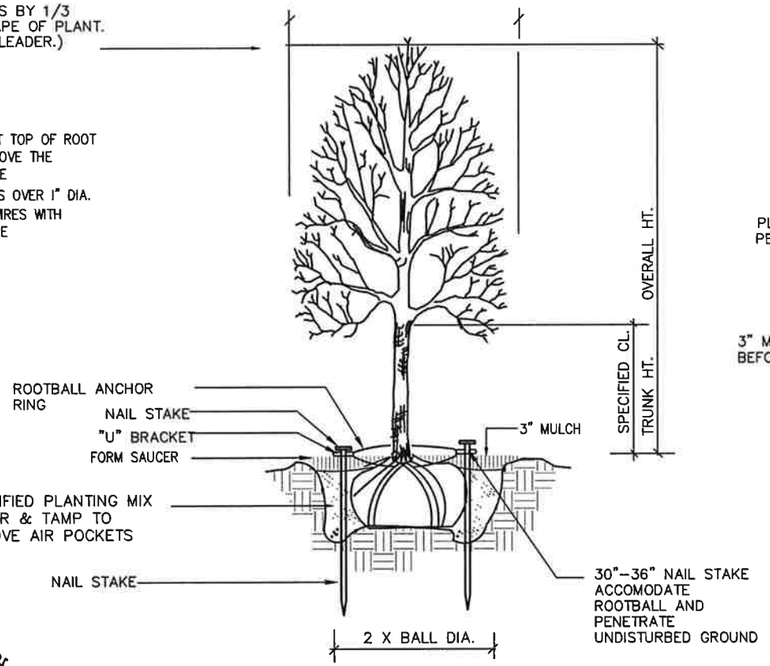
TREE STAKE SOLUTIONS
www.treestakesolutions.com
JEFF TULEY
903-676-6143



ALL TREES
- PLANT SO THAT TOP OF ROOT BALL IS 2" ABOVE THE FINISHED GRADE
- PAINT ALL CUTS OVER 1" DIA.
- FLAG GUYING WIRES WITH SURVEYOR TAPE

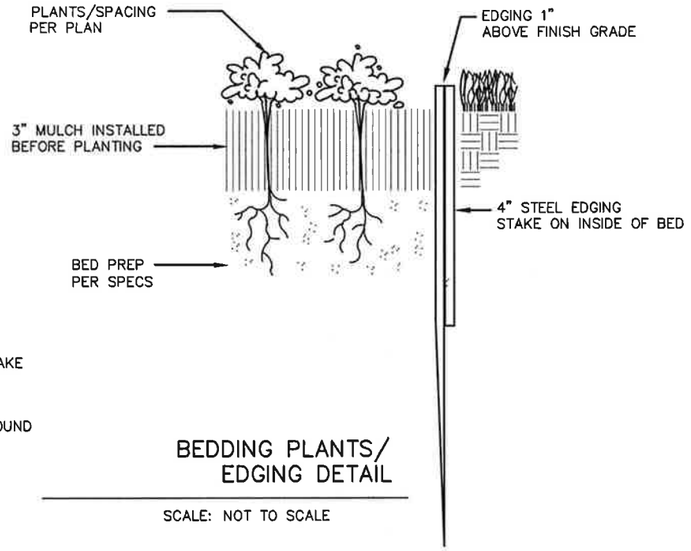
STAKING FOR MULTI–TRUNK TREES & TREES 2" CAL. & UNDER

SCALE: NOT TO SCALE



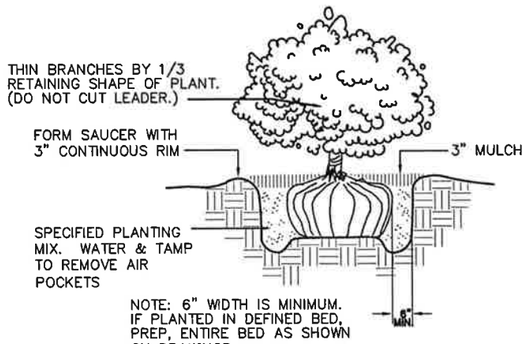
SAFETY STAKE BY TREE STAKE SOLUTIONS

SCALE: NOT TO SCALE



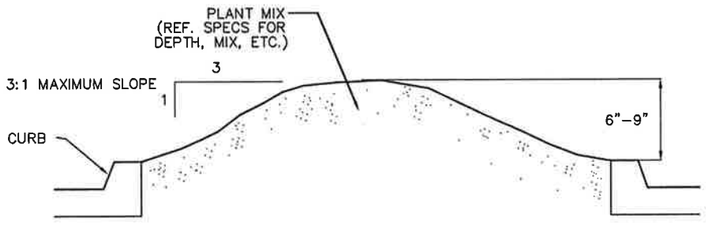
BEDDING PLANTS/ EDGING DETAIL

SCALE: NOT TO SCALE



SHRUB PLANTING

SCALE: NOT TO SCALE



TYPICAL PARKING LOT ISLAND MOUNDING

PLANT LIST

Symbol	Quantity	Code Name	Scientific Name	Common Name	Planting Size	Comments
	5	Frte	Fraxinus texensis	Texas ash	3"–Cal	B & B, 12' Min Ht, Single straight trunk
	4	Ulcr	Ulmus crassifolia	Cedar elm	3"–Cal	B & B, 12' Min Ht, Single straight trunk
	136	Mypu	Myrica pusilla	Dwarf Wax Myrtle	5–Gal	36" O.C., 30" Min Ht.
	16	Qush	Quercus shumardii	Shumard oak	3"–Cal	B & B, 12' Min Ht, Single straight trunk
	5	Quvi	Quercus virginiana	Southern live oak	3"–Cal	B & B, 12' Min Ht, Single straight trunk
	5	Cecate	Cercis canadensis 'Texensis'	Texas redbud	2"–Cal	B & B, 8' Min Ht, Single straight trunk
	20	Hepa	Hesperaloe parviflora	Red yucca	5–Gal	36" O.C., 30" Min Ht.
	24	Muca	Muhlenbergia capillaris	Gulf muhly	5–Gal	36" O.C., 30" Min Ht.
	12	IlvoN	Ilex vomitoria 'Nana'	Dwarf yaupon	5–Gal	36" O.C., 30" Min Ht.
	16	Yufi	Yucca filamentosa	Softleaf yucca	3–Gal	36" O.C., 30" Min Ht.
	33	Sagr	Salvia greggii	Autumn Sage	3–Gal	24" O.C., 24" Min Ht.
	38	Ilne	Ilex x 'Nellie R. Stevens'	Nelly R. Stevens holly	10 Gal	60" O.C.
	400	Stte	Stipa tenuissima	Mexican feathergrass	1–Gal	18" O.C.
	1240	Tras	Trachelospermum asiaticum	Asian jasmine	4" Pot	12" O.C.
		Cyda	Cynodon dactylon	Solid Bermuda sod	Sod	SolidSolid

NOTE: IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CONFIRM TREE CALIPER CALIPER MEASUREMENT HEIGHT ABOVE GRADE AS REQUIRED BY CITY.

DFL Group, LLC
PARKS + OPEN SPACE PLANNING · LANDSCAPE ARCHITECTURE
6200 NO CITIES BLVD, NORTH RICHLAND HILLS, TX 76180 817-479-0730

REGISTERED LANDSCAPE ARCHITECT · JOHN R. FAIN · 805 · STATE OF TEXAS · 08/06/13

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CVS pharmacy®

SOUTHERN 14,600-LEFT CHAMFER DRIVE-THRU

STORE NUMBER: 10413

SEC OF PRESTON RD. & SUTTON DRIVE
CELINA, TEXAS
PROJECT TYPE: NEW
DEAL TYPE: FEE FOR SERVICE

CS PROJECT NUMBER: 72532

CIVIL ENGINEER:

Winkelmann & Associates, Inc.
CONSULTING CIVIL ENGINEERS & SURVEYORS
8750 HILLCREST PLAZA DR., SUITE 335 (972) 490-7080
DALLAS, TEXAS 75230 (972) 490-7095 FAX
Gerhach Mishnow Boppett
Texas Engineers Registration No. 89
Texas Surveyors Registration No. 100866-00

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CONSULTANT:

DEVELOPER:

Orange Development Inc.
1200 Corporate Drive
Suite G-50
BIRMINGHAM, AL 35242
TEL: (205)408-3443
FAX: (205)408-1850

SEAL:

REVISIONS:
1) 11/26/13 ISSUED FOR CONST.

FILE NAME: 70195–lan.dwg
JOB NUMBER: 70195.00
DATE: August 27, 2013

TITLE: LANDSCAPE DETAILS

SHEET NUMBER: L-2

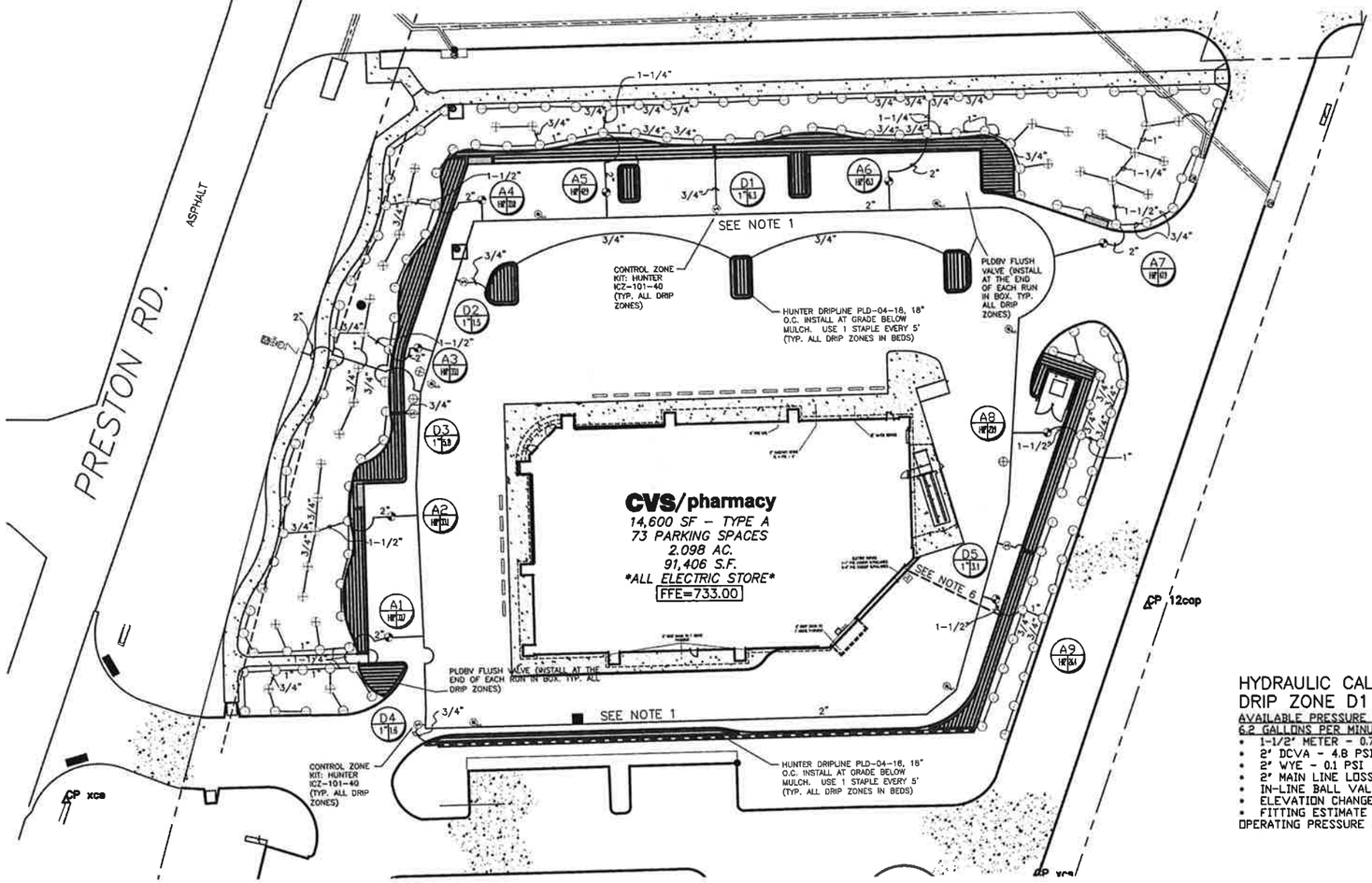
COMMENTS:

P-201311-03

IRRIGATION NOTES:

1. IRRIGATION LINES ARE SOMETIMES SHOWN OUTSIDE PLANTING BEDS FOR GRAPHIC CLARITY ONLY. ADJUST INSIDE BEDS ON SITE.
2. AVOID TRENCHING WITHIN DRIP LINE OF EXISTING TREES. WHERE NECESSARY, TRENCH RADIALLY, RATHER THAN ACROSS THE ROOT SYSTEM.
3. MAIN LINE TO BE 2".
4. ALL SLEEVES UNDER PAVING TO EXTEND 12" PAST EDGE OF PAVING. COORDINATE WORK WITH GENERAL AND PAVING SUBCONTRACTOR.
5. ALL HEADS TO BE 4" POPS IN LAWNS. ALL HEADS WITH CHECK VALVES.
6. COORDINATE SLEEVE SIZE AND LOCATION FOR FREEZE SENSOR, RAIN GAUGE AND CONTROLLER WITH GENERAL CONTRACTOR. SEAL ALL BUILDING PENETRATIONS WATER TIGHT.
7. SEE DETAIL SHEET FOLLOWING FOR IRRIGATION DETAILS.
8. PRESSURE ESTIMATED AT 55 PSI; MINIMUM 50 GPM AS PROVIDED BY CITY. VERIFY ON SITE AND REPORT TO LANDSCAPE ARCHITECT PRIOR TO BEGINNING ANY WORK.
9. CONTRACTOR RESPONSIBLE FOR LOCATION OF ALL UTILITIES INCLUDING BUT NOT LIMITED TO TELEPHONE, TELECABLE, ELECTRIC, GAS, WATER, AND SEWER. ANY DAMAGE TO UTILITIES TO BE REPAIRED BY CONTRACTOR AT NO COST TO OWNER. REFER TO SITE/UTILITY PLANS.
10. FREEZE SENSOR AND RAIN GAUGE INSTALLATION PER MANUFACTURER'S INSTRUCTIONS (MINI-CLIK F-401 & S02). LOCATION/HEIGHT TO AVOID DIRECT SPRAY OF IRRIGATION HEADS.
11. VERIFY 100% COVERAGE OF SYSTEM OVER ALL PLANTING & LAWN AREAS AS SHOWN ON DRAWINGS.
12. IF PEDESTAL MOUNTED CONTROLLER IS SPECIFIED, MOUNT ON 4'X3'X3' CONCRETE SLAB WITH (4) #4'S EACH WAY. SLEEVE THROUGH SLAB FOR CONTROLLER WIRING AS REQUIRED.
13. UNLESS NOTED OTHERWISE, THERE ARE NO EXISTING SLEEVES. IRRIGATION CONTRACTOR TO SIZE AND COORDINATE SLEEVE INSTALLATION AS NEEDED IN ALL LOCATIONS UNDER PAVEMENT.
14. QUANTITIES ARE PROVIDED AS A COURTESY AND ARE NOT INTENDED FOR BID PURPOSES. CONTRACTOR TO VERIFY ALL QUANTITIES PRIOR TO BIDDING.
15. IF DOUBLE CHECK IS PROHIBITED BY LOCAL CODE/ORDINANCE, SUBSTITUTE WITH APPROVED BACKFLOW PREVENTION DEVICE.
16. ALL WORK IN ACCORDANCE WITH LOCAL, STATE, & NATIONAL CODES & ORDINANCES.
17. CONTRACTOR TO SIZE CONTROL SIZE WIRE AS NECESSARY. HOWEVER, MINIMUM SIZE TO BE 14 GAUGE PER NATIONAL ELECTRICAL CODE. ALL SPLICES WITH APPROVED MANUFACTURED CONNECTOR IN VALVE BOX.
18. DO NOT LOCATE VALVE BOXES IN SWALES, LOW AREAS, OR ANY OTHER LOCATIONS THAT MAY COLLECT WATER.
19. CONTROLLER TO BE WIRED ON DEDICATED 110 VOLT CIRCUIT AND GROUNDED W/"GROUNDING SPIKE" PER MANUFACTURER'S INSTRUCTIONS.
20. ADJUST HEADS TO AVOID OVERSPRAY ONTO STREETS, ROADWAYS, BUILDINGS AND ELECTRICAL EQUIPMENT.
21. INCLUDE ONE SPARE WIRE FROM CONTROLLER TO EACH CONTROL VALVE. EACH WIRE TO BE VARYING COLOR.
22. CONTRACTOR IS RESPONSIBLE FOR ADJUSTING FLOW CONTROL AND/OR PRESSURE REGULATOR AT EACH CONTROL VALVE AS NECESSARY TO MAKE SYSTEM OPERATE AS INTENDED.

NOTE: STATE ROW INTENTIONALLY LEFT WITHOUT PERMANENT IRRIGATION. DO NOT TRENCH OR INSTALL HEADS IN STATE ROW.



N

SCALE: 15' 30' 60'

Irrigation Equipment Table

Quantity	Symbol	Equipment
6		3/4" Quick Coupler Valve
3		2" In Line Ball Valve
9		IRRITROL 700 Control Valve w/Omnireg (size as indicated)
1	A	HUNTER I-CORE METAL, MODULES AS REQD. W/SOLAR SYNC
1		2" FEBCO Double Check/Gate
1		2" FEBCO 650A Wye Strainer
1	M	1-1/2" Meter
117		TORO 570 Z 15' (Black) 180
28		TORO 570 Z 15' (Black) 360
6		TORO 570 Z 15' (Black) 090
2		TORO 570 Z 15' (Black) 120
1		TORO 570 Z 10' (Blue) 090

HYDRAULIC CALCULATIONS DRIP ZONE D1

AVAILABLE PRESSURE 55 PSI (ESTIMATED)
6.2 GALLONS PER MINUTE
- 1-1/2" METER - 0.7 PSI
- 2" DCVA - 4.8 PSI
- 2" WYE - 0.1 PSI
- 2" MAIN LINE LOSS - 0.1 PSI
- IN-LINE BALL VALVE - 0.5 PSI
- ELEVATION CHANGE - 0.0 PSI
- FITTING ESTIMATE - 0.6 PSI

OPERATING PRESSURE AT VALVE - 48.2 PSI

HYDRAULIC CALCULATIONS SPRAY ZONE A7

AVAILABLE PRESSURE 55 PSI (ESTIMATED)
47.9 GALLONS PER MINUTE
- 1-1/2" METER - 4.5 PSI
- 2" DCVA - 4.9 PSI
- 2" WYE - 0.3 PSI
- 2" MAIN LINE LOSS (1210') - 2.2 PSI
- IN-LINE BALL VALVE - 0.5 PSI
- ZONE LOSS - 4.0 PSI
- ELEVATION CHANGE - 0.0 PSI
- FITTING ESTIMATE - 1.7 PSI

OPERATING PRESSURE - 36.9 PSI

NOTE: INCLUDE (2) TORO SB-90-PC2 STREAM BUBBLERS TO EACH NEW TREE. ATTACH EACH BUBBLER TO TORO 570-6" POPUP. LOCATE BUBBLERS INSIDE TREE WELL OF EACH TREE ON OPPOSITE SIDES OF THE ROOT BALL. ALL BUBBLERS TO BE ZONED SEPARATELY FROM OTHER HEADS. CONTRACTOR RESPONSIBLE FOR PIPE SIZING, SLEEVING, ETC. AND ALL OTHER REQUIREMENTS TO MAKE CIRCUIT(S) OPERABLE. TOTAL COUNT FOR BUBBLERS AND VALVE(S) NOT SHOWN IN IRRIGATION KEY. IF TREE IS LOCATED IN DRIP ZONE, IN LIEU OF BUBBLER USE (2) RAIN BIRD XSB-180-025 XERI-BUBBLERS W/ SXB-180-SPYK SPIKE TIED INTO EMITTER TUBING.

TEMPORARY IRRIGATION WILL BE REQUIRED TO ESTABLISH TURF IN ALL DISTURBED AREAS WITHOUT A PERMANENT IRRIGATION SYSTEM. SOD TURF IN ALL DISTURBED AREAS AS IDENTIFIED ON GRADING AND EROSION CONTROL PLANS.

NOTE: FOR ALL DRIP CURCUITS USE
- HUNTER PROFESSIONAL LANDSCAPE DRIPLINE PLD-04-18 (18" O.C.)
- STAPLES EVERY 5'
- CONTROL ZONE KIT ICZ-101-40
- PLDBV FLUSH VALVE LOCATED IN 6" BOX

NOTE: 3/4" PVC UNDER PAVING ON ALL DRIP CIRCUITS. DO NOT RUN EMITTER TUBING UNDER PAVING./WALLS, ETC.

DFL Group, LLC
PARKS + OPEN SPACE PLANNING · LANDSCAPE ARCHITECTURE
6200B MID CITIES BLVD, NORTH RICHLAND HILLS, TX 76180 817-479-0730

STATE OF TEXAS · JOHN R. FAIN · 5135 · LICENSED IRRIGATOR · 08/06/13

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SOUTHERN 14,600-LEFT CHAMFER DRIVE-THRU

STORE NUMBER: 10413

SEC OF PRESTON RD. & SUTTON DRIVE
CELINA, TEXAS
PROJECT TYPE: NEW
DEAL TYPE: FEE FOR SERVICE

CS PROJECT NUMBER: 72532

CIVIL ENGINEER:

Winkelmann & Associates, Inc.
CONSULTING CIVIL ENGINEERS ● SURVEYORS
6750 HILLCREST PLAZA DR., SUITE 225 DALLAS, TEXAS 75230 (972) 490-7090 (972) 490-7096 FAX
Gerhard Michael Doggett
Texas Engineers Registration No. 88
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DEVELOPER:

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1200 Corporate Drive
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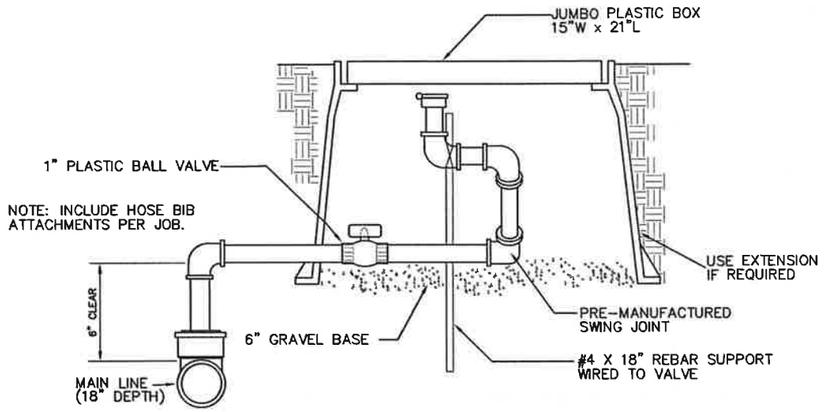
TEL: (205)408-3443
FAX: (205)408-1850

SEAL:

REVISIONS:
1) 11/26/13 ISSUED FOR CONST.

FILE NAME: 70195-lan.dwg
JOB NUMBER: 70195.00
DATE: August 27, 2013
TITLE: IRRIGATION PLAN
SHEET NUMBER: L-3
COMMENTS:

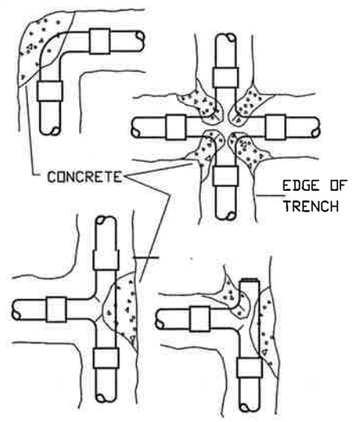
P-201311-03



QUICK COUPLER VALVE

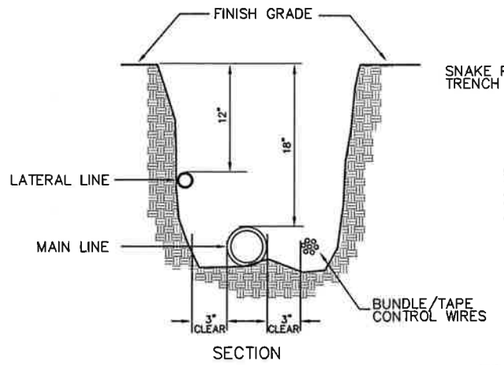
SCALE: NOT TO SCALE

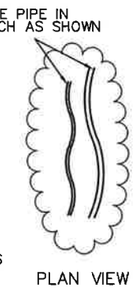
NOTE: – THRUST BLOCKS ON MAIN LINE – ALL SIZES; AND LATERALS 2" & LARGER
– MINIMUM BLOCK SIZE 8"X8"X8"



THRUST BLOCKS – PLAN VIEW

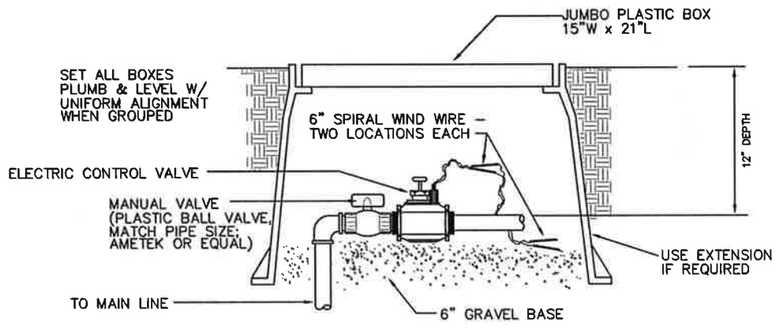
SCALE: NOT TO SCALE





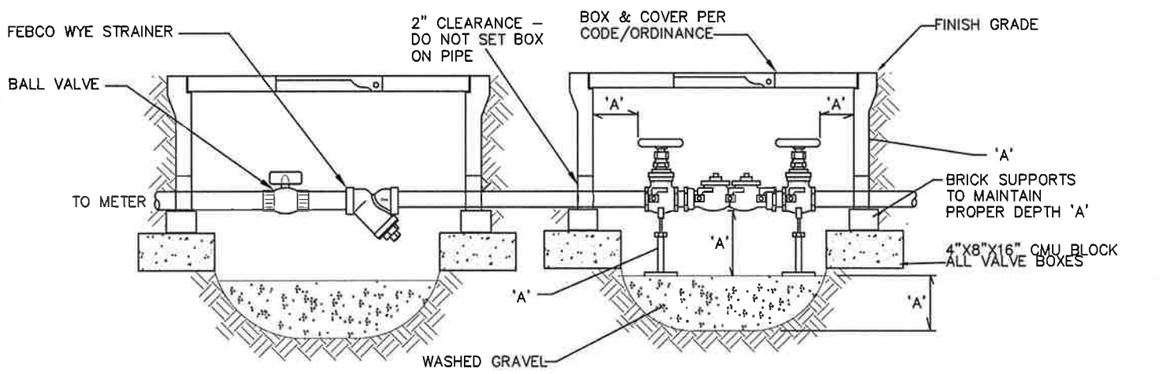
TRENCH DETAIL

SCALE: NOT TO SCALE



ELECTRIC CONTROL VALVE

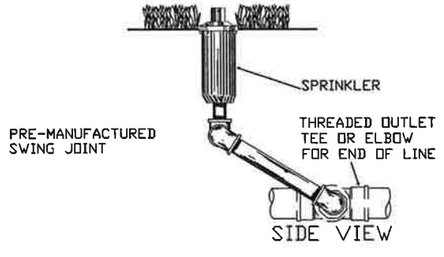
SCALE: NOT TO SCALE



'A' AS PER LOCAL CODE

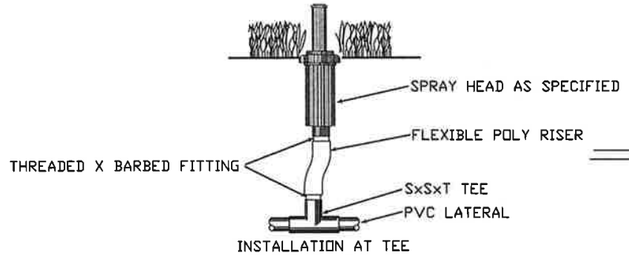
TYPICAL INSTALLATION
DOUBLE CHECK VALVE/WYE STRAINER ASSEMBLY

SCALE: NOT TO SCALE



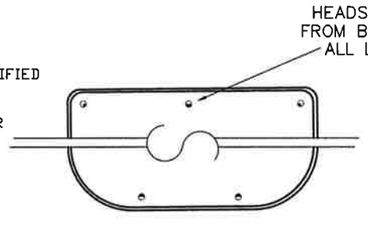
TYPICAL INSTALLATION OF
ROTARY SPRINKLER ON
SWING-JOINT RISER

SCALE: NOT TO SCALE



TYPICAL INSTALLATION OF
SPRAY HEAD

SCALE: NOT TO SCALE



HEAD LAYOUT
Plan View

SCALE: NOT TO SCALE

CVS pharmacy®

SOUTHERN 14,600-LEFT CHAMFER DRIVE-THRU

STORE NUMBER: 10413

SEC OF PRESTON RD. & SUTTON DRIVE
CELINA, TEXAS
PROJECT TYPE: NEW
DEAL TYPE: FEE FOR SERVICE

CS PROJECT NUMBER: 72532

CIVIL ENGINEER:

Winkelmann & Associates, Inc.
CONSULTING CIVIL ENGINEERS ■ SURVEYORS
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Texas Engineers Registration No. 89
Texas Surveyors Registration No. 100866-00
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SEAL:

REVISIONS:
1) 11/26/13 ISSUED FOR CONST.

FILE NAME: 70195-lan.dwg
JOB NUMBER: 70195.00
DATE: August 27, 2013

TITLE:
IRRIGATION DETAILS

SHEET NUMBER:
L-4

COMMENTS:

DFL Group, LLC
PARKS + OPEN SPACE PLANNING · LANDSCAPE ARCHITECTURE
6309B MID CITIES BLVD, NORTH RICHLAND HILLS TX 76180 817-479-0730

STATE OF TEXAS
JOHN R. FAIN
5135
LICENSED IRRIGATOR
08/06/13

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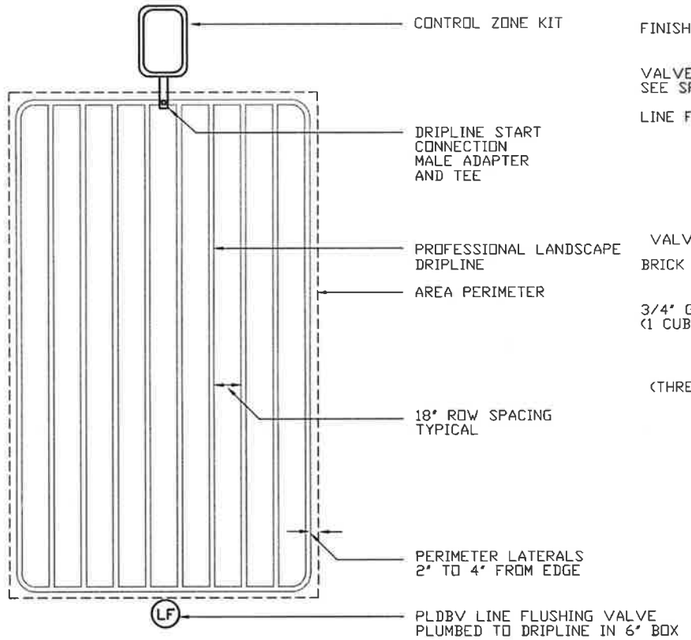
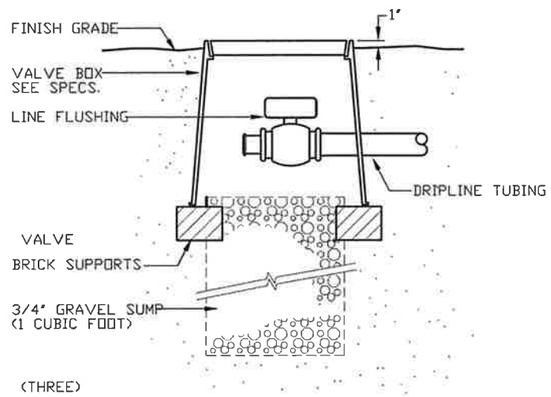


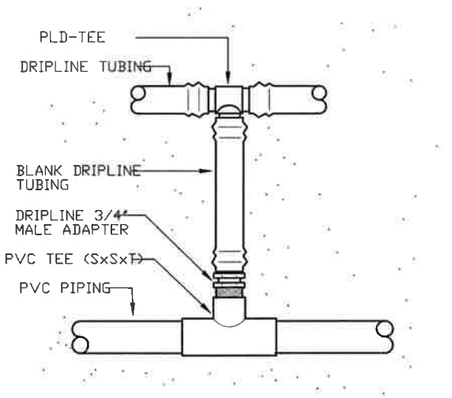
TYPICAL DRIPLINE END FEED LAYOUT

DETAIL – NO SCALE



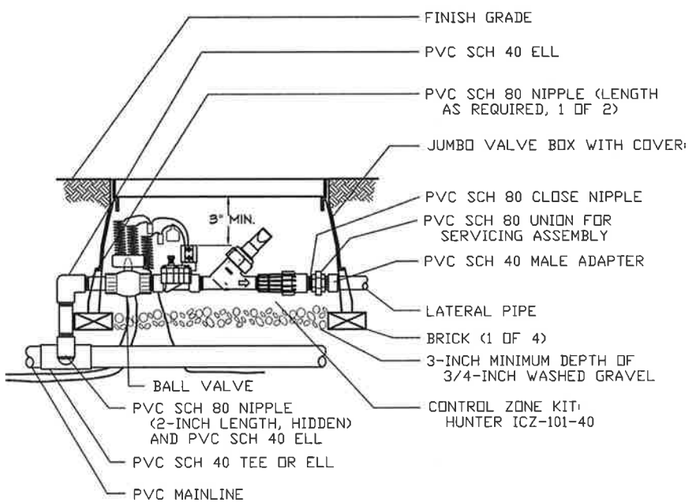
LINE FLUSHING VALVE

SECTION – NO SCALE



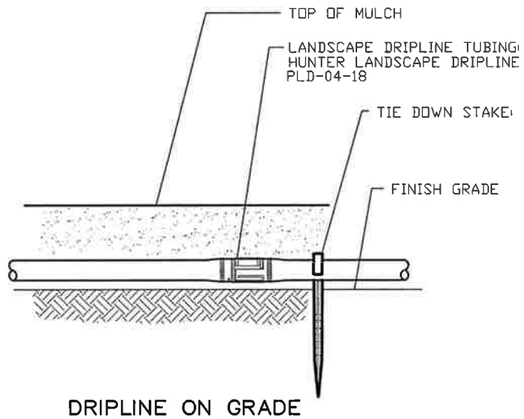
DRIPLINE START CONNECTION

SECTION – NO SCALE



FLOW CONTROL ZONE KIT

SCALE: NOT TO SCALE



DRIPLINE ON GRADE

SCALE: NOT TO SCALE

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PARKS + OPEN SPACE PLANNING · LANDSCAPE ARCHITECTURE

6200B MID CITIES BLVD, NORTH RICHLAND HILLS, TX 76180 817-479-0730

STATE OF TEXAS — JOHN R. FAIN — 5135 — LICENSED IRRIGATOR — 08/06/13

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SOUTHERN 14,600-LEFT CHAMFER DRIVE-THRU

STORE NUMBER: 10413

SEC OF PRESTON RD. & SUTTON DRIVE
CELINA, TEXAS
PROJECT TYPE: NEW
DEAL TYPE: FEE FOR SERVICE

CS PROJECT NUMBER: 72532

CIVIL ENGINEER:

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SEAL:

REVISIONS:
1) 11/26/13 ISSUED FOR CONST.

FILE NAME: 70195-lan.dwg
JOB NUMBER: 70195.00
DATE: August 27, 2013

TITLE:
DRIP DETAILS

SHEET NUMBER:
L-5

COMMENTS:

P-201311-03

SECTION 02830

TREES SHRUBS, AND GROUNDCOVERS

PART I GENERAL

1.01 DESCRIPTION OF WORK

A. Scope

1. Bed prep
2. Metal edging
3. Topoil
4. Planting
5. Mulching
6. Guarantee

B. Related Work Specified Elsewhere

1. General Requirements – All locations
2. Section 02740 – Irrigation Trenching
3. Section 02750 – Irrigation
4. Section 02800 – Lawns

1.02 QUALITY ASSURANCE

A. Contractor Qualifications

Minimum of three (3) years experience on projects of similar characteristics and size.

B. Reference Standards:

1. American Joint Committee Of Horticultural Nomenclature: Standardized Plant Names, Second Edition, 1942;
2. American Association Of Nurserymen: American Standard For Nursery Stock, 1973

C. Substitutions

1. Substitutions accepted only upon written approval of Landscape Architect and Owner.
2. Submit substitutions possessing same characteristics as indicated on plans and specifications.

D. Inspection and Testing

1. The project Owner's representative reserves the right to inspect and tag plants at the place of growth with the Contractor.
2. Inspection at place of growth does not preclude the right of rejection due to improper digging or handling.
3. Owner's representative reserves the right to request soil samples and analysis of soil and plant mix. Remove or correct unacceptable soil. Cost of testing by Contractor.

1.03 SUBMITTALS

A. Certificates

1. Submit State and Federal certificates of inspection with invoice. (Only if required by Landscape Architect.)
2. File certificates with Owner's representative prior to material acceptance.

1.04 PRODUCT DELIVERY, STORAGE, & HANDLING

A. Preparation of Delivery

1. Balled & Burlaped (B&B) Plants

a. Dig and prepare for shipment in manner that will not damage roots, branches, shape, and future development after replanting.
b. Ball with firm, natural ball of soil, wrapped tightly with burlap covering entire ball.
c. Ball size and ratios: conform to American Association of Nurserymen standards unless otherwise shown on plant list.

2. Pack plant material to protect against climatic & seasonal damage, as well as breakage injuries during transit.
3. Securely cover plant tops with ventilated tarpaulin or canvas to minimize wind–whipping and drying in transit.
4. Pack and ventilate to prevent sweating of plants during transit. Give special attention to insure prompt delivery and careful handling to point of delivery at job site.

B. Delivery

1. Deliver fertilizer, fertilizer tablets, peat, mulch, soil additives, and amendment materials to site in original, unopened containers, bearing manufacturer's guaranteed chemical analysis, name, trade name, trademark, and conformance to State law.
2. Deliver plants with legible identification and size labels on example plants.
3. Protect during delivery to prevent damage to root ball or desication of leaves.
4. Notify Owner's representative of delivery schedule in advance so plant material may be inspected upon arrival at job site.
5. Deliver plants to job site only when areas are prepared.

C. Storage

1. Protect roots of plant material from drying or other possible injury with wetted mulch or other acceptable material.
2. Protect from weather.
3. Maintain and protect plant material not to be planted immediately upon delivery.

D. Handling

1. Do not drop plants.
2. Do not damage ball, trunk, or crown.
3. Lift and handle plants from bottom of container or ball.

1.05 JOB CONDITIONS

E. Planting Season Perform actual planting only when weather and soil conditions are suitable in accordance with locally acceptable practices.
F. Protection Before excavations are made, take precautionary measures to protect areas trucked over and where soil is temporarily stacked.

1.06 GUARANTEE

A. Guarantee new plant material for one year after acceptance of final installation (ie Final Acceptance of project).
B. Make replacement (one per plant) during one year guarantee period at appropriate season with original plant type, size and planting mixture.
C. Repair damage to other plants, lawns, & irrigation caused during plant replacement at no cost to Owner.
D. Use only plant replacements of indicated size and species.
E. Ten days before end of guarantee period, notify Owner's representative in writing for year end inspection. Failure to do so, shall automatically extend guarantee until notification is received.

PART II PRODUCTS

2.01 MATERIALS

A. Plant Materials

1. Hardy under climatic conditions similar to locality of project.
2. True to botanical and common name variety.
3. Sound, healthy, vigorous, well branched, and densely foliated when in leaf; with healthy well–developed root system.
4. Free from disease, insects, and defects such as knots, sun–scald, windburn, injuries, disfigurement, or abrasions.
5. Conform to measurements after pruning with branches in normal positions.
6. Conform to American Association of Nurserymen standards unless shown differently on plant list.
7. Trees:
a. Single, straight trunks, unless indicated otherwise
b. Trees with weak, thin trunks not capable of support will not be accepated.
c. All multi–stem trees are to have a minimum of three stems, similar in size and shape, with a spread of approximately 2/3 of the height. All yaupons to be female. Crape myrtle color selection by Landscape Architect.
8. Nursery grown stock only.
9. Subject to approval of Landscape Architect.
10. Seasonal color
a. Annuals in 4" pots or as specified
b. Perennials in 4" pots, clumps, bulbs as specified

B. Topsoil

1. Natural, fertile, friable soils having a textural classification of loam or sandy loam possessing characteristics of soils in vicinity which produce heavy growth of crops, grass, or other vegetation.
2. Free of subsoil, brush, organic litter, objectionable weeds, clods, shale, stones ¾" diameter or larger, stumps, roots or other material harmful to grading, planting, plant growth, or maintenance operations.
3. Presence of vegetative parts of Bermuda grass (Cynodon dactylon), Johnson grass, nut grass (Cyperus rotundus), and other hard to eradicate weeds or grass will be cause for rejection of topsoil.
4. Test topsoil (cost by Contractor):

a. Available nitrogen
b. Available phosphorus
c. Available potash
d. Iron
e. Ph: 5.5 to 7.0
f. Decomposed organic matter: 6–10%

C. Mulch

1. Top Dressing Mulch – Shredded cypress or hard wood only
2. Mulch for soil prep – Shredded pine bark
3. In pre–packaged bags only; bulk shredded material is unacceptable.

D. Peat Moss Commercially available baled peat moss or approved equivalent.

E. Staking Material

1. Stakes for tree support

a. Construction grade yellow pine, stain brown
b. Size as noted on plans

2. Wires

a. Padded with rubbed hose to protect tree
b. Galvanized
c. With galvanized turnbuckle
d. Evenly tighten turnbuckles with plant in vertical position.

F. Water

1. Free of oils, acids, alkali, salt, and other substances harmful to plant growth
2. Location: Furnish temporary hoses and connections on site.

G. Sand Washed builders sand

H. Antidesicant – "Wilt–proof" or equal.

I. Edging – 3/16" X 4" green, new and unused; with stakes.

2.02 MIXES

A. Planting Mixture

Existing topsoil – 50%
3. Shredded pine bark – 50%
4. Fertilizer 10:20:10 at 30 lb./1000 SF

B. Planting Mix for Annuals/Perennials

1. Prepare above mix
2. Add 2" of sand

C. Azalea mix: solid peat moss in hole 9" wider than root ball each direction. Plant in solid peat moss and provide mound at base of plant to allow for drainage.
D. Japanese maple, dogwood, camellias: Provide 50/50 peat moss to topsoil mix, raise for drainage.

PART III – EXECUTION

3.01 UTILITIES – verify location of all utilities prior to initiating construction; repair any damage caused by construction at no cost to owner.

3.02 INSPECTION

A. Inspect plants for injury and insect infestation; prune prior to installation.
B. Inspect site to verify suitable job conditions.

3.03 FIELD MEASUREMENTS

A. Location of all trees and shrubs to staked in the field and approved by Owner's representative prior to installation.
B. Location of all groundcover and seeding limits as shown on plans.

3.04 EXCAVATION FOR PLANTING

A. Pits

1. Shape – Vertical hand scarified sides and flat bottom.
2. Size for trees – 2 feet wider or twice the root ball, whichever is greater.
3. Size for shrubs – Size of planting bed as shown on drawings.
4. Rototill soil mix thoroughly, full depth.
5. NOTE: If beds are proposed beneath drip line of existing tree canopy, pocket prep plants. Do not roto–till beneath existing trees.

B. Obstructions Below Ground

1. Remove rock or underground obstructions to depth necessary to permit planting.
2. If underground obstructions cannot be removed, notify Owner's representative for instruction.

C. Excess Soil Dispense of unacceptable or excess soil away from the project site at Contractor's expense.

3.05 PLANTING

A. General

1. Set plants 2" above existing grade to allow for settling.
2. Set plants plumb and rigidly braced in position until planting mixture has been tamped solidly around ball.
3. Apply soil in accordance with standard industry practice for the region.
4. Thoroughly settle by water jetting and tamping soil in 6" lifts.
5. Prepare 3" dish outside root ball after planting.
6. Thoroughly water all beds and plants.
7. Stake trees and large shrubs as indicated on plans.
8. Apply anti–desicant according to manufacturer's instructions.
9. Apply commercially manufactured root stimulator as directed by printed instruction.
10. Plant and fertilize bedding plants per trade standards.
11. Apply 3" mulch top dressing.

B. Balled Plants

1. Place in pit of planting mixture that has been hand tamped prior to placing plant.
2. Place with burlap intact to ground line. Top of ball to be 2" above surrounding soil to allow for settling.
3. Remove binding at top of ball and lay top of burlap back 6".
4. Do not pull wrapping from under ball, but cut all binding cord.
5. Do not plant if ball is cracked or broken before or during planting process or if stem or trunk is loose.
6. Backfill with planting mixture in 6" lifts.

C. Container Grown Plants

1. Place in pit on planting mixture that has been hand tamped prior to placing plant.
2. Cut cans on two sides with an acceptable can cutter, and remove root ball from can.

Do not injure root ball.
3. Carefully remove plants without injury or damage to root balls.
4. Backfill with planting mixture in 6" lifts.

D. Mulching

1. Cover planting bed evenly with 3" of mulch.
2. Water immediately after mulching.
3. Where mulch has settled, add additional mulch to regain 3" thickness.
4. Hose down planting area with fine spray to wash leaves of plants.

D. Pruning

1. Prune minimum necessary to remove injured twigs and branches, dead wood, and succors; remove approximately 1/3 of twig growth as directed by landscape architect; do not cut leaders or other major branches of plant unless directed by landscape architect.
2. Make cuts flush, leaving no stubs.
3. Paint cuts over 1" diameter with approved tree wound paint.
4. Do not prune evergreens except to remove injured branches.

3.06 EDGING

A. Stake edging alignment with string line prior to installation. Use framing square to insure right angles are true.
B. Install all edging straight and true as indicated on drawings. Where edging layout is circular in design, maintain true and constant radii as shown.
C. When required on slopes, make vertical cuts (approximately 6" on center) on bottom of edging to allow bending without crimping edging.
D. Install edging so that approximately 1" is exposed on lawn side. Edging should not be visible from bed side after application of mulch.
E. Align edging with architectural features (ie pavement joints, windows, columns, wall, etc.) when drawings indicate.
F. Bend all corners, do not cut corners.
G. Interlock all pieces with pre–fabricated connectors.
H. Install with all stakes on inside of planting bed.
I. Remove, file off all sharp corners and burrs.

3.07 CLEAN–UP

A. Sweep and wash all paved surfaces.

Remove all planting and construction debris from site, including rocks, trash and all other miscellaneous materials.

3.08 MAINTENANCE

A. Contractor responsible for routine, and regular maintenance of site until Final Acceptance is awarded by Owner. Work includes:

1. Weeding (weekly)
2. Watering (as required)
3. Pruning
4. Spraying
5. Fertilizing
6. Mulching
7. Mowing (weekly)

B. Provide Owner and Landscape Architect with preferred maintenance schedule in writing. Schedule shall include the above–listed tasks and shall address all frequencies, rates, times, levels, etc.

DFL Group, LLC
PARKS + OPEN SPACE PLANNING · LANDSCAPE ARCHITECTURE
6230B MID CITIES BLVD, NORTH RICHLAND HILLS, TX 76180 817-479-0730

REGISTERED LANDSCAPE ARCHITECT · JOHN R. FAIN · 805 · STATE OF TEXAS
08/06/13

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SOUTHERN 14,600–LEFT CHAMFER DRIVE–THRU

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CONSULTING CIVIL ENGINEERS ■ SURVEYORS
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DALLAS, TEXAS 75230 (972) 490–7098 FAX
Contact: Michael Daggett
Texas Engineers Registration No. 69
Texas Surveyors Registration No. 100965–00
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CONSULTANT:

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SEAL:

REVISIONS:
1) 11/26/13 ISSUED FOR CONST.

FILE NAME: 70195–lan.dwg
JOB NUMBER: 70195.00
DATE: August 27, 2013
TITLE:
PLANTING SPECS
SHEET NUMBER: L-6
COMMENTS:

P-201311-03

SECTION 02800

FINISH GRADING, LAWN WORK, WILD FLOWERS

PART I – GENERAL

1.01 DESCRIPTION

A. Work includes turf establishment (sod, hydromulch, etc.) as described on drawings.

B. Make required analysis and material tests for topsoil, fertilizers, and other materials of similar character per current methods of the Association of Official Agricultural Chemists, when required.

C. Grass seed shall conform to tolerances for germination and purity per applicable standards of U.S. Department of Agriculture.

D. The turf contractor shall have a stand of grass established prior to substantial completion of the project. If this is not possible due to time of year or schedule, he shall maintain and protect the seeded areas until the grass is established.

PART II – PRODUCTS

2.01 TOPSOIL MATERIAL

A. Topsoil material (stockpiled, as specified in Specifications) has been saved for use in finish grading. After sifting out all plant growth, rubbish, and stones, use for areas designated to receive grass. If stockpiled topsoil is not sufficient quantity to complete work, furnish acceptable topsoil from another approved source to provide four inches (4") of topsoil for grass areas unless otherwise noted on drawings. Grass areas shall be defined as the graded areas disturbed during construction not to be paved or built upon.

B. Acceptable topsoil material shall be defined as natural, fertile, agricultural soil, capable of sustaining vigorous plant growth, uniform composition throughout admixture of subsoil, free of stones, lumps, plants, and their roots, sticks, or other extraneous matter; do not deliver while in a frozen or muddy condition.

2.02 FERTILIZER

A. Provide a commercial balanced fertilizer delivered to the job in bags labeled with manufacturer's guaranteed analysis. Store in weatherproof storage, place in such a manner that its effectiveness will not be impaired.

B. Fertilizer shall be a grade containing the percentages of plant food elements by weight as specified elsewhere in these specifications.

C. Availability of various elements shall be per Standards of the Association of Official Agricultural Chemists.

2.03 GRASS SEED

A. Grass seed shall be of the previous season's crop and the date of analysis shown on each bag shall be within nine (9) months of the time of delivery to the project. When requested by the Owner or Representative, the seeding contractor shall furnish a sample of seed from each bag for testing.

B. The seed shall comply with all provisions of the U.S. Department of Agriculture as to labeling, purity, and germination.

2.04 MULCHING

A. Dry straw or hay of good quality, free of seeds of competing plants and at such rate of 1 1/2 – 2 tons per acre; or,

B. Wood cellulose or cane fiber mulch at a rate of 1,000 pounds per acre when the slope is 3/4:1 and steeper; or,

C. A combination of good quality dry straw or hay free of seeds of competing plants at a rate of 2 1/2 tons per acre and wood cellulose or cane fiber mulch at a rate of 500 pounds per acre. This combination shall be used when the slope is flatter than 3/4:1; or,

D. Sericea lespedza seed bearing hay at a rate of 3 tons per acre. This mulch may be applied green or air dried, but must contain mature seed.

E. Manufactured mulch materials, such as soil retention blankets, erosion control netting, or others that may be required on special areas of high water concentration or unstable soils. When these materials are used, follow the manufacturer's recommendations for installation.

2.05 HYDRO–MULCHING

Wood cellulose fiber or cane fiber mulch will be applied with hydraulic seeding and fertilizing equipment. All slurry ingredients shall be mixed to form a homogeneous slurry and spray applied within one hour after the mixture is made.

When wood cellulose or cane fiber mulch is used at the 500 pound per acre rate, straw or hay mulch with asphalt emulsion is applied over this to complete the mulch.

Wood cellulose or cane fiber mulch at the 1,000 pound per acre rate is used alone where other mulch material will not stick.

Wood cellulose or cane fiber mulch is self anchoring.

PART III – EXECUTION

3.01 RESPONSIBILITY

The site grading contractor will be responsible to stockpile acceptable topsoil in a sufficient quantity to provide four inches (4") minimum cover for all grass areas, including but not limited to all curbed islands, and topsoil planting mounds/berms at the appropriate height and width as defined and shown on the landscaping and/or planting drawings. The topsoil and grass areas shall be further defined as any area disturbed during the grading and construction process.

The site grading contractor, shall be responsible to spread the topsoil within all perimeter graded areas and future building areas only.

The site grading contractor shall be responsible for backfilling of all curbed islands and planting mounds/berms. They shall also be responsible for removal of all stones, roots, and raking of all topsoil areas hat are to be seeded and/or planted. It will also be the site grading contractor's responsibility to provide fertilizer, grass seed, and any additional topsoil required and mulching.

3.02 GRASS SEEDING

A. Remove stones, roots, rubbish and other deleterious materials from topsoiled areas that are to be seeded.

B. Immediately prior to sowing seed, scarify ground as necessary; rake until surface is smooth and friable. Sow seed evenly, lightly wood rake into 02800–3
C. ground, then roll ground with suitable roller; water thoroughly with fine
spray. During any weather, keep lawn watered with sprinklers or other approved methods. Re–seed any areas not doing well or damaged. At intervals as may be required according to seasonal conditions, mow and water grass and execute necessary weeding until acceptable and full stand of grass has been obtained.

D. Provide permanent grass seeding for lawn areas so indicated. Seed in accordance with the following schedule (unless otherwise directed by Owner or Owner's Representative::

1. Sow areas ready for seeding between March 1 and October 1 with Hulled Common Bermuda at a rate of 85 pounds per acre.

2. Sow areas ready for seeding between October 1 and March 1 with Unhulled Common Bermuda at a rate of 90 pounds per acre, and Annual Rye Grass at the rate of 50 pounds per acre.

3. Apply fertilizer at a rate of 20/25 pounds per 1,000 square feet.

3.03 WILD FLOWERS

A. Areas indicated on plans to receive wild flower coverage shall br fine graded, fertilized, and prepared in a manner similar to traditional turf establishment.

B. Area to be hydromulched with seed mix as follows:

Tickseed	10 pounds/acre
Cosmos	15 pounds/acre
Ox–Eyed Daisy	5 pounds/acre
Side Oats Grama	4 pounds/acre
Showy Primrose	0.5 pounds/acre
Plains Coreopsis	2 pounds/acre
Black Eyed Susan	2 pounds/acre
Indian Blanket	10 pounds/acre
Texas Bluebonnet	4 pounds/acre
Little Bluestem	4 pounds/acre

3.04 MULCH
A. All areas to be seeded shall be mulched.
B. Mulch materials shall be applied uniformly over the seeded area. Mulch shall be straw and shall be at the rate of 1 1/2 – 2 tons per acre.

B. Mulch shall be anchored with an emulsified asphalt binder at the rate of 10 gallons per 1,000 square feet.

3.05 PROTECTION

Provide, at no additional cost to Owner, fencing, railing, wire or other types of protection for topsoiled and seeded areas against trespassing and damage. If lawns are damaged prior to Final Acceptance, treat or replace them as directed.
Remove protection when so directed.

3.06 MAINTENANCE

Provide maintenance from start of work until Final Acceptance. Maintenance includes watering of lawns, weeding, mowing, edging, repairs of wash–outs and gullies, repairs to protection, and other necessary work of maintenance. Maintain slopes against erosion.

3.07 REHYDROMULCHING

The Owner's representative will designate areas to be replanted. Areas on which a stand of growing grass is not present in a reasonable length of time, (Bermuda grass seed should be germinating in 6–8 days) shall be prepared, reseeded and remulched, as specified for original planting at no additional cost to Owner. A stand shall be defined as live plants from seed occurring at a rate of not less than 1,000 growing plants per square foot. Replanting required because of faulty operations or negligence on the part of the Contractor shall be performed without
cost to Owner.

3.08 FINAL CLEAN–UP

A. At time of final inspection of work, and before final acceptance, clean paved areas that are soiled or stained by operations of work of this section. Clean by sweeping or washing, and remove all defacements or stains.

B. Remove construction equipment, excess material and tools. Cart away from site any debris resulting from work of this section and dispose of as directed.

SECTION 02922
SODDING

PART I – GENERAL

1.01 DESCRIPTION

A. Work Included

1. Sod bed preparation
2. Fertilizing
3. Sodding
4. Miscellaneous management practices

B. Related Work Specified Elsewhere

1. Finish Grading, Section 02800
2. Lawns and Grasses, Section 02930

1.02 REFERENCE STANDARDS

A. Standardized Plant Names

American Joint Committee of Horticultural Nomenclature, Second Edition, 1942.

B. Texas Highway Department – Standard Specifications for Construction, Item 164, Seeding for Erosion Control.

1.03 SUBMITTALS

A. Vendors Certification That Sod Meets Texas State Sod Law

1. Include labeling requirements.
2. Include purity and type.

1.04 PRODUCT DELIVERY, STORAGE AND HANDLING

A Sod:

1. Previous season's crop with date of analysis on each bag.
2. Furnish and deliver each variety in separate bags or containers.
3. Sod to be cut no more than three days before delivery.

B. Fertilizer:

1. Unopened bags labeled with the analysis.
2. Conform to Texas Fertilizer Law.

1.05 JOB CONDITIONS

A. Planting Season:

1. Only during suitable weather and soil conditions.
2. As specifically authorized by the Owner's Representative.

B. Schedule – Only after all other construction is complete.

C. Protect and Maintain Sodded Areas

1. From traffic and all other use.
2. Until sodding is complete and accepted.

PART II – PRODUCTS

2.01 MATERIALS

A. Sod:

1. Sod: As specified on drawings, weed, insect, and disease free having a minimum of 1 inch of topsoil attached to the roots and cut no more than three days prior to installation.
2. The sod shall be cut in strips of at least 1/2 sq. yd. and not more than 1 sq. yd. Sod shall be cut into strips not less than 12" in width or more than 9' in length. At the time of harvest, the top growth shall not exceed 3" in length.
3. All sod shall conform to the laws of the State and shall be obtained from sources meeting the approval of the Department of Agriculture, Division of Entomology.

B. Fertilizer:

1. Uniform in composition, free flowing.
2. Suitable for application in approved equipment.
3. Analysis of 16–20–0, 16–8–8 or as directed.

C. Water:

1. Free of oil, acid, alkali, salts or other substances harmful to growth of grasses.

PART III – EXECUTION

3.01 SOD BED PREPARATION

A. Cultivate to a depth of four (4") inches by disking and tilling with a power tiller.

B. Clear surfaces of all materials:

1. Stumps, stones, and other objects larger than one inch (1").
2. Roots, brush, wire, stakes, etc.
3. Any objects that may interfere with sodding or maintenance.

C. Prepare sod bed:

1. Remove soil clods larger than one inch (1").
2. Grade areas to smooth, even surface, removing ridges and filling depressions. Final grade to be below finish grade of curbing and edging as shown on details. All grades shall meet approval of Owner's Representative before sodding.

3.02 SODDING

A. Sodding:

1. Lightly water prepared grade, lay sod with staggered joints and with edges touching. Topdress with topsoil at edges if necessary to provide smooth surface. On slopes of 2 to 1 and greater, fasten sod in place with wood pegs (two each piece) or other approved method. Sod damaged by storage or during installation shall be rejected. Following settling, topdress with screened, approved topsoil.
2. Water and fertilize at 5 lbs. per 1,000 sq. ft.
3. Sod shall not be placed during a drought, nor during periods when sod is not normally placed in the area, and shall not be placed on frozen ground. No dry or frozen sod is acceptable.
4. The contractor shall keep all keep all sodded areas moist and growing until Final Acceptance. All areas shall be maintained in an acceptable condition until acceptance by Owner.

B. Rolling:

1. After placing sod, roll with a hand roller, weighing not more than 100 lbs. per foot of width, in two directions.
2. Eliminate all air pockets; finished surface should be free of excessive undulations.

3.05 MAINTENANCE AND MANAGEMENT

A. Includes protection, replanting, maintaining grades, repair of erosion damage. Also includes weekly mowing at 1 1/2" height until final acceptance.

B. Resodding:

1. Reseed damaged or unacceptable areas.
2. Ruts, ridges, and other surface irregularities shall be corrected.

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REGISTERED LANDSCAPE ARCHITECT · JOHN R. FAIN · 805 · STATE OF TEXAS
08/06/13

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SOUTHERN 14,600–LEFT CHAMFER DRIVE–THRU
STORE NUMBER: 10413
SEC OF PRESTON RD. & SUTTON DRIVE
CELINA, TEXAS
PROJECT TYPE: NEW
DEAL TYPE: FEE FOR SERVICE
CS PROJECT NUMBER: 72532

CIVIL ENGINEER:
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SECTION 02750

IRRIGATION

PART I - GENERAL

1.01 DESCRIPTION

A. Work Included

1. Piping and fittings.
2. Connection to existing water lines.
3. Valves, bubblers, and spray heads.
4. All miscellaneous fittings and accessories required to complete and operate system.
5. Excavation and backfill.
6. Testing and adjusting.
7. Clean up.

B. Related Work Specified Elsewhere

1.02 QUALITY ASSURANCE

A. Codes and Standards:

1. All applicable local and national Plumbing Ordinances, Electrical Codes, and Building Codes.
2. National Plumbing Code.

B. Licenses:

1. All work shall be performed by or under the direct supervision of an irrigator or plumber licensed to practice under the authority of the State of Texas.

C. Reference Standards:

1. ASTM D-2241-78
2. CS 256-63

1.03 SUBMITTALS

A. Maintenance Materials : At completion of the job, furnish spare parts and all special tools and equipment required to operate and maintain system.

B. Maintenance Data: Furnish two copies of parts l ist and repair manuals and all special tools and equipment required to operate and maintain system.

C. Manufacturer's Literature: Submit catalogue data indicating, performance, weight, size and function of each item of equipment and material. Also provide manufacturer's operating manual.

D. Project Record Documents: Record on a clean set of plans in colored pencil and also a reproducible mylar:

1. All piping and wiring, including control wires by dimensions.
2. Locate all valves by dimension from two directions.

PART II - PRODUCTS

2.01 GENERAL

A. Equipment and Material Requirements:

1. Standard product of acceptable manufacturer.
2. In-service performance records to verify published capabilities.
3. New and unused.

2.02 MATERIALS

A. PVC Pipe and Fittings:

1. Polyvinyl chloride pipe (PVC) in accordance with ASTM D-2241-78 made to SDR-PR dimensions and approved by National Sanitation Foundation.
2. 2 inch pipe and smaller: Solvent weld PVC Type "Bell-End" pipe may be used.
3. 2 inch pipe fittings and smaller: Solvent weld type as recommended by pipe manufacturer.
4. All pipe downstream of backflow preventer to be Class 200 PVC; all swing joints and risers to be Schedule 80.

B. Joints and Fittings:

1. Nipples and risers: Schedule 80 threaded PVC pipe.
2. Fittings: Schedule 80 PVC.

C. Valves:

1. Double Check Double Gate Valve

a. Factory assembled and tested valve train.
b. Two spring loaded all brass check valves with soft rubber discs.
c. Two all brass shutoff valves.
d. Assembled with brass nipples.
e. In accordance with AWWA and ASSE specifications.
f. Approved Product: FEBCO.

2. Manual Control Valve

a. Straight type globe valve.
b. Size to match upstream pipe or as shown on drawings.
c. Cross handle control wheel.
d. Brass or bronze body and parts, Class 150.
e. Full floating valve disc with replaceable seat and washers.
f. Removable bonnet and stem assembly with packing gland and nut.

3. Electric Control Valve

a. With flow control.
b. Globe valve.
c. Manual bleed.
d. 24 VAC solenoid.
e. Electric control, in-line.
f. Size to match upstream pipe or as shown on drawings.

4. Quick Coupler

a. 1" female inlet.
b. Brass or bronze construction.
c. 150 psi capacity.
d. Self closing cover.
e. One piece, single lug, single key construction.
f. Provide owner with two quick coupler keys & hose bib attachments.
g. Install in "jumbo" plastic valve box, rectangular, heavy duty.

D. Valve Boxes:

1. Box for Double check double gate valve:

a. Concrete box with cast iron cover (or per code).
b. Sufficient size to house entire assembly and permit inspection, maintenance and repair.

2. Box for Electric Valves, Manual Valves, and Double Check Valves
a. "Jumbo", rectangular
b. Heavy duty plastic construction.
c. With locking lid.

E. Sprinkler Heads:

1. Bubbler, Flood Type
a. Plastic construction.
b. 1/2" IPS female inlet.
c. Adjustable flow via screen.

2. Spray Heads

a. 4" pop/12" pop
b. Plastic construction.
c. Stainless steel retraction spring.
d. Serviceable filter screen and nozzle.
e. Stationary or gear driven.

3. Rotary Heads

a. 12" pop/4"pop
b. Full and part circle heads as drawings indicate.
c. Stainless steel retraction spring.
d. Serviceable filter screen and nozzle.

F. Controllers:

1. Solid state.
2. Digital readout.
3. Dust Barrier.
4. Pump/master valve circuit switch.
5. 0-60 minute timing per station or as specified.
6. Up to three start times/day with manual override.
7. UL listed.
8. Battery backup.

G. Accessories:

1. Jointing Material: Teflon tape for threads on PVC pipe.
2. Control Wire: Direct Burial, size for voltage drop, minimum size per National Electric Code.

PART III - EXECUTION

3.01 GENERAL

Install all equipment and products in accordance with manufacturer's recommendations.

3.02 INSTALLATION

A. PVC Pipe and Fittings:

1. Handle and install PVC pipe, couplings, and fittings in accordance with manufacturer's recommendations and industry standards.
2. All PVC fittings shall be molded of the same material as the pipe and shall be suitable for solvent weld, slip joint ring tight seal, or screwed connections.
3. No fittings made of other material shall be used except copper as specified in the plans and details.
4. Space pipe length in jointing and snake to allow for expansion and contraction.
5. Thoroughly clean interior of the pipe of all foreign matter before being lowered into trench. Keep clean during laying operation by means of plugs or other approved method.
6. Do not lay pipe in water or when trench or weather conditions are unsuitable for work. Keep water out of trench until the joints are completed.
7. When work is not in progress, securely close open ends of pipe and fittings so that no trench water, earth or other substances will enter pipes or fittings.
8. Take up and relay any pipe that has the grade or joints disturbed after laying.
9. Fittings at bends in the pipe line and at ends of lines shall be firmly wedged against the vertical face of the trench.
10. Make joints in all screwed fittings by applying teflon tape on male threads.
11. Only schedule 80 pipe may be threaded.

B. Valves:

1. Install all new valves as indicated on the plans or as may be required for the proper control of the piping systems in which they are incorporated.
2. Bury valves deep enough so that valve box lid will not protrude above the ground.
3. Set valves vertically and locate 12 inches from sidewalks where possible.
4. Adjust flow control to give correct pressure at sprinkler head.

C. Heads - Contractor shall field adjust all heads to minimize/eliminate direct head spray onto all paving, roadways, walks, buildings, electrical transformers and other above ground equipment.

3.03 FIELD QUALITY CONTROL

A. Leak Test:

1. When the main line or sections of the main line, e.g. loops with swing joints and valves have been installed, the system (or section) will then be pressurized to the operating pressure indicated on the drawings. The pressure will then be maintained for a twenty four hour leak test period.
2. All leaks will be repaired and retested prior to backfilling lines.
3. Any leaks developed during the first under normal operating pressures due to improper installation shall be repaired by the contractor at no expense to the owner.

B. Cleaning and Flushing System:

1. After pipe, fittings, and valves have been installed and connections made to water source, flush pipe free of all rock, dirt, trash, pipe shavings, and other debris before installing heads.
2. After heads have been installed, use system several times before final inspection.
3. Immediately before final inspection, check all heads for stoppage. Clean if necessary.
4. Remove nozzles of all heads and flush pipes. Clean and replace heads before final inspection.

C. Maintenance Instructions:

1. School at least two of the Owner's employees that will be maintaining the irrigation system in operating and maintenance procedures.
2. Include operation of controllers and valves, balancing of the system, and maintenance of all equipment including removal and replacement of valve and controller components.

3.04 CLEANUP

A. Make final cleanup of all parts of work before final acceptance.

B. Remove all construction materials and equipment.

C. Prepare site in an orderly and finished appearance.

D. Remove from site any rock or extra soil that resulted from this work and restore site to its original condition.

END OF SECTION

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STATE OF TEXAS
JOHN R. FAIN
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LICENSED IRRIGATOR
08/06/13

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