CIVIL CONSTRUCTION PLANS FOR

STONE CREEK RETAIL

BLOCK A, LOTS 1–6, STONE CREEK RETAIL ADDITION
SEC OF STATE HIGHWAY 205 & F.M. 552
W.T. DEWEESE SURVEY, ABSTRACT NO. 71

ROCKWALL COUNTY
CITY OF ROCKWALL, TEXAS

PLANS PREPARED BY:

POGUE ENGINEERING & DEVELOPMENT COMPANY, INC.
1512 BRAY CENTRAL DRIVE, SUITE 100
McKINNEY, TEXAS 75069
PH (214) 544–8880
FAX (214) 544–8882
BRANDON E. COX, P.E.

PLANS PREPARED FOR:
CRESTVIEW REAL ESTATE, L.L.C.
MR. GREY STOGNER
8214 WESTCHESTER, SUITE 850
DALLAS, TEXAS 75225
(214) 343–4477 PHONE
(214) 340–2029 FAX

LEGEND

B.	BOLLARD
EM	ELECTRIC METER
PP	POWER POLE
LS	LIGHT STANDARD
WM	WATER METER
WV	WATER VALVE
ICV	IRRIGATION CONTROL VALVE
FH	FIRE HYDRANT
FDC	FIRE DEPARTMENT CONNECTION
CO	CLEAN OUT
MH	MANHOLE
GM	GAS METER
TSC	TRAFFIC SIGNAL CONTROL
TSP	TRAFFIC SIGNAL POLE
SIGN	TRAFFIC SIGN
TELE	TELEPHONE BOX
TV	TV BOX
FP	FLAG POLE
L.A.	LANDSCAPE AREA
	PROPERTY LINE
OHL	O.H. POWER LINES
TEL	U/G TELEPHONE LINES
WATER	U/G WATER LINE
GAS	U/G GAS LINE
x x	FENCE
500	EXISTING CONTOURS
XXX.XX	EXISTING SPOT GRADES
(C.M.)	CONTROLLING MONUMENT
SIR	5/8–INCH IRON ROD WITH "POGUE ENG & DEV" CAP SET
XXXX	PROPOSED CONTOURS
TC XXX.XX G XXX.XX	PROPOSED SPOT GRADES
	PROPOSED EROSION CONTROL
	PROPOSED DRAINAGE DIVIDES

FRANCHISE UTILITY NOTES:
1. TXU ENERGY CONSTRUCTION SERVICES – (800) 711–9112
2. ATMOS ENERGY (GAS) – 903–457–2092 – DINAH WOOD
3. AT&T (PHONE) – 903–457–2092 – DWAYNE WELLS

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...

BENCH MARK LIST:

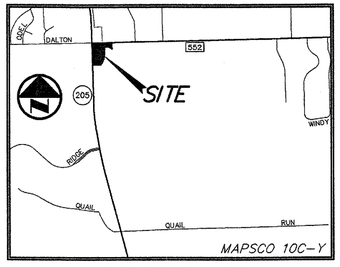
BENCHMARK #1
SQUARE CUT SET AT SOUTHWESTCORNER OF WATER VAULT LOCATEDED AT THE SOUTHEAST CORNER OF THE INTERSECTION OF THE EAST RIGHT–OF–WAY LINE OF SH 205 AND THE SOUTH RIGHT–OF–WAY LINE OF FM 552.
ELEVATION = 543.09

BENCHMARK #2
CITY OF ROCKWALL MONUMENT (R010) FOUND.
ELEVATION = 524.788

OWNER:
MR. GREY STOGNER
METROPLEX ACQUISITION FUND, L.P.
8214 WESTCHESTER, SUITE 850
DALLAS, TEXAS 75225
(214) 343–4477 PHONE
(214) 340–2029 FAX

RECORD DRAWINGS:
IT WAS THE INTENT THAT THE IMPROVEMENTS SHOWN BE CONSTRUCTED ACCORDING TO THESE PLANS AS APPROVED BY THE CITY. THE LINES AND GRADES WERE SET ON THE GROUND FOR CONSTRUCTION ACCORDING TO SAID PLANS. THE CITY INSPECTED THE CONSTRUCTION. THE ENGINEER DID NOT VERIFY LINES OR GRADES AFTER CONSTRUCTION. WE ARE NOT AWARE OF ANY CHANGES OR REVISIONS TO THESE PLANS DURING CONSTRUCTION OTHER THAN THOSE SHOWN.

RANDALL P. POGUE, P.E. DATE: APRIL 15, 2010
TX LIC. NO. 84780 ⚠4



VICINITY MAP
NOT TO SCALE

TxDOT NOTES:
1. ALL CONSTRUCTION WITHIN THE STATE RIGHT OF WAY WILL REQUIRE COMPLIANCE TO TXDOT STANDARD SPECIFICATIONS, STANDARD PLANS, AND TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

2. SPECIFICATIONS ADOPTED BY THE TEXAS DEPARTMENT OF TRANSPORTATION, JUNE 1, 2004, AND SPECIFICATION ITEMS LISTED AND DATED AS FOLLOWS SHALL GOVERN ON THIS PROJECT. FOR ALL WORK WITHIN THE STATE RIGHT OF WAY.

⚠3 3. EDGE DROP OFFS GREATER THAN 2 INCHES WILL NOT BE ALLOWED OVERNIGHT WITHOUT PROPER SIGNING OR THE INSTALLATION OF TEMPORARY 3:1 SAFETY SLOPES.

⚠4 *04–15–10 RECORD DRAWINGS*
⚠3 *02–24–10 ADDED RIGHT TURN LANE ON S.H. 205*
⚠2 *07–17–09 SANITARY SEWER & ADA ROUTE REVISIONS*
⚠1 *06–19–09 TXDOT COMMENTS*

PROJECT GENERAL NOTES:

1. SIZE AND LOCATION OF ALL UNDERGROUND UTILITIES HAVE BEEN REPRODUCED FROM PLANS ON FILE WITH THE CITY. CONTRACTOR TO VERIFY SIZE AND LOCATION OF ALL UTILITIES PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION ACTIVITY.

2. THE BEARING SYSTEM FOR THIS TRACT WAS BASED ON A BEARING OF NORTH 89 DEGREES, 09 MINUTES, 25 SECONDS EAST FOR THE SOUTH RIGHT–OF–WAY LINE OF F.M. 552 ACCORDING TO SPECIAL WARRANTY DEED TO BETSY COMMERCIAL LTD. RECORDED IN INSTRUMENT NO. 2007–00375397 OF THE DEED RECORDS OF ROCKWALL COUNTY, TEXAS.

3. BASE BOUNDARY AND TOPOGRAPHY INFORMATION SHOWN IS BASED ON AN ON THE GROUND SURVEY AS PREPARED BY POGUE ENGINEERING & DEVELOPMENT COMPANY, INC. DATED 07–16–2008.

4. THE SUBJECT PROPERTY IS SHOWN ON THE NATIONAL FLOOD INSURANCE PROGRAM FLOOD INSURANCE RATE MAP FOR ROCKWALL COUNTY, TEXAS AND INCORPORATED AREAS COMMUNITY PANEL NUMBER 480543 0030 B, DATED SEPTEMBER 17, 1980. ALL OF THE SUBJECT PROPERTY IS INDICATED TO BE IN ZONE 'C' ON SAID MAP. RELEVANT ZONES ARE DEFINED ON SAID MAP AS FOLLOWS:

ZONE 'C' – AREAS OF MINIMAL FLOODING.

THIS FLOOD STATEMENT REGARDING FLOODING DOES NOT IMPLY THAT THE PROPERTY AND/OR STRUCTURES 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 AND/OR ENGINEER.

5. PRIOR TO ANY CONSTRUCTION ACTIVITY, THE CONTRACTOR SHALL BECOME FAMILIAR WITH THE PLANS AND SPECIFICATIONS INCLUDING ALL NOTES, THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION AS ISSUED BY THE NORTH TEXAS CENTRAL TEXAS COUNCIL OF GOVERNMENTS, THE CITY STANDARDS FOR PUBLIC WORKS CONSTRUCTION AND ANY OTHER APPLICABLE STANDARDS AND SPECIFICATIONS RELEVANT TO THE PROPER COMPLETION OF THE WORK HEREIN SPECIFIED. FAILURE ON THE PART OF THE CONTRACTOR TO BECOME FAMILIAR WITH SAID STANDARDS AND SPECIFICATIONS PERTAINING TO THIS WORK SHALL IN NO WAY RELIEVE THE CONTRACTOR OF RESPONSIBILITY OF PERFORMING THE WORK IN ACCORDANCE WITH ALL SUCH APPLICABLE STANDARDS AND SPECIFICATIONS.

6. REFER TO THE GEOTECHNICAL REPORT FOR SUBSURFACE SOIL CONDITIONS AND RECOMMENDATIONS PERTAINING TO THE SUBJECT SITE.

7. ALL DIMENSIONS ARE FROM BACK OF CURB TO BACK OF CURB, UNLESS OTHERWISE NOTED.

8. REFER TO THE STANDARD DETAILS AND GENERAL NOTES PLAN(S) FOR PAVING, DRAINAGE, AND UTILITY STANDARD DETAILS AND GENERAL NOTES.

9. REFER TO THE ARCHITECTURAL AND STRUCTURAL PLANS TO VERIFY ALL BUILDING DIMENSIONS.

10. REFER TO THE ARCHITECTURAL PLANS FOR DETAILED BUILDING ENTRANCE LAYOUTS, RAMPS, DUMPSTER AREA, BUILDING OVERHANGS, BOLLARDS, LANDSCAPING AND SIDEWALKS.

11. REFER TO THE ARCHITECTURAL AND MECHANICAL PLANS FOR THE EXACT LOCATIONS FOR ROOF DRAIN COLLECTION SYSTEM TIE IN LOCATIONS.

12. REFER TO THE ARCHITECTURAL AND ELECTRICAL PLANS FOR THE SITE LIGHTING LOCATIONS, REQUIREMENTS AND SPECIFICATIONS.

13. DUMPSTER SCREENING TO COMPLY WITH CITY REQUIREMENTS.

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L1.1	LANDSCAPE PLAN

* THE STANDARD SHEETS, SPECIFICALLY IDENTIFIED IN THIS INDEX OF SHEETS, HAVE BEEN SELECTED BY ME OR UNDER MY RESPONSIBLE SUPERVISION AS BEING APPLICABLE TO THIS PROJECT.

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY BRANDON E. COX, P.E. 101037 ON 05–21–09 . ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT.

Brandon E. Cox 05–21–09

STATE OF TEXAS · BRANDON E. COX · 101037 · LICENSED · PROFESSIONAL ENGINEER

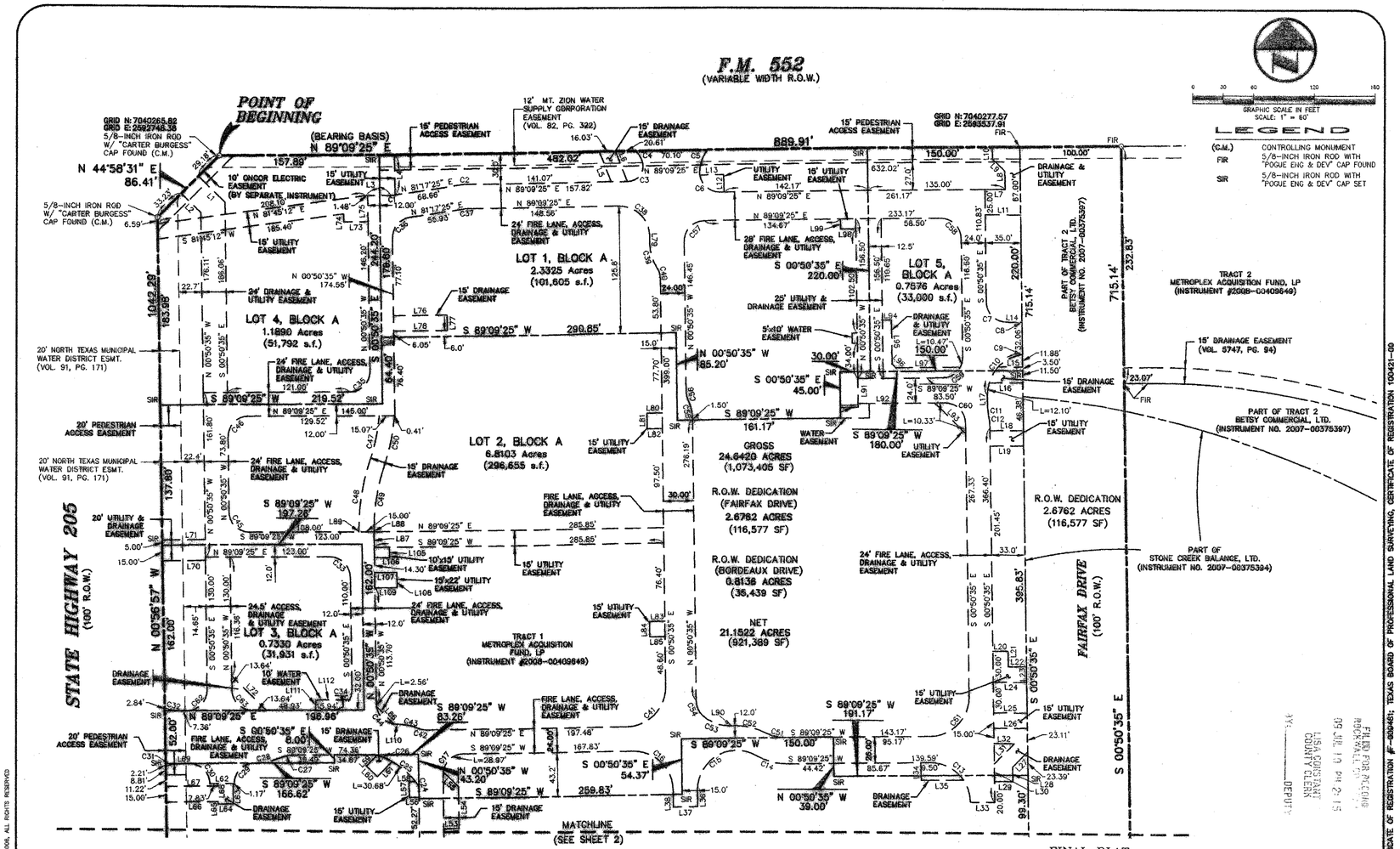
PI NO: 1393–08–087

DWG NO: 1393–08–087–07A.DWG

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STONE CREEK RETAIL – ROCKWALL

TWILLIAMS 04/29/2010 – 3:26PM
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LISA CURTIS
COUNTY CLERK
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FINAL PLAT
STONE CREEK RETAIL ADDITION
LOTS 1-6, BLOCK A

LOCATED IN THE CITY OF ROCKWALL, TEXAS
AND BEING OUT OF THE
W.T. DEWEESE SURVEY, ABSTRACT NO. 71
ROCKWALL COUNTY, TEXAS

SHEET 1 OF 4

NOTE

Bearing system for this survey is based on a bearing of North 89 degrees, 09 minutes, 25 seconds East for the south right-of-way line of F.M. 552 according to Special Warranty Deed to Metroplex Acquisition Fund, LP recorded in Instrument No. 2008-00409649 of the Deed Records of Rockwall County, Texas.

PREPARED FOR:	PREPARED FOR:	PREPARED FOR:	PREPARED FOR:
METROPLEX ACQUISITION FUND, LP 8214 WESTCHESTER, SUITE 850 DALLAS, TEXAS 75225 (214) 343-4477	BETSY COMMERCIAL, LTD. 3838 OAK LAWN AVENUE, SUITE 1212 DALLAS, TEXAS 75219 (214) 522-4945	STONE CREEK BALANCE, LTD. 3838 OAK LAWN AVENUE, SUITE 1212 DALLAS, TEXAS 75219 (214) 522-4945	STONE CREEK SF, LTD. 3838 OAK LAWN AVENUE, SUITE 1212 DALLAS, TEXAS 75219 (214) 522-4945

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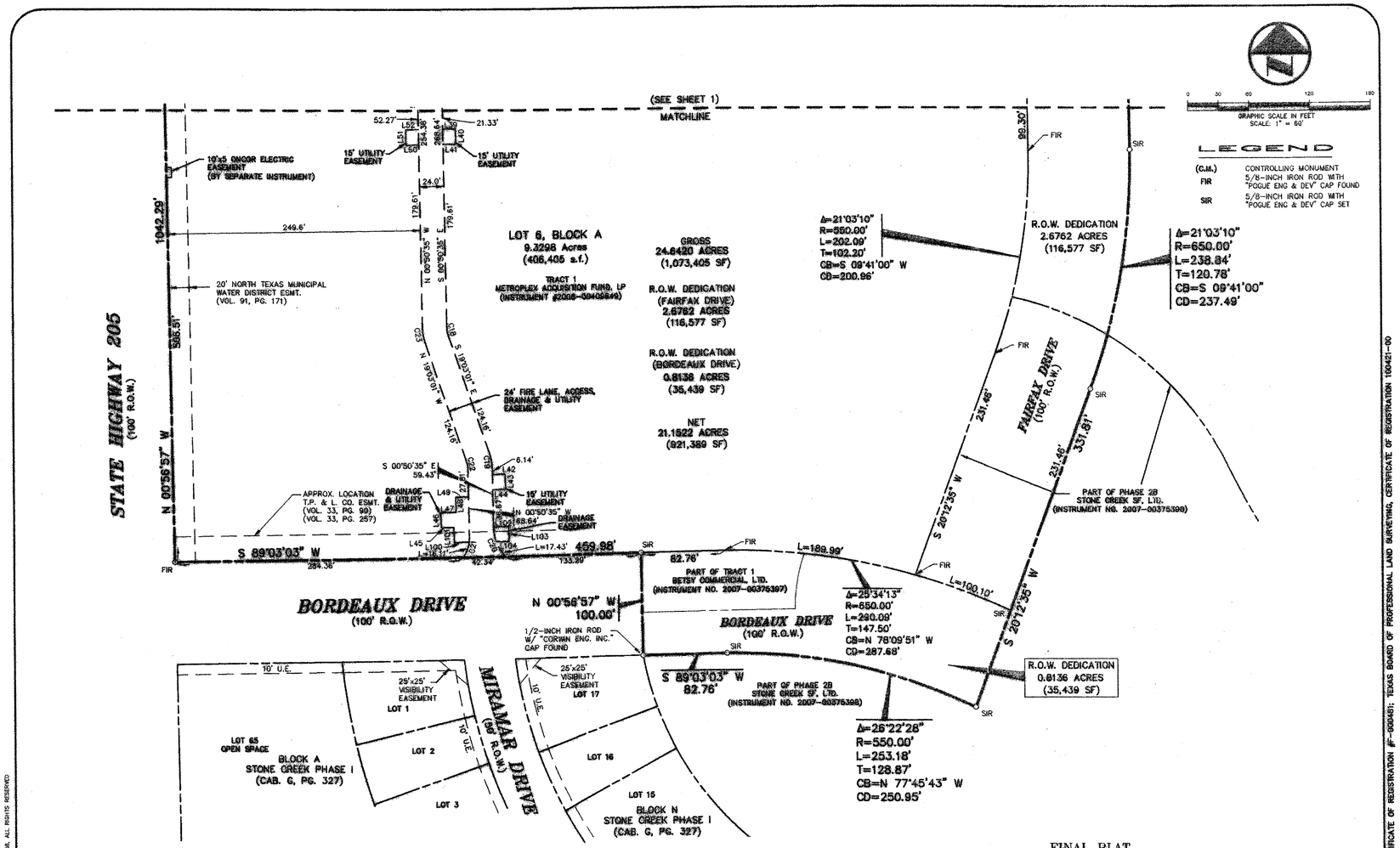
P.I. NO:	1393-08-087
DATE:	03-20-2009
SCALE:	1" = 60'
DRAWN BY:	RLG
CHECKED BY:	BEC

PI NO: 1393-08-087
DWG NO: 1393-08-087-04A.DWG
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PI NO: 1393-08-087
DWG NO: 1393-08-087-07A.DWG



FINAL PLAT

STONE CREEK RETAIL ADDITION
LOTS 1-6, BLOCK A

LOCATED IN THE CITY OF ROCKWALL, TEXAS
AND BEING OUT OF THE
W.T. DEWEESE SURVEY, ABSTRACT NO. 71
ROCKWALL COUNTY, TEXAS

SHEET 2 OF 4

PREPARED FOR:	PREPARED FOR:	PREPARED FOR:	PREPARED FOR:
METROPLEX ACQUISITION FUND, LP 8214 WESTCHESTER, SUITE 850 DALLAS, TEXAS 75225 (214) 343-4477	BETSY COMMERCIAL, LTD. 3838 OAK LAWN AVENUE, SUITE 1212 DALLAS, TEXAS 75219 (214) 522-4945	STONE CREEK BALANCE, LTD. 3838 OAK LAWN AVENUE, SUITE 1212 DALLAS, TEXAS 75219 (214) 522-4945	STONE CREEK SF, LTD. 3838 OAK LAWN AVENUE, SUITE 1212 DALLAS, TEXAS 75219 (214) 522-4945

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P.I. NO:	1393-08-087
DATE:	03-20-2009
SCALE:	1" = 60'
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CHECKED BY:	BEC

PI NO: 1393-08-087

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DWG NO: 1393-08-087-04A.DWG

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PI NO: 1393-08-087

DWG NO: 1393-08-087-07A.DWG

LINE TABLE					
LINE	BEARING	LENGTH	LINE	BEARING	LENGTH
L1	S 45°00'35" E	38.90'	L57	N 00°50'35" W	15.00'
L2	N 45°57'31" W	28.00'	L58	N 89°09'25" E	8.10'
L3	N 89°09'25" E	24.11'	L59	S 41°09'25" W	14.00'
L4	N 00°50'35" W	38.89'	L60	S 45°50'35" E	15.00'
L5	N 21°28'55" W	32.68'	L61	N 44°09'25" E	21.21'
L6	S 21°28'55" E	38.68'	L62	S 89°09'25" W	24.00'
L7	N 89°09'25" E	28.00'	L63	S 00°50'35" E	18.46'
L8	N 00°50'35" W	17.86'	L64	S 89°09'25" W	15.00'
L9	N 45°50'35" W	17.14'	L65	N 00°50'35" W	2.27'
L10	N 00°26'25" W	12.00'	L66	S 89°09'25" W	51.29'
L11	S 89°09'25" W	35.00'	L67	N 89°09'25" E	51.32'
L12	N 00°50'35" W	17.00'	L68	N 00°50'35" W	2.26'
L13	S 89°09'25" W	23.62'	L69	S 89°09'25" W	10.60'
L14	N 89°09'25" E	11.09'	L70	S 89°09'25" W	42.23'
L15	S 89°09'25" W	24.23'	L71	N 89°09'25" E	42.27'
L16	N 89°09'25" E	33.14'	L72	N 45°50'35" W	47.57'
L17	S 00°50'35" E	11.93'	L73	S 89°09'25" W	23.96'
L18	N 89°09'25" E	33.00'	L74	N 00°50'35" W	7.88'
L19	S 89°09'25" W	33.00'	L75	S 00°50'35" E	28.00'
L20	N 89°09'25" E	15.00'	L76	N 89°09'25" E	52.85'
L21	S 00°26'35" E	15.00'	L77	S 00°50'35" E	15.00'
L22	N 89°09'25" E	18.00'	L78	S 89°09'25" W	52.85'
L23	S 00°50'35" E	15.00'	L79	S 00°50'35" E	7.65'
L24	S 89°09'25" W	33.00'	L80	S 89°09'25" W	15.00'
L25	N 89°09'25" E	33.00'	L81	S 00°50'35" E	15.00'
L26	S 89°09'25" W	33.00'	L82	N 89°09'25" E	15.00'
L27	S 44°09'25" W	21.21'	L83	S 89°09'25" W	15.00'
L28	S 00°50'35" E	14.39'	L84	S 00°50'35" E	15.00'
L29	S 89°09'25" W	18.00'	L85	N 89°09'25" E	15.00'
L30	N 89°09'25" E	17.61'	L86	N 45°50'35" W	24.44'
L31	N 44°09'25" E	28.13'	L87	N 00°50'35" W	15.00'
L32	S 89°09'25" W	19.89'	L88	N 00°50'35" W	0.98'
L33	S 89°09'25" W	24.00'	L89	N 00°50'35" W	0.98'
L34	S 00°50'35" E	17.50'	L90	N 89°09'25" E	6.00'
L35	N 89°09'25" E	42.04'	L91	S 00°50'35" E	24.00'
L36	S 00°50'35" E	15.37'	L92	N 89°09'25" E	85.50'
L37	S 89°09'25" W	24.00'	L93	S 45°50'35" E	42.99'
L38	N 00°50'35" W	16.20'	L94	N 89°09'25" E	8.75'
L39	N 89°09'25" E	12.50'	L95	S 00°50'35" E	42.89'
L40	S 00°50'35" E	15.00'	L96	S 45°50'35" E	5.10'
L41	S 89°09'25" W	12.50'	L97	N 89°09'25" E	63.46'
L42	N 89°09'25" E	12.50'	L98	S 89°09'25" W	15.00'
L43	S 00°50'35" E	15.00'	L99	N 00°50'35" W	10.00'
L44	S 89°09'25" W	12.50'	L100	S 89°03'03" W	14.70'
L45	S 89°09'25" W	12.49'	L101	N 00°56'57" W	15.00'
L46	N 00°50'35" W	15.00'	L102	N 89°03'03" E	14.99'
L47	N 89°09'25" E	15.00'	L103	S 00°56'57" E	15.00'
L48	N 00°50'35" W	15.00'	L104	S 89°03'03" W	12.65'
L49	N 89°09'25" E	12.50'	L105	S 00°50'35" E	10.00'
L50	S 89°09'25" W	12.50'	L106	S 89°09'25" W	15.00'
L51	N 00°50'35" W	15.00'	L107	N 89°09'25" E	22.00'
L52	N 89°09'25" E	12.50'	L108	S 00°50'35" E	15.00'
L53	N 89°09'25" E	15.00'	L109	S 89°09'25" W	22.00'
L54	N 00°50'35" W	40.28'	L110	S 89°09'25" W	1.02'
L55	N 45°50'35" W	21.90'	L111	N 00°50'35" W	10.00'
L56	S 89°09'25" W	9.70'	L112	N 89°09'25" E	33.28'

CURVE TABLE						
CURVE	DELTA	RADIUS	LENGTH	TANGENT	CHORD BEARING	CHORD
C1	7°52'00"	28.00'	2.75'	1.38'	N 85°13'25" E	2.74'
C2	7°52'00"	44.00'	6.04'	3.03'	S 85°13'25" W	6.04'
C3	111°22'59"	15.00'	29.16'	21.98'	N 33°27'56" E	24.78'
C4	14°08'12"	39.00'	10.95'	5.53'	N 30°17'38" W	10.95'
C5	32°14'45"	38.00'	21.95'	11.27'	S 28°31'31" W	21.66'
C6	88°01'39"	30.00'	33.17'	21.63'	S 43°06'22" E	29.50'
C7	90°00'00"	28.00'	31.42'	20.00'	S 45°50'35" E	28.28'
C8	7°39'44"	30.00'	4.01'	2.01'	N 85°19'33" E	4.01'
C9	2°35'28"	20.00'	0.90'	0.45'	S 83°14'07" W	0.90'
C10	82°46'58"	38.00'	56.35'	34.37'	S 40°32'54" W	51.57'
C11	11°21'54"	39.00'	7.74'	3.88'	S 06°31'32" E	7.72'
C12	11°21'54"	63.00'	12.50'	6.27'	N 06°31'32" W	12.48'
C13	90°00'00"	38.00'	61.26'	39.00'	N 45°50'35" W	55.15'
C14	30°22'26"	63.00'	33.40'	17.10'	S 75°39'23" E	33.01'
C15	120°22'26"	39.00'	81.94'	68.06'	S 59°20'37" W	67.68'
C16	90°00'00"	38.00'	61.26'	39.00'	N 45°50'35" W	55.15'
C17	90°00'00"	20.00'	31.42'	20.00'	S 44°09'25" W	28.28'
C18	18°12'28"	20.00'	6.36'	3.20'	S 09°56'48" E	6.33'
C19	18°12'25"	44.00'	13.98'	7.05'	N 09°56'48" W	13.92'
C20	45°40'08"	38.00'	31.09'	16.42'	S 23°40'38" E	30.27'
C21	38°42'34"	30.00'	20.27'	10.54'	N 18°30'42" E	19.89'
C22	18°12'25"	20.00'	6.36'	3.20'	N 09°56'48" W	6.33'
C23	18°12'25"	44.00'	13.98'	7.05'	S 09°56'48" E	13.92'
C24	37°49'00"	10.00'	6.60'	3.43'	N 19°45'05" W	6.48'
C25	22°53'47"	88.84'	35.50'	17.98'	N 50°06'29" W	35.27'
C26	29°17'13"	40.00'	20.45'	10.48'	N 76°11'59" W	20.22'
C27	22°50'37"	39.00'	15.55'	7.88'	S 77°44'08" W	15.45'
C28	22°50'37"	63.00'	25.12'	12.73'	N 77°44'08" E	24.95'
C29	90°38'57"	20.00'	31.45'	20.03'	S 44°06'26" W	28.31'
C30	89°54'03"	20.00'	31.38'	19.97'	N 45°13'34" W	28.26'
C31	19°21'58"	39.00'	13.18'	6.65'	S 79°28'27" W	13.12'
C32	21°59'50"	39.00'	14.97'	7.58'	S 79°50'41" E	14.88'
C33	90°00'00"	20.00'	31.42'	20.00'	N 45°50'35" W	28.28'
C34	90°00'00"	20.00'	31.42'	20.00'	N 44°09'25" E	28.28'
C35	90°00'00"	20.00'	31.42'	20.00'	N 44°09'25" E	28.28'
C36	82°08'00"	20.00'	28.67'	17.43'	S 40°13'25" W	26.28'
C37	7°52'00"	20.00'	2.75'	1.38'	S 85°13'25" W	2.74'
C38	89°47'17"	30.00'	47.01'	29.89'	N 45°44'14" W	42.35'
C39	32°27'42"	44.00'	24.93'	12.81'	S 17°04'27" E	24.60'
C40	32°27'42"	20.00'	11.33'	5.82'	N 17°04'27" W	11.18'
C41	90°00'00"	39.00'	61.26'	39.00'	N 44°09'25" E	55.15'
C42	23°53'44"	20.00'	8.34'	4.23'	S 78°53'43" E	8.28'
C43	23°53'44"	50.00'	20.85'	10.58'	N 78°53'43" W	20.70'
C44	90°00'00"	20.00'	31.42'	20.00'	S 45°50'35" E	28.28'
C45	90°00'00"	20.00'	31.42'	20.00'	S 45°50'35" E	28.28'
C46	90°00'00"	20.00'	31.42'	20.00'	S 44°09'25" W	28.28'
C47	13°30'55"	192.50'	45.41'	22.81'	N 11°42'33" E	45.30'
C48	19°18'36"	207.50'	69.93'	35.30'	S 08°48'43" W	69.60'
C49	19°18'36"	182.50'	61.50'	31.04'	S 08°48'43" W	61.21'
C50	13°58'07"	207.50'	50.47'	25.36'	N 11°29'57" E	50.34'
C51	28°04'21"	39.00'	19.11'	9.75'	S 76°48'25" E	18.92'
C52	28°04'21"	63.00'	30.87'	15.75'	N 76°48'25" W	30.56'
C53	43°10'25"	39.00'	29.39'	15.43'	S 69°15'23" E	28.70'
C54	46°49'35"	20.00'	16.35'	8.66'	S 24°15'23" E	15.89'
C55	25°00'28"	44.00'	19.20'	9.76'	N 13°20'50" W	19.05'
C56	25°00'28"	20.00'	8.73'	4.44'	S 13°20'50" E	8.66'
C57	90°00'00"	20.00'	31.42'	20.00'	S 44°09'25" W	28.28'
C58	90°00'00"	20.00'	31.42'	20.00'	N 45°50'35" W	28.28'
C59	90°00'00"	20.00'	31.42'	20.00'	N 44°09'25" E	28.28'
C60	90°00'00"	20.00'	31.42'	20.00'	N 45°50'35" W	28.28'
C61	90°00'00"	39.00'	61.26'	39.00'	N 44°09'25" E	55.15'
C62	90°00'00"	20.00'	31.42'	20.00'	N 44°09'25" E	28.28'
C63	90°00'00"	20.00'	31.42'	20.00'	S 45°50'35" E	28.28'

FINAL PLAT
STONE CREEK RETAIL ADDITION
LOTS 1-5, BLOCK A
LOCATED IN THE CITY OF ROCKWALL, TEXAS
AND BEING OUT OF THE
W.T. DEWEESE SURVEY, ABSTRACT NO. 71
ROCKWALL COUNTY, TEXAS

SHEET 3 OF 4

PREPARED FOR:	PREPARED FOR:	PREPARED FOR:	PREPARED FOR:
METROPLEX ACQUISITION FUND, LP 8214 WESTCHESTER, SUITE 850 DALLAS, TEXAS 75225 (214) 343-4477	BETSY COMMERCIAL, LTD. 3838 OAK LAWN AVENUE, SUITE 1212 DALLAS, TEXAS 75219 (214) 522-4945	STONE CREEK BALANCE, LTD. 3838 OAK LAWN AVENUE, SUITE 1212 DALLAS, TEXAS 75219 (214) 522-4945	STONE CREEK SF, LTD. 3838 OAK LAWN AVENUE, SUITE 1212 DALLAS, TEXAS 75219 (214) 522-4945

POGUE ENGINEERING & DEVELOPMENT COMPANY, INC.
1512 BRAY CENTRAL DRIVE, SUITE 100, McKINNEY, TEXAS 75069
(214) 544-8860 PHONE (214) 544-8862 FAX www.PogueEngineering.com

P.I. NO:	1393-08-087
DATE:	03-20-2009
SCALE:	1" = 60'
DRAWN BY:	RLG
CHECKED BY:	BEC

PI NO: 1393-08-087 H-17 DWG NO: 1393-08-087-04A.DWG

RGROYSMAN 06/17/2009 - 1:00PM
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POGUE ENGINEERING & DEVELOPMENT COMPANY, INC. 2006, ALL RIGHTS RESERVED

TEXAS BOARD OF PROFESSIONAL ENGINEERS, CERTIFICATE OF REGISTRATION #F-000461; TEXAS BOARD OF PROFESSIONAL LAND SURVEYING, CERTIFICATE OF REGISTRATION 100421-00

TWILLIAMS 04/14/2010 - 4:24PM
N:\JOBS\1300-1399\1393-08-087\DWG\1393-08-087-07A.DWG

TEXAS BOARD OF PROFESSIONAL ENGINEERS, CERTIFICATE OF REGISTRATION #F-000461; TEXAS BOARD OF PROFESSIONAL LAND SURVEYING, CERTIFICATE OF REGISTRATION 100421-00

PI NO: 1393-08-087 DWG NO: 1393-08-087-07A.DWG

OWNER'S CERTIFICATE
(Public Dedication)

STATE OF TEXAS
COUNTY OF ROCKWALL

WHEREAS, Metroplex Acquisition Fund, LP, Betsy Commercial, Ltd., Stone Creek Balance, Ltd. and Stone Creek SF, Ltd. are the owners of a 24.6420 acre tract of land situated in the W.T. Deweese Survey, Abstract No. 71, City of Rockwall, Rockwall County, Texas; said tract being all of that certain tract of land described as Tract 1 in Special Warranty Deed to Metroplex Acquisition Fund, LP recorded in Instrument No. 2008-00409849 of the Deed Records of Rockwall County, Texas, part of those certain tracts of land described as Tract 1 and Tract 2 in Special Warranty Deeds to Betsy Commercial, Ltd. recorded in Instrument No. 2007-00375397 of the said Deed Records, part of that certain tract of land described in Special Warranty Deeds to Stone Creek Balance, Ltd. recorded in Instrument No. 2007-00375394 of the said Deed Records and part of that certain tract of land described as Phase 2B in Special Warranty Deed to Stone Creek SF, Ltd. recorded in Instrument No. 2007-00375398 of the said Deed Records; said 24.6420 acre tract being more particularly described as follows:

BEGINNING, at a 5/8-inch iron rod with "Carter Burgess" cap found for corner at the north end of a right-of-way corner clip at the intersection of the east right-of-way line of State Highway 205 (a 100-foot wide right-of-way) and the south right-of-way line of F.M. 552 (a variable width right-of-way);

THENCE, North 89 degrees, 09 minutes, 25 seconds East, along the said south line of F.M. 552, at a distance of 789.91 feet passing a 5/8-inch iron rod with "Pogue Eng & Dev" cap found at the northeast corner of said Tract 1, continuing along said south line of F.M. 552, in all a total distance of 889.91 feet to a 5/8-inch iron rod with "Pogue Eng & Dev" cap found for corner; said point also being the northwest corner of that certain tract of land described as Tract 2 in same deed to Metroplex Acquisition Fund, LP;

THENCE, South 00 degrees, 50 minutes, 35 seconds East, departing the said south line of F.M. 552 and along the west line of second referenced Tract 2, at a distance of 232.83 feet passing a 5/8-inch iron rod with "Pogue Eng & Dev" cap found at the southwest corner of second referenced Tract 2, continuing in all a total distance of 715.14 feet to a 5/8-inch iron rod with "Pogue Eng & Dev" cap set at the beginning of a tangent curve to the right;

THENCE, in a southwesterly direction, along said curve to the right, having a central angle of 21 degrees, 03 minutes, 10 seconds, a radius of 650.00 feet, a chord bearing and distance of South 09 degrees, 41 minutes, 00 seconds West, 237.49 feet, an arc distance of 238.84 feet to a 5/8-inch iron rod with "Pogue Eng & Dev" cap set at the end of said curve;

THENCE, South 20 degrees, 12 minutes, 35 seconds West, a distance of 331.81 feet to a 5/8-inch iron rod with "Pogue Eng & Dev" cap set for corner; said point being the beginning of a non-tangent curve to the left;

THENCE, in a northwesterly direction, along said curve to the left, having a central angle of 25 degrees, 22 minutes, 28 seconds, a radius of 550.00 feet, a chord bearing and distance of North 77 degrees, 45 minutes, 43 seconds West, 250.95 feet, an arc distance of 253.18 feet to a 5/8-inch iron rod with "Pogue Eng & Dev" cap set at the end of said curve;

THENCE, South 89 degrees, 03 minutes, 03 seconds West, a distance of 82.76 feet to a 1/2-inch iron rod with "Corwin Emg Inc." cap found for corner; said point being at the south end of the east terminus of Bordeaux Drive (a 100-foot wide right-of-way); said point also being the northeast corner of Lot 17, Block N, Stone Creek Phase I, an addition to the City of Rockwall, Texas according to the plat recorded in Cabinet G, Page 327 of the Plat Records of Rockwall County, Texas;

THENCE, North 00 degrees, 56 minutes, 57 seconds West, along the said east terminus of Bordeaux Drive, a distance of 100.00 feet to a 5/8-inch iron rod with "Pogue Eng & Dev" cap set for corner; said point also being at the north end of said east terminus of Bordeaux Drive;

THENCE, South 89 degrees, 03 minutes, 03 seconds West, departing the said east terminus of Bordeaux Drive and along the north right-of-way line of said Bordeaux Drive, a distance of 459.98 feet to a 5/8-inch iron rod with "Pogue Eng & Dev" cap found for corner at the intersection of the said east line of State Highway 205 and the said north line of Bordeaux Drive; said point also being the southwest corner of said Tract 1;

THENCE, North 00 degrees, 56 minutes, 57 seconds West, departing the said north line of Bordeaux Drive and along the said east line of State Highway 205 and the west line of Tract 1, a distance of 1042.29 feet to a 5/8-inch iron rod with "Carter Burgess" cap found for corner; said point also being the south end of said right-of-way corner clip;

THENCE, North 44 degrees, 58 minutes, 31 seconds East, departing the said east line of State Highway 205 and said west line of Tract 1 and along the said corner clip, a distance of 86.41 feet to the POINT OF BEGINNING;

CONTAINING, 1,073,405 square feet or 24.6420 acres of land, more or less.

SURVEYOR'S CERTIFICATE

NOW, THEREFORE KNOW ALL MEN BY THESE PRESENTS:

THAT I, Roman L. Greyerman, do hereby certify that I prepared this plat from an actual and accurate survey of the land, and that the corner monuments shown thereon were properly placed under my personal supervision.

R. Greyerman 5/28/09
Roman L. Greyerman
Registered Profession Land Surveyor
No. 5864

STATE OF TEXAS
ROMAN L. GREYERMAN
5864
REGISTERED
LAND SURVEYOR

NOW, THEREFORE, KNOW ALL MEN BY THESE PRESENTS:

STATE OF TEXAS
COUNTY OF ROCKWALL
I the undersigned owner of the land shown on this plat, and designated herein as the STONE CREEK RETAIL ADDITION, LOTS 1-6, BLOCK A, subdivision to the City of Rockwall, Texas, and whose name is subscribed hereto, hereby dedicate to the use of the public forever all streets, alleys, parks, water courses, drains, easements and public places thereon shown on the purpose and consideration therein expressed. We further certify that all other parties who have a mortgage or lien interest in the STONE CREEK RETAIL ADDITION, LOTS 1-6, BLOCK A, have been notified and signed this plat.

I understand and do hereby reserve the easement strips shown on this plat for the purposes stated and for the mutual use and accommodation of all utilities desiring to use or using same. We also understand the following;

1. No buildings shall be constructed or placed upon, over, or across the utility easements as described herein.

2. Any public utility shall have the right to remove and keep removed all or part of any buildings, fences, trees, shrubs, or other growths or improvements which in any way endanger or interfere with construction, maintenance or efficiency of their respective system on any of these easement strips; and any public utility shall at all times have the right of ingress or egress to, from and upon the said easement strips for purpose of construction, reconstruction, inspecting, patrolling, maintaining, and either adding to or removing all or part of their respective system without the necessity of, at any time, procuring the permission of anyone.

3. The City of Rockwall will not be responsible for any claims of any nature resulting from or occasioned by the establishment of grade of streets in the subdivision.

4. The developer and subdivision engineer shall bear total responsibility for storm drain improvements.

5. The developer shall be responsible for the necessary facilities to provide drainage patterns and drainage controls such that properties within the drainage area are not adversely affected by storm drainage from the development.

6. No house dwelling unit, or other structure shall be constructed on any lot in this addition by the owner or any other person until the developer and/or owner has complied with all requirements of the Subdivision Regulations of the City of Rockwall regarding improvements with respect to the entire block on the street or streets on which property abuts, including the actual installation of streets with the required base and paving, curb and gutter, water and sewer, drainage structures, storm structures, storm sewers, and alleys, all according to the specifications of the City of Rockwall; or

Until an escrow deposit, sufficient to pay for the cost of such improvements, as determined by the city's engineer and/or city administrator, computed on a private commercial rate basis, has been made with the city secretary, accompanied by an agreement signed by the developer and/or owner, authorizing the city to make such improvements at prevailing private commercial rates, or have the same made by a contractor and pay for the same out of the escrow deposit, should the developer and/or owner fail or refuse to install the required improvements within the time stated in such written agreement, but in no case shall the City be obligated to make such improvements itself. Such deposit may be used by the owner and/or developer as progress payments as the work progresses in making such improvements by making certified requisitions to the city secretary, supported by evidence of work done; or

Until the developer and/or owner files a corporate surety bond with the city secretary in a sum equal to the cost of such improvements for the designated area, guaranteeing the installation thereof within the time stated in the bond, which time shall be fixed by the city council of the City of Rockwall.

I further acknowledge that the dedications and/or exaction's made herein are proportional to the impact of the Subdivision upon the public services required in order that the development will comport with the present and future growth needs of the City. Our successors and assigns hereby waive any claim, damage, or cause of action that We may have as a result of the dedication of exactions made herein.

METROPLEX ACQUISITION FUND, LP
a Texas limited partnership
By: SIX PINES REALTY, L.C.
a Texas limited liability company
its general partner
Ronald G. Gentzler
By: Ronald G. Gentzler, President

STATE OF TEXAS
COUNTY OF DALLAS

Before me, the undersigned authority, on this day personally appeared Ronald G. Gentzler, known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that he executed the same for the purpose and consideration therein stated.

Given upon my hand and seal of office this 29th day of May 2009.
Joanna Contreras
Notary Public in and for the State of Texas
My Commission Expires: _____

JOANNA CONTRERAS
Notary Public, State of Texas
My Commission Expires
August 24, 2011

BETSY COMMERCIAL, LTD., a Texas limited partnership
By: BETSY COMMERCIAL GP Corporation, a Texas corporation, its general partner
By: Richard M. Skorburg, President

STATE OF TEXAS
COUNTY OF DALLAS

Before me, the undersigned authority, on this day personally appeared RICHARD M. SKORBURG, known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that he executed the same for the purpose and consideration therein stated.

Given upon my hand and seal of office this 15th day of June 2009.
Rainelle McDonald
Notary Public in and for the State of Texas
My Commission Expires: 01-09-2011

RAINELLE MCDONALD
Notary Public, State of Texas
My Commission Expires
January 09, 2011

STONE CREEK BALANCE, LTD., a Texas limited partnership
By: STONE CREEK BALANCE GP Corporation, a Texas corporation, its general partner
By: Richard M. Skorburg, President

STATE OF TEXAS
COUNTY OF DALLAS

Before me, the undersigned authority, on this day personally appeared RICHARD M. SKORBURG, known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that he executed the same for the purpose and consideration therein stated.

Given upon my hand and seal of office this 15th day of June 2009.
Rainelle McDonald
Notary Public in and for the State of Texas
My Commission Expires: 01-09-2011

RAINELLE MCDONALD
Notary Public, State of Texas
My Commission Expires
January 09, 2011

STONE CREEK SF, LTD., a Texas limited partnership
By: STONE CREEK SF GP Corporation, a Texas corporation, its general partner
By: Richard M. Skorburg, President

STATE OF TEXAS
COUNTY OF DALLAS

Before me, the undersigned authority, on this day personally appeared RICHARD M. SKORBURG, known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that he executed the same for the purpose and consideration therein stated.

Given upon my hand and seal of office this 15th day of June 2009.
Rainelle McDonald
Notary Public in and for the State of Texas
My Commission Expires: 01-09-2011

RAINELLE MCDONALD
Notary Public, State of Texas
My Commission Expires
January 09, 2011

RECOMMENDED FOR FINAL APPROVAL

Planning and Zoning Commission — 04-14-09 Date

APPROVED

I hereby certify that the above and foregoing plat of an addition to the City of Rockwall, Texas, was approved by the City Council of the City of Rockwall on the 20th day of April 2009.

WITNESS OUR HANDS, this 2nd day of July 2009.
William R. Cecil
Mayor, City of Rockwall
Kristy Ashberry
City Secretary City of Rockwall
Chuck Lee 7-10-09
City of Rockwall Engineer

CITY OF ROCKWALL TEXAS
SEAL

FINAL PLAT
STONE CREEK RETAIL ADDITION
LOTS 1-6, BLOCK A
LOCATED IN THE CITY OF ROCKWALL, TEXAS
AND BEING OUT OF THE
W.T. DEWEESE SURVEY, ABSTRACT NO. 71
ROCKWALL COUNTY, TEXAS

SHEET 4 OF 4

PREPARED FOR:	PREPARED FOR:	PREPARED FOR:	PREPARED FOR:
METROPLEX ACQUISITION FUND, LP 8214 WESTCHESTER, SUITE 850 DALLAS, TEXAS 75225 (214) 343-4477	BETSY COMMERCIAL, LTD. 3838 OAK LAWN AVENUE, SUITE 1212 DALLAS, TEXAS 75219 (214) 522-4945	STONE CREEK BALANCE, LTD. 3838 OAK LAWN AVENUE, SUITE 1212 DALLAS, TEXAS 75219 (214) 522-4945	STONE CREEK SF, LTD. 3838 OAK LAWN AVENUE, SUITE 1212 DALLAS, TEXAS 75219 (214) 522-4945

POGUE ENGINEERING & DEVELOPMENT COMPANY, INC.
1512 BRAY CENTRAL DRIVE, SUITE 100, McKINNEY, TEXAS 75069
(214) 544-8880 PHONE
(214) 544-8882 FAX
www.PogueEngineering.com

P.I. NO:	1393-08-087
DATE:	03-20-2009
SCALE:	1" = 60'
DRAWN BY:	RLG
CHECKED BY:	BEC

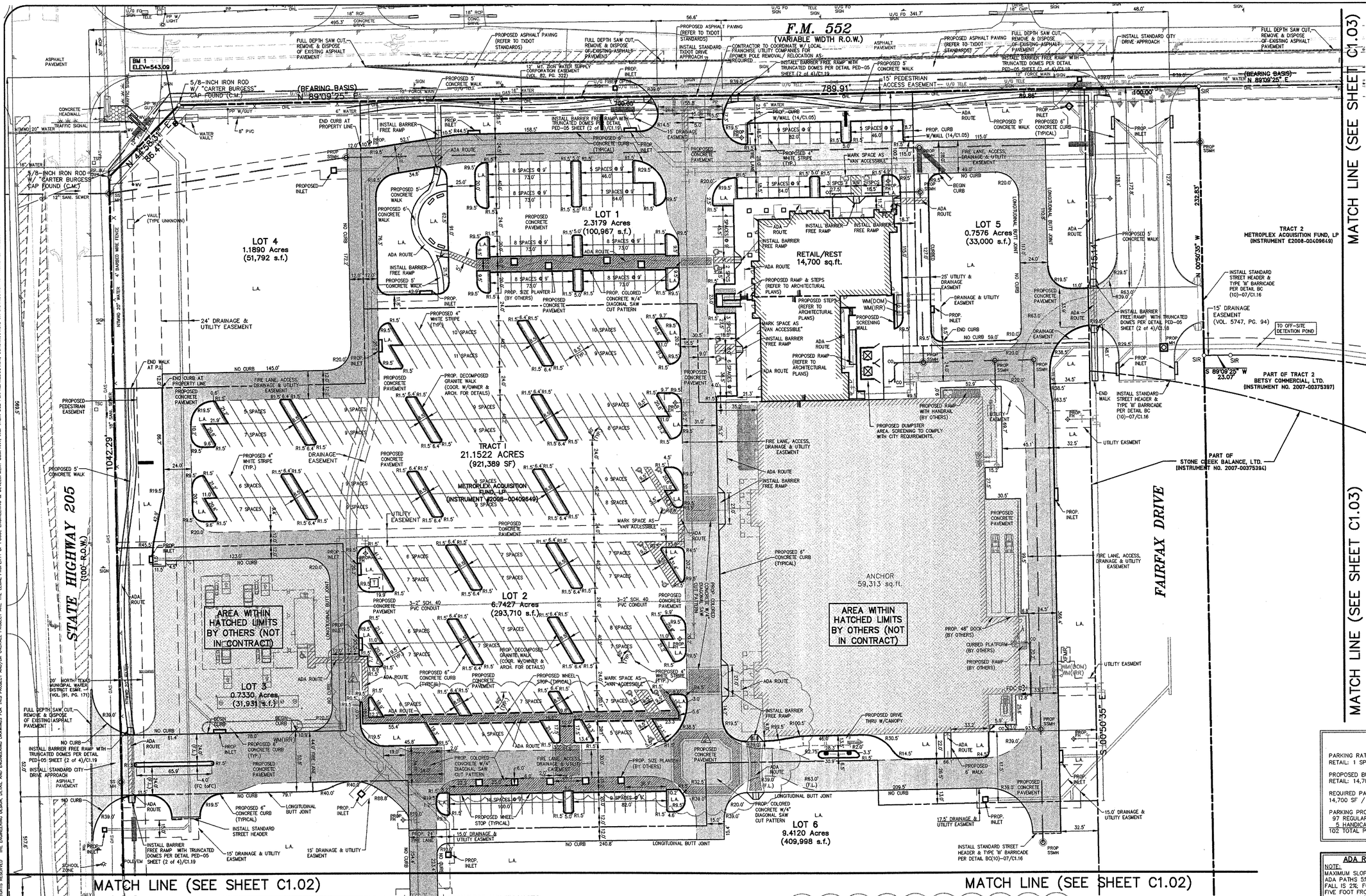
PI NO: 1393-08-087 — H-18 — DWG NO: 1393-08-087-04A.DWG

TEXAS BOARD OF PROFESSIONAL ENGINEERS, CERTIFICATE OF REGISTRATION #F-000461; TEXAS BOARD OF PROFESSIONAL LAND SURVEYING, CERTIFICATE OF REGISTRATION 100421-00

BCOX 05/28/2009 - 11:37AM
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POGUE ENGINEERING & DEVELOPMENT COMPANY, INC. 2008, ALL RIGHTS RESERVED

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PI NO: 1393-08-087
DWG NO: 1393-08-087-07A.DWG
TEXAS BOARD OF PROFESSIONAL ENGINEERS, CERTIFICATE OF REGISTRATION #F-000461; TEXAS BOARD OF PROFESSIONAL LAND SURVEYING, CERTIFICATE OF REGISTRATION 100421-00


F.M. 552
(VARIABLE WIDTH R.O.W.)
STATE HIGHWAY 205
(100'-R.O.W.)
FAIRFAX DRIVE
(BEARING BASIS)
N 89°09'25" E
789.91'
(BEARING BASIS)
N 89°09'25" E
BM 1
ELEV=543.09
5/8-INCH IRON ROD W/ "CARTER BURGESS" CAP FOUND (C.M.)
N 44°58'31" E
86.41'
LOT 1
2.3179 Acres
(100,967 s.f.)
LOT 2
6.7427 Acres
(293,710 s.f.)
LOT 3
0.7330 Acres
(31,931 s.f.)
LOT 4
1.1890 Acres
(51,792 s.f.)
LOT 5
0.7576 Acres
(33,000 s.f.)
LOT 6
9.4120 Acres
(409,998 s.f.)
TRACT I
21.1522 ACRES
(921,389 SF)
METROPLEX ACQUISITION FUND, LP
(INSTRUMENT #2005-00409649)
RETAIL/REST
14,700 sq.ft.
ANCHOR
59,313 sq.ft.
AREA WITHIN HATCHED LIMITS BY OTHERS (NOT IN CONTRACT)
AREA WITHIN HATCHED LIMITS BY OTHERS (NOT IN CONTRACT)
TRACT 2
METROPLEX ACQUISITION FUND, LP
(INSTRUMENT E2008-00409649)
PART OF TRACT 2
BETSY COMMERCIAL, LTD.
(INSTRUMENT NO. 2007-00375397)
PART OF
STONE CREEK BALANCE, LTD.
(INSTRUMENT NO. 2007-00375394)
S 89°09'25" W
23.07'
N 00°50'35" W
715.14'
S 00°50'35" W
1042.29'
MATCH LINE (SEE SHEET C1.03)
MATCH LINE (SEE SHEET C1.02)
MATCH LINE (SEE SHEET C1.02)
24' DRAINAGE & UTILITY EASEMENT
15' DRAINAGE EASEMENT (VOL. 5747, PG. 94)
TO OFF-SITE DETENTION POND
FIRE LANE, ACCESS, DRAINAGE & UTILITY EASEMENT
PROPOSED PEDESTRIAN EASEMENT
PROPOSED DUMPSTER AREA, SCREENING TO COMPLY WITH CITY REQUIREMENTS.
PROPOSED RAMP WITH HANDRAIL (BY OTHERS)
PROPOSED 48" DOCK (BY OTHERS)
CURBED PLATFORM (BY OTHERS)
PROPOSED RAMP (BY OTHERS)
PROPOSED DRIVE THRU W/CANOPY
PROPOSED 6' WALK
PROPOSED STEPS (REFER TO ARCHITECTURAL PLANS)
PROPOSED RAMP & STEPS (REFER TO ARCHITECTURAL PLANS)
PROPOSED RAMP (REFER TO ARCHITECTURAL PLANS)
PROPOSED SCREENING WALL
PROPOSED ASPHALT PAVING (REFER TO TXDOT STANDARDS)
INSTALL STANDARD TXDOT DRIVE APPROACH
INSTALL STANDARD CITY DRIVE APPROACH
INSTALL STANDARD STREET HEADER & TYPE 'III' BARRICADE PER DETAIL BC (10)-07/C1.16
INSTALL STANDARD STREET HEADER & TYPE 'III' BARRICADE PER DETAIL BC(10)-07/C1.16
INSTALL BARRIER FREE RAMP WITH TRUNCATED DOMES PER DETAIL PED-05 SHEET (2 of 4)/C1.19
INSTALL BARRIER FREE RAMP WITH TRUNCATED DOMES PER DETAIL PED-05 SHEET (2 of 4)/C1.18
INSTALL BARRIER FREE RAMP
INSTALL BARRIER FREE RAMP WITH TRUNCATED DOMES PER DETAIL PED-05 SHEET (2 of 4)/C1.19
INSTALL STANDARD CITY DRIVE APPROACH
INSTALL STANDARD STREET HEADER
INSTALL STANDARD STREET HEADER & TYPE 'III' BARRICADE PER DETAIL BC(10)-07/C1.16
CONTRACTOR TO COORDINATE W/ LOCAL FRANCHISE UTILITY COMPANIES FOR POWER POLE REMOVAL/ RELOCATION AS REQUIRED
FULL DEPTH SAW CUT, REMOVE & DISPOSE OF EXISTING ASPHALT PAVEMENT
PROPOSED 5' CONCRETE WALK
PROPOSED 6' CONCRETE CURB (TYPICAL)
PROPOSED 6" CONCRETE CURB (TYPICAL)
PROPOSED 5' CONCRETE WALK
PROPOSED 6' CONCRETE WALK
PROPOSED 8' CONCRETE WALK
PROPOSED CONCRETE PAVEMENT
PROPOSED 4" WHITE STRIPE (TYP.)
PROPOSED WHEEL STOP (TYPICAL)
PROP. CURB W/WALL (14/C1.05)
PROP. COLORED CONCRETE W/4' DIAGONAL SAW CUT PATTERN
PROP. DECOMPOSED GRANITE WALK (COOR. W/OWNER & ARCH. FOR DETAILS)
PROP. SIZE PLANTER (BY OTHERS)
MARK SPACE AS "VAN ACCESSIBLE"
LONGITUDINAL BUTT JOINT
NO CURB
BEGIN CURB
END CURB AT PROPERTY LINE
END WALK AT P.I.
END CURB AT PROPERTY LINE
UTILITY EASEMENT
DRAINAGE EASEMENT
DRAINAGE & UTILITY EASEMENT
15' PEDESTRIAN ACCESS EASEMENT
25' UTILITY & DRAINAGE EASEMENT
15' DRAINAGE & UTILITY EASEMENT
17.5' DRAINAGE & UTILITY EASEMENT
12" MT. ZION WATER SUPPLY CORPORATION EASEMENT (VOL. 87, PG. 327)
20' NORTH TEXAS MUNICIPAL WATER DISTRICT ESMT. (VOL. 191, PG. 171)
4' BARBED WIRE FENCE
NTMWD 20" WATER
16" WATER
12" SANI. SEWER
8" SANITARY SEWER
6" WATER
8" PVC
3-2" SCH. 40 PVC CONDUIT
PROP. 48" STORM SEWER
PROP. 24" STORM SEWER
PROP. 18" RCP
PROP. 15" RCP
PROP. 12" RCP
PROP. 6" RCP
PROP. 4" RCP
PROP. INLET
PROP. SSMH
PROP. MH
PROP. FDC
PROP. 48" DOCK
PROP. 24" THE LANE

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TEXAS BOARD OF PROFESSIONAL ENGINEERS, CERTIFICATE OF REGISTRATION #F-00486; TEXAS BOARD OF PROFESSIONAL LAND SURVEYING, CERTIFICATE OF REGISTRATION 100421-00

STONE CREEK RETAIL – ROCKWALL

MATCH LINE (SEE SHEET C1.01)

MATCH LINE (SEE SHEET C1.01)

STATE HIGHWAY 205
(100' R.O.W.)

SCHOOL ZONE

N 00°56'57" W 245'

5'4/6

18" SAN. SEWER

OHL

GAS

4' BARBED WIRE FENCE

WTR

NTMWD 24" WATER

INLET

SS MH

SIGN

INLET RIM 551.99 INV EX. 12" WATER 519.82

S 89°03'03" W 542.74'

ASPHALT PAVEMENT

CONCRETE PAVEMENT

8" SAN. SEWER

INSTALL STANDARD CITY DRIVE APPROACH

BORDEAUX DRIVE
(100' R.O.W.)

CONCRETE PAVEMENT

10' U.E.

25'x25' VISIBILITY EASEMENT

LOT 65
OPEN SPACE

LOT 1

LOT 2

LOT 3

BLOCK A
STONE CREEK
PHASE I
(CAB. G, PG. 327)

UTILITY EASEMENT

PROPOSED CONCRETE PAVEMENT

LONGITUDINAL BUTT JOINT NO CURB

254.4'

221.4'

FUTURE LANDSCAPE ISLANDS

PROP. 24' FIRE LANE

LOT 6
9.4120 Acres
(409,998 s.f.)

249.4'

R44.0'

R20.0'

181°47'35"

FIRE LANE, ACCESS & UTILITY EASEMENT

134.2'

291.1'

DRAINAGE & UTILITY EASEMENT

APPROX. LOCATION T.P. & L. CO. ESMT. (VOL. 33, PG. 90) (VOL. 33, PG. 257)

PROP. FH

55.4'

END CURB

DRAINAGE EASEMENT

INSTALL BARRIER FREE RAMP WITH TRUNCATED DOMES PER DETAIL PED-05 SHEET (2 of 4)/C1.19

PROPOSED CONCRETE PAVEMENT

R38.5'

INSTALL BARRIER FREE RAMP WITH TRUNCATED DOMES PER DETAIL PED-05 SHEET (2 of 4)/C1.19

R29.6'

FULL DEPTH SAW CUT, REMOVE & DISPOSE OF EXISTING CONCRETE CURB & GUTTER AS REQUIRED

W.S. REMOVE 21' EX.

MIRAMAR DRIVE
(50' R.O.W.)

LOT 17

LOT 16

LOT 15

BLOCK N
STONE CREEK
PHASE I
(CAB. G, PG. 327)

PART OF
TRACT 1
BETSY COMMERCIAL, LTD.
(INSTRUMENT NO. 2007-00375397)
FILED: APRIL 05, 2007

1/2-INCH IRON ROD
W/ "CORWIN ENG. INC."
CAP FOUND

SIR

Δ=21°03'10"
R=550.00'
L=202.09'
T=102.20'
CB=S 09°41'00" W
CD=200.96'

231.46'

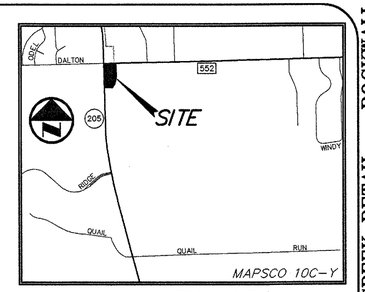
S 20°12'35" W

FAIRFAX DRIVE

PHASE 2B
STONE CREEK SF, LTD. (INSTRUMENT
NO. 2007-00375398)
FILED: APRIL 05, 2007

Δ=16°44'49"
R=650.00'
L=189.99'
T=95.68'
CB=N 82°34'32" W
CD=189.31'

4' BARBED WIRE FENCE



VICINITY MAP
NOT TO SCALE

GRAPHIC SCALE IN FEET
SCALE: 1" = 40'

LEGEND

B	BOLLARD
EM	ELECTRIC METER
PP	POWER POLE
LS	LIGHT STANDARD
WM	WATER METER
WV	WATER VALVE
ICV	IRRIGATION CONTROL VALVE
FH	FIRE HYDRANT
FDC	FIRE DEPARTMENT CONNECTION
CO	CLEAN OUT
MH	MANHOLE
GM	GAS METER
TSC	TRAFFIC SIGNAL CONTROL
TSP	TRAFFIC SIGNAL POLE
SIGN	TRAFFIC SIGN
TELE	TELEPHONE BOX
TV	TV BOX
FP	FLAG POLE
L.A.	LANDSCAPE AREA
	PROPERTY LINE
OHL	O.H. POWER LINES
TEL	U/G TELEPHONE LINES
WATER	U/G WATER LINE
GAS	U/G GAS LINE
	FENCE
500	EXISTING CONTOURS
XXX.XX	EXISTING SPOT GRADES
(C.M.)	CONTROLLING MONUMENT
SIR	5/8-INCH IRON ROD WITH "POGUE ENG & DEV" CAP SET
XXX	PROPOSED CONTOURS
TC XXX.XX G XXX.XX	PROPOSED SPOT GRADES
	PROPOSED EROSION CONTROL
	PROPOSED DRAINAGE DIVIDES

PAVEMENT LEGEND

- STANDARD PAVEMENT
- FIRE LANE PAVEMENT
- DUMPSTER PAD AND APRON
- COLORED CONCRETE W/4' DIAGONAL SAW CUT PATTERN

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...

BENCH MARK LIST:

BENCHMARK #1
SQUARE CUT SET AT SOUTHWESTCORNER OF WATER VAULT LOCATEDED AT THE SOUTHEAST CORNER OF THE INTERSECTION OF THE EAST RIGHT-OF-WAY LINE OF SH 205 AND THE SOUTH RIGHT-OF-WAY LINE OF FM 552.
ELEVATION = 543.09

BENCHMARK #2
CITY OF ROCKWALL MONUMENT (R010) FOUND.
ELEVATION = 524.788

FRANCHISE UTILITY NOTES:
1. TXU ENERGY CONSTRUCTION SERVICES – (800) 711-9112
2. ATMOS ENERGY (GAS) – 903-457-2092 – DINAH WOOD
3. AT&T (PHONE) – 903-457-2092 – DWAYNE WELLS

RECORD DRAWINGS:
IT WAS THE INTENT THAT THE IMPROVEMENTS SHOWN BE CONSTRUCTED ACCORDING TO THESE PLANS AS APPROVED BY THE CITY. THE LINES AND GRADES WERE SET ON THE GROUND FOR CONSTRUCTION ACCORDING TO SAID PLANS. THE CITY INSPECTED THE CONSTRUCTION. THE ENGINEER DID NOT VERIFY LINES OR GRADES AFTER CONSTRUCTION. WE ARE NOT AWARE OF ANY CHANGES OR REVISIONS TO THESE PLANS DURING CONSTRUCTION OTHER THAN THOSE SHOWN.

RANDALL P. POGUE, P.E.
TX LIC. NO. 84780

DATE: APRIL 15, 2010

4

ADA ROUTE
NOTE:
MAXIMUM SLOPE FOR ALL ADA PATHS 5%. MAX. CROSS FALL IS 2% FOR THE FIRST FIVE FOOT FROM THE DOOR A 2% SLOPE (MAX.) MUST BE MAINTAINED

NOTE:
ALL DIMENSIONS ARE FROM BACK OF CURB TO BACK OF CURB, UNLESS OTHERWISE NOTED.

NO.	DATE	REVISION / DESCRIPTION
4	04-15-10	RECORD DRAWINGS
3	02-24-10	ADDED RIGHT TURN LANE ON S.H. 205
2	07-17-09	SANITARY SEWER & ADA ROUTE REVISIONS
1	06-19-09	TXDOT COMMENTS

DESIGN	DRAWN	DATE	SCALE	NOTES
BEC	WTW	05-21-09	AS SHOWN	–

OWNER
METROPLEX ACQUISITION FUND, LP
8214 WESTCHESTER, SUITE 850
DALLAS, TEXAS 75225
MR. GREY STOGNER
(214) 343-4477 PHONE
(214) 340-2029 FAX

DEVELOPER
CRESTVIEW REAL ESTATE, L.L.C.
8214 WESTCHESTER, SUITE 850
DALLAS, TEXAS 75225
MR. GREY STOGNER
(214) 343-4477 PHONE
(214) 340-2029 FAX

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05-21-09

STATE OF TEXAS
BRANDON E. COX
101037
LICENSED
PROFESSIONAL ENGINEER

POGUE ENGINEERING & DEVELOPMENT COMPANY, INC.
1512 BRAY CENTRAL DRIVE
SUITE 100
McKINNEY, TEXAS 75069
(214) 544-8880 PHONE
(214) 544-8882 FAX
www.PogueEngineering.com

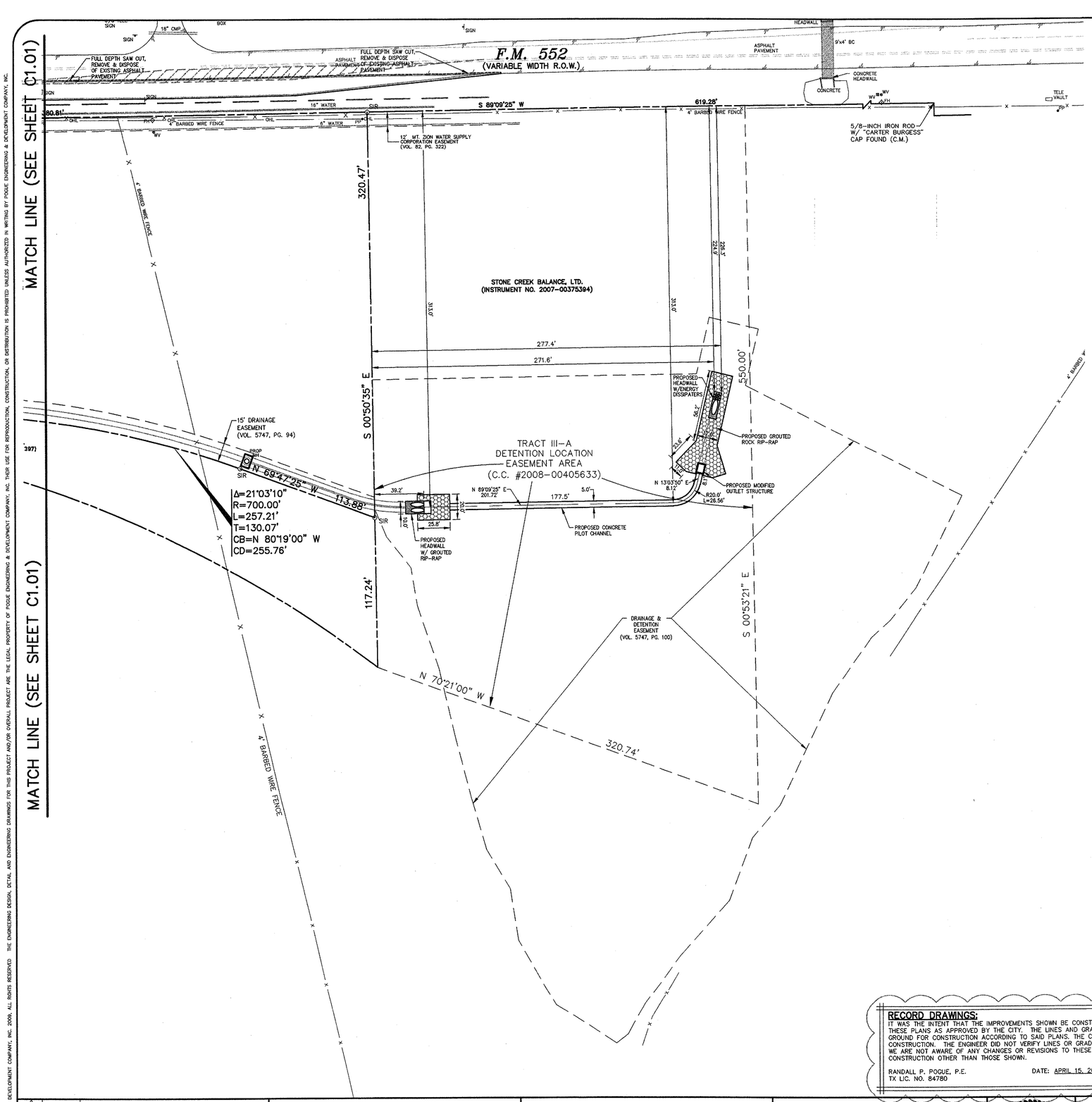
SITE PLAN (2 of 3)

STONE CREEK RETAIL
BLOCK A, LOTS 1-6, STONE CREEK RETAIL ADDITION
W.T. DEWEESE SURVEY, ABSTRACT NO. 71
CITY OF ROCKWALL, TEXAS

SHEET NO. C1.02

PJ NO: 1393-08-087

DWG NO: 1393-08-087-07A.DWG



0 20 40 80 120
GRAPHIC SCALE IN FEET
SCALE: 1" = 40'

LEGEND

B	BOLLARD
EM	ELECTRIC METER
PP	POWER POLE
LS	LIGHT STANDARD
WM	WATER METER
WV	WATER VALVE
ICV	IRRIGATION CONTROL VALVE
FH	FIRE HYDRANT
FDC	FIRE DEPARTMENT CONNECTION
CO	CLEAN OUT
MH	MANHOLE
GM	GAS METER
TSC	TRAFFIC SIGNAL CONTROL
TSP	TRAFFIC SIGNAL POLE
SIGN	TRAFFIC SIGN
TELE	TELEPHONE BOX
TV	TV BOX
FP	FLAG POLE
L.A.	LANDSCAPE AREA
	PROPERTY LINE
OHL	O.H. POWER LINES
TEL	U/G TELEPHONE LINES
WATER	U/G WATER LINE
GAS	U/G GAS LINE
x x	FENCE
500	EXISTING CONTOURS
XXX.XX	EXISTING SPOT GRADES
(C.M.)	CONTROLLING MONUMENT
SIR	5/8-INCH IRON ROD WITH "POGUE ENG & DEV" CAP SET
XXX	PROPOSED CONTOURS
TC XXX.XX G XXX.XX	PROPOSED SPOT GRADES
	PROPOSED EROSION CONTROL
	PROPOSED DRAINAGE DIVIDES

PAVEMENT LEGEND

- STANDARD PAVEMENT
- FIRE LANE PAVEMENT
- DUMPSTER PAD AND APRON
- COLORED CONCRETE W/4' DIAGONAL SAW CUT PATTERN

NOTE:
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BENCH MARK LIST:

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ELEVATION = 543.09

BENCHMARK #2
CITY OF ROCKWALL MONUMENT (R010) FOUND.
ELEVATION = 524.788

RECORD DRAWINGS:
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RANDALL P. POGUE, P.E.
TX LIC. NO. 84780
DATE: APRIL 15, 2010 (4)

ADA ROUTE
NOTE:
MAXIMUM SLOPE FOR ALL ADA PATHS 5%, MAX. CROSS FALL IS 2% FOR THE FIRST FIVE FOOT FROM THE DOOR. A 2% SLOPE (MAX.) MUST BE MAINTAINED

FRANCHISE UTILITY NOTES:
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2. ATMOS ENERGY (GAS) – 903-457-2092 – DINAH WOOD
3. AT&T (PHONE) – 903-457-2092 – DWAYNE WELLS

CAUTION!!!
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TEXAS ONE CALL SYSTEMS
1-800-245-4545
LONE STAR NOTIFICATION CENTER
1-800-669-8344 EXT. 5
BEFORE YOU DIG...

NO.	DATE	REVISION / DESCRIPTION
4	04-15-10	RECORD DRAWINGS
3	02-24-10	ADDED RIGHT TURN LANE ON S.H. 205
2	07-17-09	SANITARY SEWER & ADA ROUTE REVISIONS
1	06-19-09	TXDOT COMMENTS

DESIGN	DRAWN	DATE	SCALE	NOTES
BEC	WTW	05-21-09	AS SHOWN	–

OWNER
METROPLEX ACQUISITION FUND, LP
8214 WESTCHESTER, SUITE 850
DALLAS, TEXAS 75225
MR. GREY STOGNER
(214) 343-4477 PHONE
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DALLAS, TEXAS 75225
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Brandon E. Cox 05-21-09

STATE OF TEXAS
BRANDON E. COX
101037
LICENSED PROFESSIONAL ENGINEER

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1512 BRAY CENTRAL DRIVE
SUITE 100
McKINNEY, TEXAS 75069
(214) 544-8880 PHONE
(214) 544-8882 FAX
www.PogueEngineering.com

SITE PLAN (3 of 3)

SHEET NO. C1.03

STONE CREEK RETAIL
BLOCK A, LOTS 1-6, STONE CREEK RETAIL ADDITION
W.T. DEWEESE SURVEY, ABSTRACT NO. 71
CITY OF ROCKWALL, TEXAS

PI NO: 1393-08-087
DWG NO: 1393-08-087-07A.DWG

STONE CREEK RETAIL – ROCKWALL
100421-00

TEXAS BOARD OF PROFESSIONAL ENGINEERS, CERTIFICATE OF REGISTRATION #F-000461; TEXAS BOARD OF PROFESSIONAL LAND SURVEYING, CERTIFICATE OF REGISTRATION 100421-00

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TWILLIAMS 04/29/2010 - 3:40PM
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HORIZONTAL SCALE: 1" = 40'
0 40 80 120
VERTICAL SCALE: 1" = 5'
0 5 10 15
GRAPHIC SCALE IN FEET

END STA: 12+98.79
OFFSET: 39.50 L&R

P.T. STA: 10+75.60
OFFSET: 39.50 L&R

P.C. STA: 8+55.14
OFFSET: 39.50 L&R

P.T. STA: 6+72.32
OFFSET: 39.50 L&R

P.R.C. STA: 6+07.11
OFFSET: 31.64 L&R
TC=548.61

P.C. STA: 5+47.84
OFFSET: 24.50 L&R
TC=548.16

END STA: 3+92.83
OFFSET: 24.50 L&R
TC=546.61

PROPOSED CONCRETE PAVEMENT

PROFILE GRADE LINE

FAIRFAX DRIVE

INSTALL STANDARD STREET HEADER & TYPE III BARRICADE

ADA ROUTE

C.R. STA: 3+72.83
OFFSET: 24.50 R
TC=546.41

C.R. STA: 3+45.12
OFFSET: 50.00 R
TC=546.63

C.R. STA: 3+12.06
OFFSET: 50.00 R
TC=546.30

C.R. STA: 1+63.74
OFFSET: 24.50 R
TC=543.80
TP=543.30

C.R. STA: 1+24.74
OFFSET: 63.00 R
TP=543.54

BEGIN TYPICAL SECTION
STA: 2+23.87
OFFSET: 24.50 R
TC=544.92

C.I. STA: 1+69.98
OFFSET: 24.50 R
TC=543.92

R=30.0' (NO CURB)

INSTALL BARRIER FREE RAMP WITH TRUNCATED DOMES PER DETAIL PED-05 SHEET (2 of 4)/C1.19

P.I. STA: 1+24.93
OFFSET: 24.50 R
TP=542.98

STA: 1+25.09
CENTER LINE
TP=542.65

P.I. STA: 1+25.25
OFFSET: 24.50 L
TP=542.34

C.R. STA: 3+72.83
OFFSET: 24.50 L
TC=546.41

C.R. STA: 3+45.12
OFFSET: 50.00 L
TC=546.63

15' DRAINAGE EASEMENT (VOL 5747, PG 94)

C.R. STA: 3+12.06
OFFSET: 50.00 L
TC=546.30

C.I. STA: 1+69.98
OFFSET: 24.50 L
TC=543.98

C.R. STA: 1+64.48
OFFSET: 24.50 L
TC=543.44
TP=542.94

CROWN STA: 1+64.11
CENTER LINE
TP=543.43

C.R. STA: 1+25.48
OFFSET: 63.16 L
TP=541.82

F.M. 552
(VARIABLE WIDTH R.O.W.)

STONE CREEK RETAIL - ROCKWALL

LEGEND

B.	BOLLARD
EM	ELECTRIC METER
PP	POWER POLE
LS	LIGHT STANDARD
WM	WATER METER
WV	WATER VALVE
ICV	IRRIGATION CONTROL VALVE
FH	FIRE HYDRANT
FDC	FIRE DEPT CONNECTION
CO	CLEAN OUT
MH	MANHOLE
GM	GAS METER
TSC	TRAFFIC SIGNAL CONTROL
TSP	TRAFFIC SIGNAL POLE
SIGN	TRAFFIC SIGN
TELE	TELEPHONE BOX
TV	TV BOX
FP	FLAG POLE
L.A.	LANDSCAPE AREA
	PROPERTY LINE
OHL	O.H. POWER LINES
TEL	U/G TELEPHONE LINES
WATER	U/G WATER LINE
GAS	U/G GAS LINE
	FENCE
500	EXISTING CONTOURS
XXX.XX	EXISTING SPOT GRADES
(C.M.)	CONTROLLING MONUMENT
SIR	5/8-INCH IRON ROD WITH "POGUE ENG & DEV" CAP SET

RECORD DRAWINGS:
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RANDALL P. POGUE, P.E.
TX LIC. NO. 84780
DATE: APRIL 15, 2010
4

ADA ROUTE
NOTE:
MAXIMUM SLOPE FOR ALL ADA PATHS 5% MAX. CROSS FALL IS 2% FOR THE FIRST FIVE FOOT FROM THE DOOR A 2% SLOPE (MAX.) MUST BE MAINTAINED

NOTE:
ALL DIMENSIONS ARE FROM BACK OF CURB TO BACK OF CURB, UNLESS OTHERWISE NOTED.

NOTE:
CONTRACTOR TO CONSTRUCT LAYDOWN CURB FOR BARRIER FREE RAMPS AT ALL INTERSECTIONS IN ACCORDANCE WITH ADA AND CITY STANDARDS. LOT DEVELOPER SHOULD BE RESPONSIBLE FOR RAMPS AND SIDEWALKS UNLESS OTHERWISE NOTED.

FRANCHISE UTILITY NOTES:
1. TXU ENERGY CONSTRUCTION SERVICES – (800) 711-9112
2. ATMOS ENERGY (GAS) – 903-457-2092 – DINAH WOOD
3. AT&T (PHONE) – 903-457-2092 – DWAYNE WELLS

BENCH MARK LIST:
BENCHMARK #1
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ELEVATION = 543.09

BENCHMARK #2
CITY OF ROCKWALL MONUMENT (R010) FOUND.
ELEVATION = 524.788

CAUTION!!!
EXISTING UNDERGROUND AND OVERHEAD LINES EXIST IN THIS AREA. COORDINATE WITH LOCAL FRANCHISE UTILITY COMPANIES FOR LOWERING AS REQUIRED.

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:
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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...

HIGH POINT ELEV = 556.49
HIGH POINT STA = 11+87.11
PVI STA = 11+70.70
PVI ELEV = 556.95
A.D. = -2.56
K = 58.59
150.0' VC

EVCS: 12+45.70
EVCE: 556.20
BVCS: 10+96.70
BVCE: 555.78

-1.00%
1.56%
1.00%
2.00% (L)
1.96% (R)
1.97% (L)

PHASE 1 PROPOSED GRADE 39.5' RIGHT
PHASE 1 PROPOSED GRADE 39.5' LEFT
PROPOSED TOP OF CURB 39.5' LEFT AND RIGHT
EXISTING GROUND 39.5' RIGHT
EXISTING GROUND AT THE CENTER LINE
EXISTING GROUND 39.5' LEFT

BEGIN TYPICAL SECTION STA: 2+23.87 OFFSET: 38.50' L&R
END STA: 3+92.83 OFFSET: 38.50' L&R
P.V.I. STA: 11+26.35 OFFSET: 38.50' L
P.V.I. STA: 11+24.63 OFFSET: 38.50' R
BEGIN STA: 11+11.12 OFFSET: 38.50' L
BEGIN STA: 11+11.04 OFFSET: 38.50' R

TC=555.67 TC=555.47 TC=552.03 TC=549.17 TC=548.98
TP=542.65 TP=542.15 TP=543.63 TP=543.13 TP=542.63 TP=542.13 TP=543.90 TP=543.40

FAIRFAX DRIVE

NO.	DATE	REVISION / DESCRIPTION
4	04-15-10	RECORD DRAWINGS
3	02-24-10	ADDED RIGHT TURN LANE ON S.H. 205
2	07-17-09	SANITARY SEWER & ADA ROUTE REVISIONS
1	06-19-09	TXDOT COMMENTS

DESIGN	DRAWN	DATE	SCALE	NOTES
BEC	WTW	05-21-09	AS SHOWN	–

OWNER
METROPLEX ACQUISITION FUND, LP
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Brandon E. Cox 05-21-09

STATE OF TEXAS
BRANDON E. COX
101037
LICENSED
PROFESSIONAL ENGINEER

POGUE ENGINEERING & DEVELOPMENT COMPANY, INC.
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PAVING PLAN & PROFILE

STONE CREEK RETAIL
BLOCK A, LOTS 1-6, STONE CREEK RETAIL ADDITION
W.T. DEWEESE SURVEY, ABSTRACT NO. 71
CITY OF ROCKWALL, TEXAS

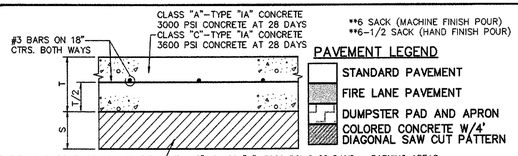
SHEET NO. C1.04

PI NO: 1393-08-087
DWG NO: 1393-08-087-07A.DWG

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TEXAS BOARD OF PROFESSIONAL ENGINEERS, CERTIFICATE OF REGISTRATION #F-000481; TEXAS BOARD OF PROFESSIONAL LAND SURVEYING, CERTIFICATE OF REGISTRATION 100421-00

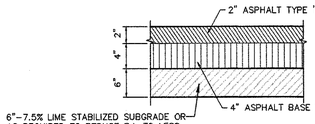


*PER GEOTECHNICAL REPORT, LIME STABILIZATION IS NOT RECOMMENDED.

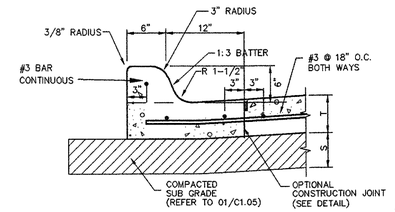
USE CITY OF ROCKWALL STANDARDS

*** NOT FOR CITY STREETS (REFER TO C1.06)**

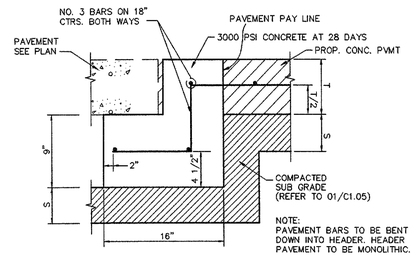
01 C1.05 PAVEMENT SECTION
NOT TO SCALE



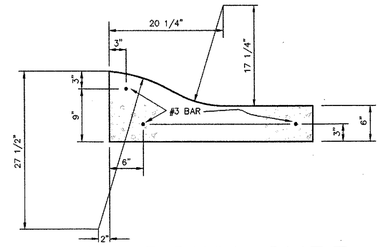
02 C1.05 TXDOT ASPHALT PAVEMENT SECTION DETAIL
NOT TO SCALE



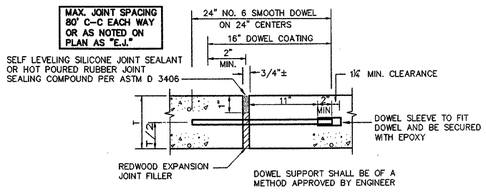
03 C1.05 CONCRETE CURB
NOT TO SCALE



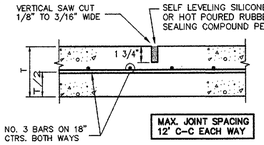
04 C1.05 STREET HEADER
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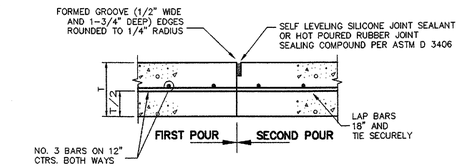
05 C1.05 LAY DOWN CURB
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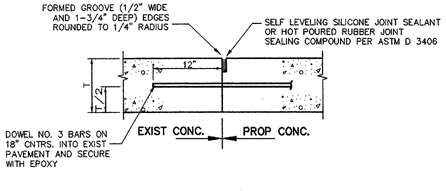
06 C1.05 EXPANSION JOINT
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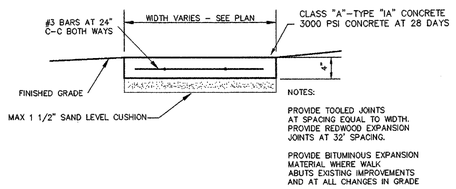
07 C1.05 SAWED DUMMY JOINT
NOT TO SCALE



08 C1.05 CONSTRUCTION JOINT
NOT TO SCALE

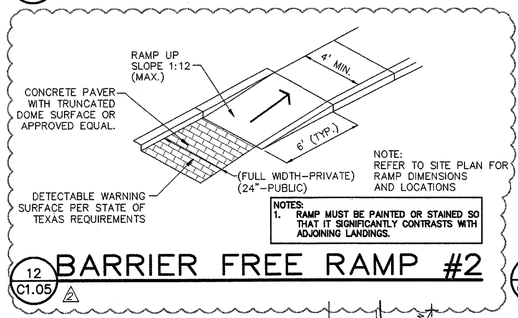


09 C1.05 PAVEMENT CONNECTION
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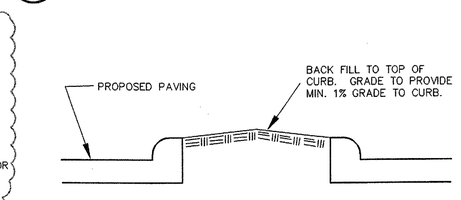


10 C1.05 CONCRETE SIDEWALK
NOT TO SCALE

11 C1.05 NOT USED
NOT TO SCALE

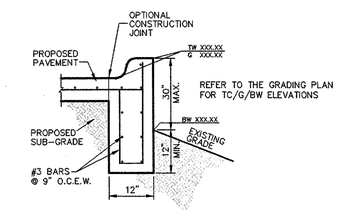


12 C1.05 BARRIER FREE RAMP #2
NOT TO SCALE



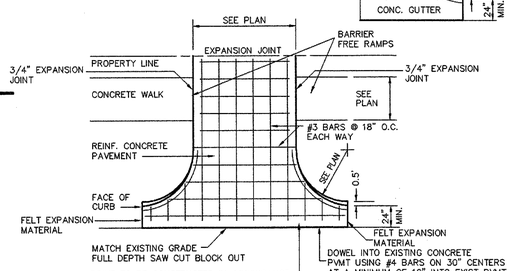
13 C1.05 ISLAND BACK FILL
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14 C1.05 NOT USED
NOT TO SCALE

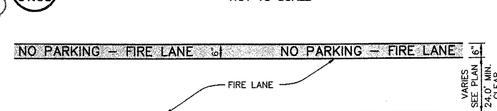


15 C1.05 NOT USED
NOT TO SCALE

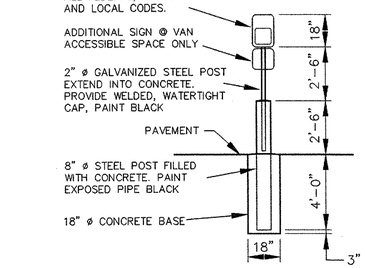
16 C1.05 NOT USED
NOT TO SCALE



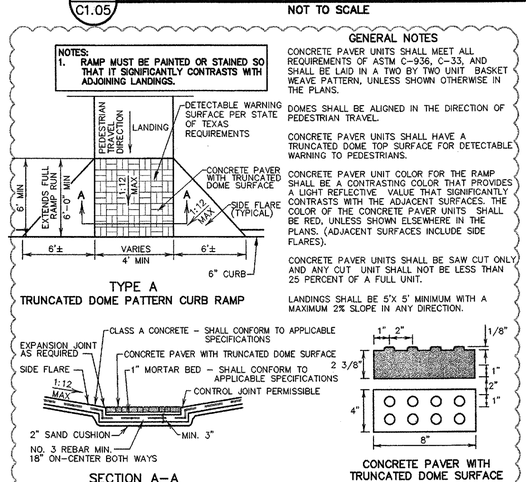
18 C1.05 DRIVEWAY APPROACH
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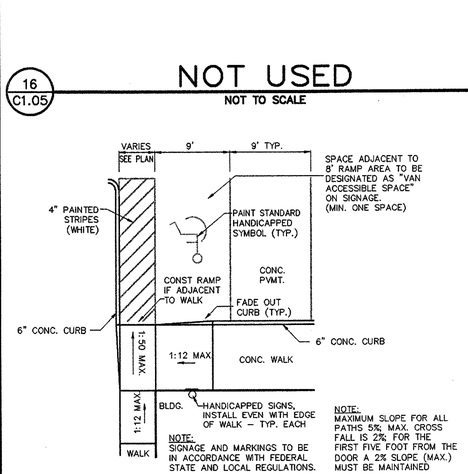
21 C1.05 FIRE LANE STRIPING
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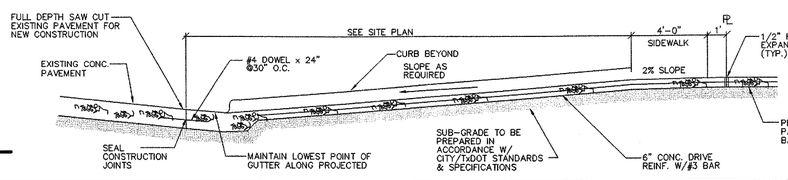
22 C1.05 HANDICAPPED SIGN
NOT TO SCALE



23 C1.05 BARRIER FREE RAMP
NOT TO SCALE



17 C1.05 HANDICAPPED PARKING
NOT TO SCALE



20 C1.05 DRIVE CROSS SECTION
NOT TO SCALE

RECORD DRAWINGS:
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RANDALL P. POGUE, P.E. TX LIC. NO. 84780 — DATE: APRIL 15, 2010 (4)

USE CITY OF ROCKWALL AND NCTCOG 3RD EDITION STANDARDS.

THIS STANDARD DETAIL SHEET DOES NOT APPLY TO ANY WORK WITHIN STATE RIGHT OF WAY.

NO.	DATE	REVISION / DESCRIPTION
4	04-15-10	RECORD DRAWINGS
3	02-24-10	ADDED RIGHT TURN LANE ON S.H. 205
2	07-17-09	SANITARY SEWER & ADA ROUTE REVISIONS
1	06-19-09	TXDOT COMMENTS

DESIGN	DRAWN	DATE	SCALE	NOTES
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STATE OF TEXAS — BRANDON E. COX — 101037 — LICENSED PROFESSIONAL ENGINEER

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STANDARD DETAILS SHEET (1/2)

STONE CREEK RETAIL
BLOCK A, LOTS 1-6, STONE CREEK RETAIL ADDITION
W.T. DEWEESE SURVEY, ABSTRACT NO. 71
CITY OF ROCKWALL, TEXAS

SHEET NO. C1.05

PI NO: 1393-08-087 DWG NO: 1393-08-087-07A.DWG

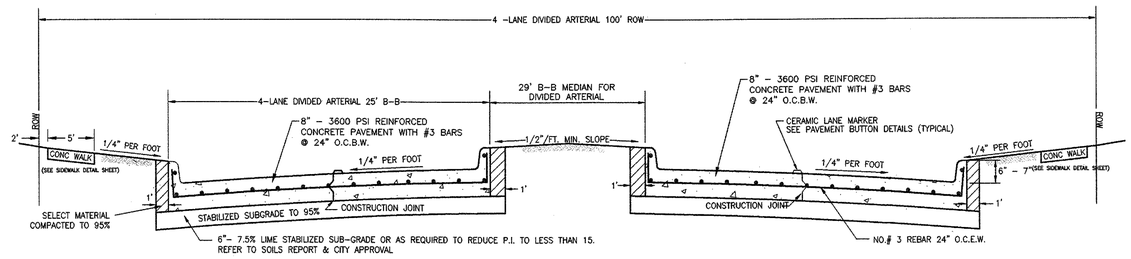
STONE CREEK RETAIL - ROCKWALL

TEXAS BOARD OF PROFESSIONAL ENGINEERS, CERTIFICATE OF REGISTRATION #F-000461; TEXAS BOARD OF PROFESSIONAL LAND SURVEYING, CERTIFICATE OF REGISTRATION 100423-00

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DIVIDED ROADWAY SECTION

01 C1.06

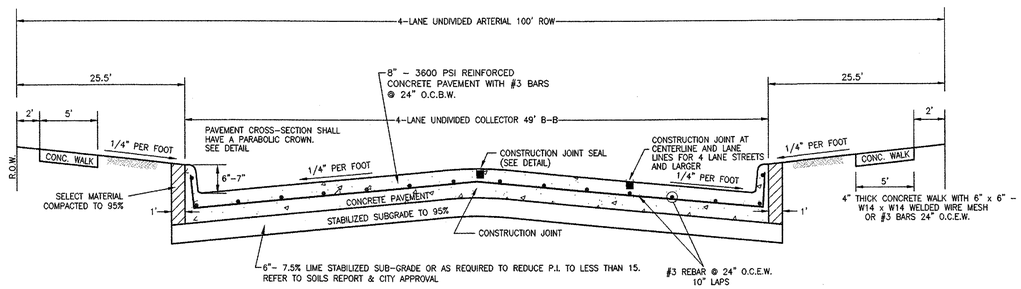
FUTURE ROADWAY SECTION

NOT TO SCALE

NOTES:
1. ALL REINFORCING STEEL IS TO CONFORM TO ASTM NO. A-15-54T AND A-305-53T.
2. THE MAXIMUM WIDTH BETWEEN LONGITUDINAL JOINTS SHALL NOT EXCEED 15'.
3. THE SURFACE OF THE COMPACTED SUBGRADE MUST BE CURED FOR A MINIMUM OF 48 HOURS (TO BE DETERMINED BY THE CONSTRUCTION INSPECTOR) AND KEPT MOIST AT ALL TIMES.

SEE ADDITIONAL PAVING NOTES ON THIS SHEET.

**6 SACK (MACHINE FINISH POUR)
**6-1/2 SACK (HAND FINISH POUR)



UNDIVIDED ROADWAY SECTION

02 C1.06

ROADWAY SECTION

NOT TO SCALE

NOTES:
1. ALL REINFORCING STEEL IS TO CONFORM TO ASTM NO. A-15-54T AND A-305-53T.
2. THE MAXIMUM WIDTH BETWEEN LONGITUDINAL JOINTS SHALL NOT EXCEED 15'.
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RANDALL P. POGUE, P.E.
TX LIC. NO. 84780

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Brandon E. Cox 05-21-09

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STANDARD DETAILS SHEET (2/2)

STONE CREEK RETAIL
BLOCK A, LOTS 1-6, STONE CREEK RETAIL ADDITION
W.T. DEWEESE SURVEY, ABSTRACT NO. 71
CITY OF ROCKWALL, TEXAS

SHEET NO. C1.06

PI NO: 1393-08-087

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DISCLAIMER

Barricade and Construction (BC) Standard Sheets General Notes:

1. The Barricade and Construction Standard Sheets (BC sheets) are intended to show typical examples for placement of temporary traffic control devices, construction pavement markings, and typical work zone signs. The information contained in these sheets meet or exceed the requirements shown in the "Texas Manual on Uniform Traffic Control Devices" (TMUTCD).
2. The development and design of the Traffic Control Plan (TCP) is the responsibility of the Engineer.
3. The Contractor may propose changes to the TCP that are signed and sealed by a licensed professional engineer for approval. The Engineer may develop, sign and seal Contractor proposed changes.
4. The Contractor is responsible for installing and maintaining the traffic control devices as shown in the plans. The Contractor may not move or change the approximate location of any device without the approval of the Engineer.
5. Geometric design of lane shifts and detours should, when possible, meet the applicable design criteria contained in manuals such as the American Association of State Highway and Transportation Officials (AASHTO), "A Policy on Geometric Design of Highways and Streets", the TxDOT "Roadway Design Manual" or engineering judgment.
6. When projects abut, the Engineer(s) may omit the END ROAD WORK, TRAFFIC FINES DOUBLE, and other advance warning signs if the signing would be redundant and the work areas appear continuous to the motorists. If the adjacent project is completed first, the Contractor shall erect the necessary warning signs as shown on these sheets, the TCP sheets or as directed by the Engineer. The BEGIN ROAD WORK NEXT X MILES sign shall be revised to show appropriate work zone distance.
7. The Engineer may require duplicate warning signs on the median side of divided highways where median width will permit and traffic volumes justify the signing.
8. All signs shall be constructed in accordance with the details found in the "Standard Highway Sign Designs for Texas," latest edition. Sign details not shown in this manual shall be shown in the plans or the Engineer shall provide a detail to the Contractor before the sign is manufactured.
9. The temporary traffic control devices shown in the illustrations of the BC sheets are examples. As necessary, the Engineer will determine the most appropriate traffic control devices to be used.
10. As shown on BC(2), the OBEY WARNING SIGNS STATE LAW sign and the WORK ZONE TRAFFIC FINES DOUBLE sign with plaque shall be erected in advance of the CSJ limits. The BEGIN ROAD WORK NEXT X MILES, CONTRACTOR and END ROAD WORK signs shall be erected at or near the CSJ limits.
11. Except for devices required by Note 10, traffic control devices should be in place only while work is actually in progress or a definite need exists.
12. The Engineer has the final decision on the location of all traffic control devices.
13. Inactive equipment and work vehicles, including workers' private vehicles must be parked away from travel lanes. They should be as close to the right-of-way line as possible, or located behind a barrier or guardrail, or as approved by the Engineer.

Worker Safety Apparel Notes:

1. Workers on foot who are exposed to traffic or to construction equipment within the right-of-way shall wear high-visibility safety apparel meeting the requirements of ISEA "American National Standard for High-Visibility Apparel" labeled as ANSI 107-2004 standard performance for Class 2 or 3 risk exposure. Class 3 garments should be considered for high traffic volume work areas or night time work.

Only pre-qualified products shall be used. The "Compliant Work Zone Traffic Control Devices List" (CWZTCD) describes prequalified products and their sources and may be found on-line at the web address given below or by contacting:

Texas Department of Transportation
Traffic Operations Division - TE
Phone (512) 416-3134

WEB ADDRESSES FOR REFERENCED DOCUMENTS

Compliant Work Zone Traffic Control Devices List (CWZTCD)
http://www.txdot.gov/publications/traffic.htm

Texas Manual on Uniform Traffic Control Devices (TMUTCD)
http://www.txdot.gov/publications/traffic.htm

Standard Highway Sign Designs for Texas (SHSD)
http://www.txdot.gov/publications/traffic.htm

Traffic Engineering Standard Sheets
http://www.txdot.gov/business/disclaim.htm

Material Producer List
http://www.txdot.gov/business/producer_list.htm

Departmental Material Specifications (DMS)
http://www.txdot.gov/services/construction/material_specifications/

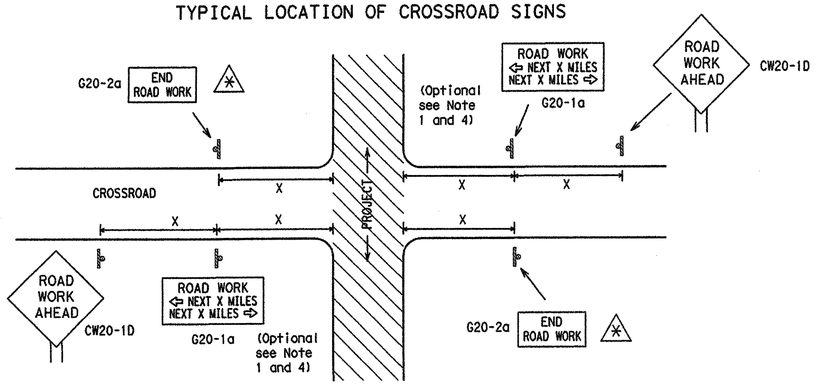
Roadway Design Manual
http://www.txdot.gov/services/general_services/manuals.htm

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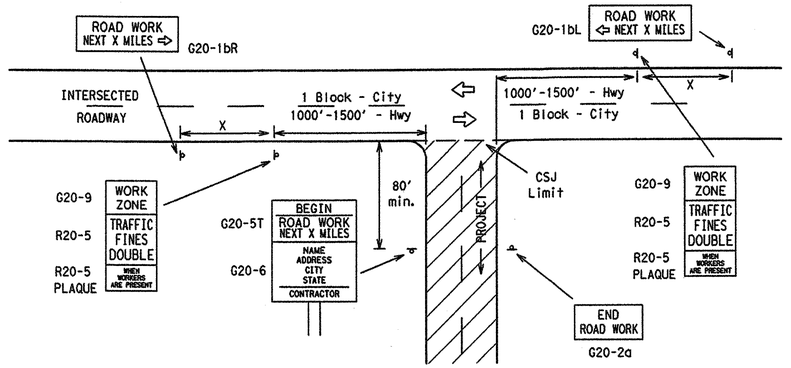
TYPICAL LOCATION OF CROSSROAD SIGNS



✱ May be mounted on back of CW20-1D sign with approval of engineer. (See note 2 below)

1. The typical minimum signing on a crossroad approach should be a CW20-1D ROAD WORK AHEAD sign and a G20-2a END ROAD WORK sign, unless noted otherwise in plans.
2. The Engineer may use the reduced size 36" x 36" ROAD WORK AHEAD (CW20-1D) sign mounted back to back with the reduced size 36" x 18" END ROAD WORK (G20-2a) sign on low volume crossroads (see Note 4 under "Typical Construction Warning Sign Size and Spacing"). See the "Standard Highway Sign Designs for Texas" manual for sign details. The Engineer may omit the advance warning signs on low volume crossroads. The Engineer will determine whether a road is low volume. This information shall be shown in the plans.
3. Based on existing field conditions, the Engineer/Inspector may require additional signs such as FLAGGER AHEAD, LOOSE GRAVEL, or other appropriate signs. When additional signs are required, these signs will be considered part of the minimum requirements. The Engineer/Inspector will determine the proper location and spacing of any sign not shown on the BC sheets, Traffic Control Plan sheets or the Work Zone Standard Sheets.
4. The G20-1a sign shall be required at high volume crossroads to advise motorists of the length of construction in either direction from the intersection. The Engineer will determine whether a roadway is considered high volume.
5. Additional traffic control devices may be shown elsewhere in the plans for higher volume crossroads.
6. When work occurs in the intersection area, appropriate traffic control devices, as shown elsewhere in the plans or as determined by the Engineer/Inspector, shall be in place.

T-INTERSECTION



CSJ LIMITS AT T-INTERSECTION

1. The Engineer will determine the types and location of any additional traffic control devices, such as a flagger and accompanying signs, or other signs, that should be used when work is being performed at or near an intersection.
2. If construction closes the road at a T-intersection the Contractor shall place the G20-6 "Contractor Name" sign behind the Type III Barricades for the road closure (see BC(10) also). The G20-1bL and G20-1bR signs shall be replaced by the detour signing called for in the plans.

TYPICAL CONSTRUCTION WARNING SIGN SIZE AND SPACING [1,5,6]

SIZE

Sign Number or Series	Conventional Road	Expressway/ Freeway
CW20 [4], CW21, CW22, CW23, CW25	48" x 48"	48" x 48"
CW1, CW2, CW7, CW8, CW9, CW11, CW14	36" x 36"	48" x 48"
CW3, CW4, CW5, CW6, CW8-3, CW10, CW12	48" x 48"	48" x 48"

SPACING

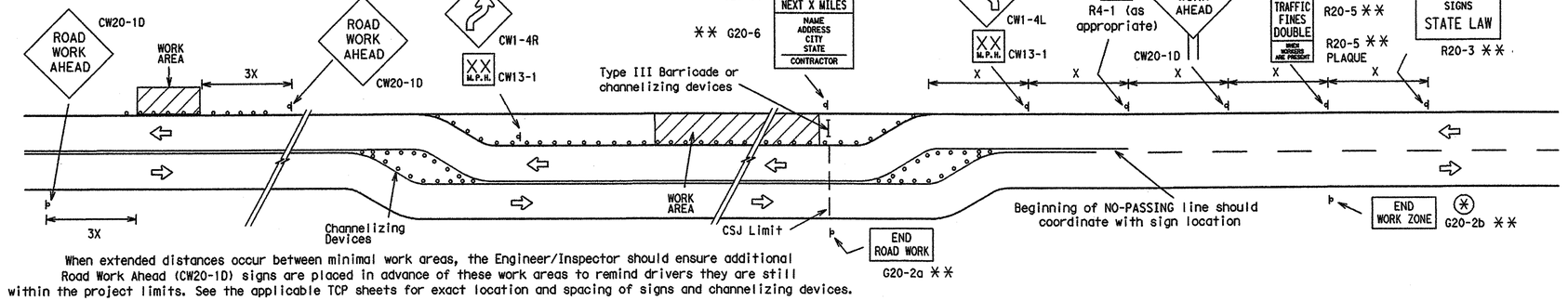
Posted Speed	Sign Spacing "X" Δ
MPH	Feet (Apprx.)
30	120
35	160
40	240
45	320
50	400
55	500 [2]
60	600 [2]
65	700 [2]
70	800 [2]
75	900 [2]
80	1000 [2]
✱	✱ [3]

✱ For typical sign spacings on divided highways, expressways and freeways, see Part 6 of the "Texas Manual on Uniform Traffic Control Devices" (TMUTCD) typical application diagrams or TCP Standard Sheets.
Δ Minimum distance from work area to first Advance Warning sign nearest the work area and/or distance between each additional sign.

General Notes:

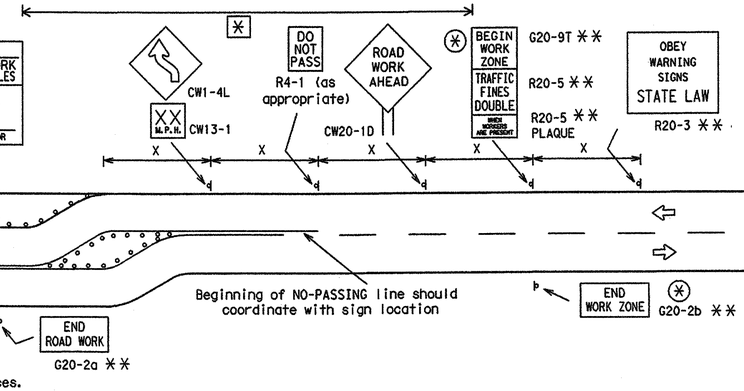
1. Special or larger size signs may be used as necessary.
2. Distance between signs should be increased as required to have 1500 feet advance warning.
3. Distance between signs should be increased as required to have ½ mile or more advance warning.
4. 36" x 36" ROAD WORK AHEAD (CW20-1D) signs may be used on low volume crossroads at the discretion of the Engineer. See Note 2 under "Typical Location of Crossroad Signs".
5. Only diamond shaped warning sign sizes are indicated.
6. See sign size listing in "TMUTCD", Sign Appendix or the "Standard Highway Sign Designs for Texas" manual for complete list of available sign design sizes.

WORK AREAS IN MULTIPLE LOCATIONS WITHIN CSJ LIMITS

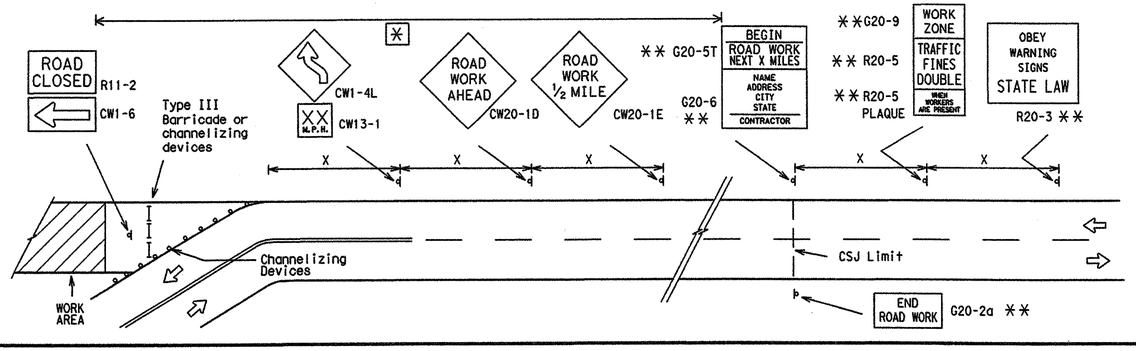


When extended distances occur between minimal work areas, the Engineer/Inspector should ensure additional Road Work Ahead (CW20-1D) signs are placed in advance of these work areas to remind drivers they are still within the project limits. See the applicable TCP sheets for exact location and spacing of signs and channelizing devices.

SAMPLE LAYOUT OF SIGNING FOR WORK BEGINNING AT THE CSJ LIMITS



SAMPLE LAYOUT OF SIGNING FOR WORK BEGINNING DOWNSTREAM OF THE CSJ LIMITS



NOTES

The Contractor shall determine the appropriate distance to be placed on the G20-1 series signs and G20-5T sign for each specific project. This distance shall replace the "X" and shall be rounded to the nearest whole mile with the approval of the Engineer. No decimals shall be used.

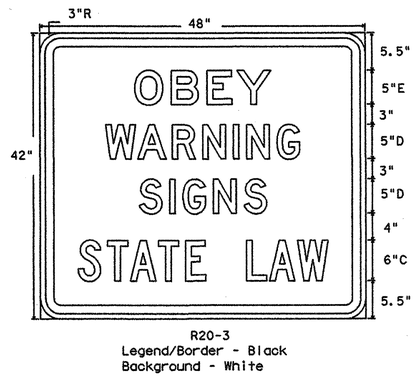
✱ The G20-9T and G20-2b shall be used when advance signs are required outside the CSJ Limits. They inform the motorist of entering or leaving a work zone where traffic fines may double if workers are present.

✱✱ Required CSJ Limit signing. See Note 10 on BC(1).

✱ Area for placement of "ROAD WORK AHEAD" sign and other signs or devices as called for on the Traffic Control Plan.

LEGEND

- ◁ Sign
- ○ ○ Channelizing Devices
- I Type III Barricade
- X See Typical Construction Warning Sign Size and Spacing chart or the TMUTCD for sign spacing requirements.



R20-3
Legend/Border - Black
Background - White

STANDARD PLANS
TEXAS DEPARTMENT OF TRANSPORTATION
Traffic Operations Division

BARRICADE AND CONSTRUCTION PROJECT LIMIT STANDARD

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REVISIONS	STATE DISTRICT	FEDERAL REGION	FEDERAL AID PROJECT	SHEET
9-07		6		

COUNTY	CONTROL	SECTION	JOB	HIGHWAY

102

C1.08

PI NO: 1393-08-087

DWG NO: 1393-08-087-07A.DWG

TEXAS BOARD OF PROFESSIONAL ENGINEERS, CERTIFICATE OF REGISTRATION #F-000481; TEXAS BOARD OF PROFESSIONAL LAND SURVEYING, CERTIFICATE OF REGISTRATION 100421-00

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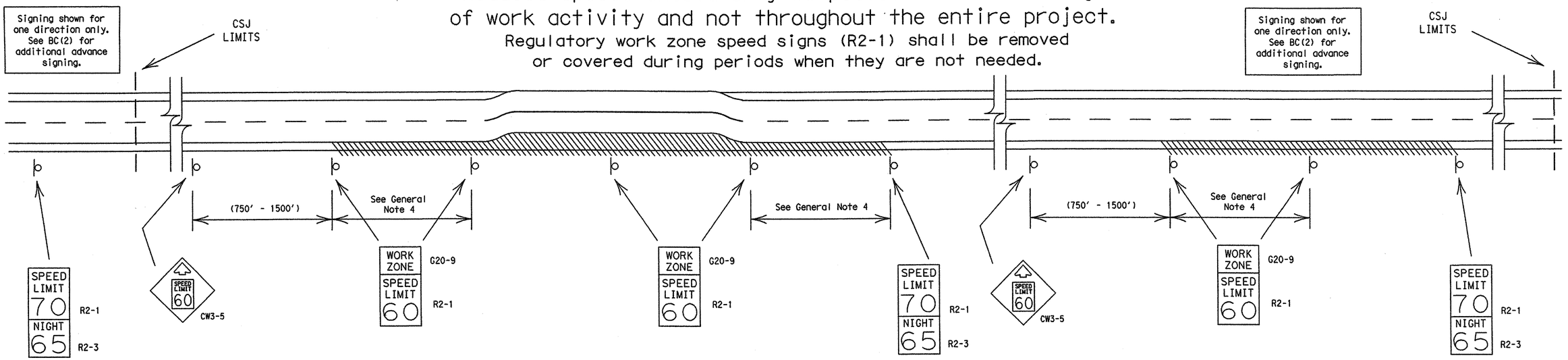
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33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48
49 50 51 52 53 54 55 56 57 58 59 60 61 62 63

TYPICAL APPLICATION OF WORK ZONE SPEED LIMIT SIGNS

Work zone speed limits shall be regulatory, established in accordance with the "Procedures for Establishing Speed Zones," and approved by the Texas Transportation Commission, or by City Ordinance when within Incorporated City Limits.

Reduced speeds should only be posted in the vicinity of work activity and not throughout the entire project.

Regulatory work zone speed signs (R2-1) shall be removed or covered during periods when they are not needed.



GUIDANCE FOR USE:

LONG/INTERMEDIATE TERM WORK ZONE SPEED LIMITS

This type of work zone speed limit should be included on the design of the traffic control plans when restricted geometrics with a lower design speed are present in the work zone and modification of the geometrics to a higher design speed is not feasible.

Long/Intermediate Term Work Zone Speed Limit signs, when approved as described above, should be posted and visible to the motorist when work activity is present. Work activity may also be defined as a change in the roadway that requires a reduced speed for motorists to safely negotiate the work area, including:

a) rough road or damaged pavement surface
b) substantial alteration of roadway geometrics (diversions)
c) construction detours
d) grade
e) width
f) other conditions readily apparent to the driver

As long as any of these conditions exist, the work zone speed limit signs should remain in place.

SHORT TERM WORK ZONE SPEED LIMITS

This type of work zone speed limit should be included on the design of the traffic control plans when workers or equipment are not behind concrete barrier, when work activity is within 15 feet of pavement edge or actually on the pavement.

Short Term Work Zone Speed Limit signs should be posted and visible to the motorists only when work activity is present. When work activity is not present, signs shall be removed or covered.
(See Removing or Covering on BC(4)).

GENERAL NOTES:

1. Regulatory work zone speed limits should be used only for sections of construction projects where speed control is of major importance.
2. Regulatory work zone speed limit signs shall be placed on supports at a 7 foot minimum mounting height.
3. Speed zone signs are illustrated for one direction of travel and are normally posted for each direction of travel.
4. Frequency of work zone speed limit signs should be:
   40 mph and greater 0.2 to 2 miles
   35 mph and less 0.2 to 1 mile
5. Regulatory speed limit signs shall have black legend and border on a white reflective background (See "Reflective Sheeting" on BC(4)).
6. Fabrication, errection and maintenance of the CW3-5 sign, G20-9 plaque and the R2-1 and R2-3 signs shall not be paid for directly, but shall be considered subsidiary to Item 502.
7. Turning signs from view, laying signs over or down will not be allowed, unless otherwise noted.
8. Techniques that may help reduce traffic speeds include but are not limited to:
   A. Law enforcement.
   B. Flagger stationed next to sign.
   C. Portable changeable message sign (PCMS).
   D. Low-power (drone) radar transmitter.
   E. Speed monitor trailers or signs.
9. Speeds shown on details above are for illustration only. Work Zone Speed Limits should only be posted as approved for each project.

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LEVELS DISPLAYED
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
1 7 1 9 2 0 2 1 2 2 3 2 4 2 9 2 6 2 7 2 8 2 9 3 0 3 3 1 5 2
3 3 4 5 3 3 3 7 3 8 3 9 4 0 4 1 4 2 4 3 4 4 5 4 6 4 7 4 8
4 9 5 0 5 1 5 2 5 3 5 4 5 5 5 6 5 7 5 8 5 9 6 0 6 1 6 2 6 3

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STANDARD PLANS
Texas Department of Transportation
Traffic Operations Division

BARRICADE AND CONSTRUCTION WORK ZONE SPEED LIMIT STANDARD

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REVISIONS	STATE DISTRICT	FEDERAL REGION	FEDERAL AID PROJECT	SHEET
9-07		6		

COUNTY	CONTROL	SECTION	JOB	HIGHWAY

103

C1.09

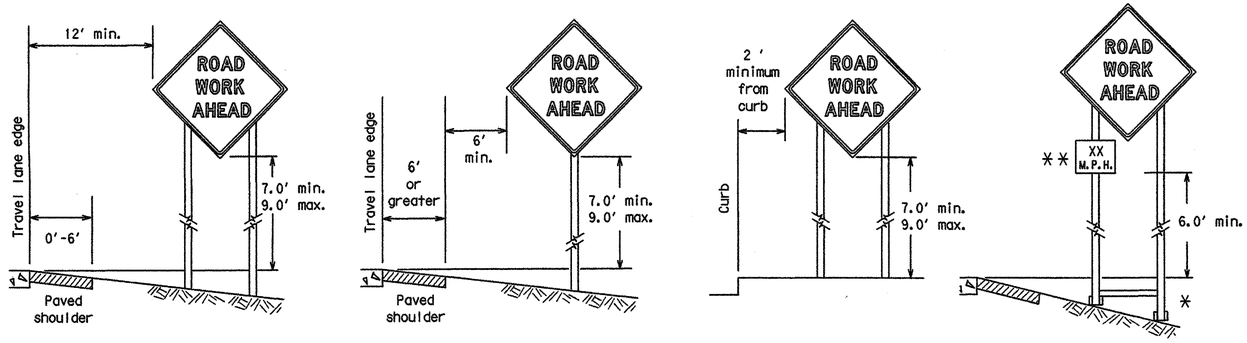
PI NO: 1393-08-087

DWG NO: 1393-08-087-07A.DWG

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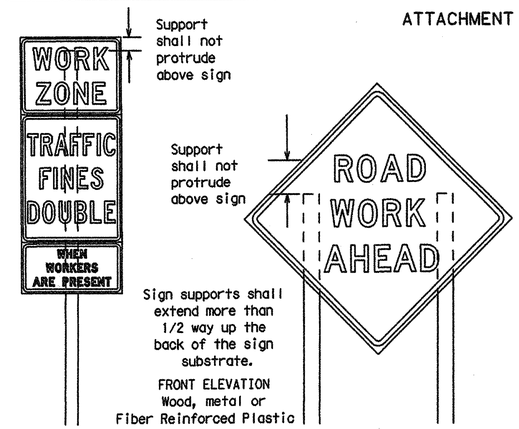
TYPICAL MINIMUM CLEARANCES FOR LONG TERM AND INTERMEDIATE TERM SIGNS



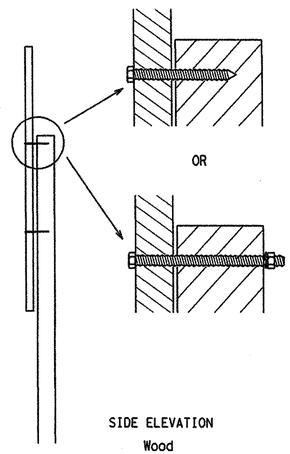
* When placing skid supports on unlevel ground, the leg post lengths must be adjusted so the sign appears straight and plumb. Objects shall NOT be placed under skids as a means of leveling.

** When plaques are placed on dual-leg supports, they should be attached to the upright nearest the travel lane. Supplemental plaques (advisory or distance) should not cover the surface of the parent sign.

ATTACHMENT FOR SIGN SUPPORTS



Splicing embedded perforated square metal tubing in order to extend post height will only be allowed when the splice is made using four bolts, two above and two below the spice point. Splice must be located entirely behind the sign substrate, not near the base of the support. Splice insert lengths should be at least 5 times nominal post size, centered on the splice and of at least the same guage material.



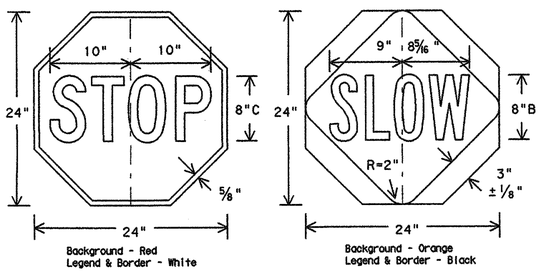
Attachment to wooden supports will be by bolts and nuts or screws. Use TxDOT's or manufacturer's recommended procedures for attaching sign substrates to other types of sign supports

Nails will NOT be allowed.

Each sign shall be attached directly to the sign support. Multiple signs shall not be joined or spliced by any means. Wood supports shall not be extended or repaired by splicing or other means.

STOP/SLOW PADDLES

1. STOP/SLOW paddles are the primary method to control traffic by flaggers. The STOP/SLOW paddle size should be 24" x 24" as detailed below.
2. When used at night, the STOP/SLOW paddle shall be retroreflectorized.
3. STOP/SLOW paddles may be attached to a staff with a minimum length of 6' to the bottom of the sign.
4. Any lights incorporated into the STOP or SLOW paddle faces shall only be as specifically described in Section 6E.03 Hand Signaling Devices in the TMUTCD.



CONTRACTOR REQUIREMENTS FOR MAINTAINING PERMANENT SIGNS WITHIN THE PROJECT LIMITS

1. Permanent signs are used to give notice of traffic laws or regulations, call attention to conditions that are potentially hazardous to traffic operations, show route designations, destinations, directions, distances, services, points of interest, and other geographical, recreational, or cultural information. Drivers proceeding through a work zone need the same, if not better route guidance as normally installed on a roadway without construction.
2. When permanent regulatory or warning signs conflict with work zone conditions, remove or cover the permanent signs until the permanent sign message matches the roadway condition.
3. When existing permanent signs are moved and relocated due to construction purposes, they shall be visible to motorists at all times.
4. If existing signs are to be relocated on their original supports, they shall be installed on crashworthy bases as shown on the SMD Standard sheets. The signs shall meet the required mounting heights shown on the BC Sheets or the SMD Standards. This work should be paid for under the appropriate pay item for relocating existing signs.
5. If permanent signs are to be removed and relocated using temporary supports, the Contractor shall use crashworthy supports as shown on the BC sheets or the CWZTCD. The signs shall meet the required mounting heights shown on the BC Sheets or the SMD Standards during construction. This work should be paid for under the appropriate pay item for relocating existing signs.
6. Any sign or traffic control device that is struck or damaged by the Contractor or his/her construction equipment shall be replaced as soon as possible by the Contractor to ensure proper guidance for the motorists. This will be subsidiary to Item 502.

GENERAL NOTES FOR WORK ZONE SIGNS

1. Contractor shall install and maintain signs in a straight and plumb condition and/or as directed by the Engineer.
2. Wooden sign posts shall be painted white.
3. Barricades shall NOT be used as sign supports.
4. Nails shall NOT be used to attach signs to any support.
5. All signs shall be installed in accordance with the plans or as directed by the Engineer. Signs shall be used to regulate, warn, and guide the traveling public safely through the work zone.
6. The Contractor may furnish either the sign design shown in the plans or in the "Standard Highway Sign Designs for Texas" (SHSD). The Engineer/Inspector may require the Contractor to furnish other work zone signs that are shown in the TMUTCD but may have been omitted from the plans. Any variation in the plans shall be documented by written agreement between the Engineer and the Contractor's Responsible Person. All changes must be documented in writing before being implemented. This can include documenting the changes in the Inspector's TxDOT diary and having both the Inspector and Contractor initial and date the agreed upon changes.
7. The Contractor shall furnish sign supports listed in the "Compliant Work Zone Traffic Control Device List" (CWZTCD). The Contractor shall install the sign support in accordance with the manufacturer's recommendations. If there is a question regarding installation procedures, the Contractor shall furnish the Engineer a copy of the manufacturer's installation recommendations so the Engineer can verify the correct procedures are being followed.
8. The Contractor is responsible for installing signs on approved supports and replacing signs with damaged or cracked substrates and/or damaged or marred reflective sheeting as directed by the Engineer/Inspector.
9. Identification markings may be shown only on the back of the sign substrate. The maximum height of letters and/or company logos used for identification shall be 1 inch.
10. The Contractor shall replace damaged wood posts. New or damaged wood sign posts shall not be spliced.

DURATION OF WORK (as defined by the "Texas Manual on Uniform Traffic Control Devices" Part 6)

1. The types of sign supports, sign mounting height, the size of signs, and the type of sign substrates can vary based on the type of work being performed. The Engineer is responsible for selecting the appropriate size sign for the type of work being performed. The Contractor is responsible for ensuring the sign support, sign mounting height and substrate meets manufacturer's recommendations in regard to crashworthiness and duration of work requirements.
   a. Long-term stationary - work that occupies a location more than 3 days.
   b. Intermediate-term stationary - work that occupies a location more than one daylight period up to 3 days, or nighttime work lasting more than one hour.
   c. Short-term stationary - daytime work that occupies a location for more than 1 hour in a single daylight period.
   d. Short, duration - work that occupies a location up to 1 hour.
   e. Mobile - work that moves continuously or intermittently (stopping for up to approximately 15 minutes.)

SIGN MOUNTING HEIGHT

1. The bottom of Long-term/Intermediate-term signs shall be at least 7 feet, but not more than 9 feet, above the paved surface, except as shown for supplemental plaques mounted below other signs.
2. The bottom of Short-term/Short Duration signs shall be a minimum of 1 foot above the pavement surface but no more than 2 feet above the ground.
3. Long-term/Intermediate-term Signs may be used in lieu of Short-term/Short Duration signing.
4. Short-term/Short Duration signs shall be used only during daylight and shall be removed at the end of the workday. or raised to appropriate Long-term/Intermediate sign height.
5. Regulatory signs shall be mounted at least 7 feet, but not more than 9 feet, above the paved surface regardless of work duration.

SIZE OF SIGNS

1. The Engineer may allow the use of smaller size construction warning signs on secondary roads or city streets where speeds are low if the sign size is listed as an option on the "Typical Construction Warning Sign Size and Spacing" chart shown on BC(2).
2. The Contractor shall furnish the sign sizes shown in plans, the BC Sheets, the TCP sheets or as directed by the Engineer.

SIGN SUBSTRATES

1. The Contractor shall ensure the sign substrate is installed in accordance with the manufacturer's recommendations for the type of sign support that is being used. The CWZTCD lists each substrate that can be used on the different types and models of sign supports.
2. "Mesh" type materials are NOT an approved sign substrate, regardless of the tightness of the weave.
3. All wooden individual sign panels fabricated from 2 or more pieces shall have one or more plywood cleat, 1/2" thick by 6" wide, fastened to the back of the sign and extending fully across the sign. The cleat shall be attached to the back of the sign using wood screws that do not penetrate the face of the sign panel. The screws shall be placed on both sides of the splice and spaced at 6" centers. The Engineer may approve other methods of splicing the sign face.

REFLECTIVE SHEETING

1. All signs shall be retroreflective and constructed of sheeting meeting the color and retro-reflectivity requirements of DMS-8300 for rigid signs or DMS-8310 for roll-up signs. The web address for DMS specifications is shown on BC(1).
2. White sheeting, meeting the requirements of DMS-8300 Type C (High Specific Intensity), shall be used for signs with a white background.
3. Orange sheeting, meeting the requirements of DMS-8300 Type E (Fluorescent Prismatic), shall be used for rigid signs with orange backgrounds.

SIGN LETTERS

1. All sign letters and numbers shall be clear, and open rounded type uppercase alphabet letters as approved by the Federal Highway Administration (FHWA) and as published in the "Standard Highway Sign Design for Texas" manual. Signs, letters and numbers shall be of first class workmanship in accordance with Department Standards and Specifications.

REMOVING OR COVERING

1. When sign messages may be confusing or do not apply, the signs shall be removed or completely covered.
2. Long-term stationary or intermediate stationary signs installed on square metal tubing may be turned away from traffic 90 degrees when the sign message is not applicable. This type of sign support meets the crashworthiness standards regardless of the direction of impact. This technique may not be used for signs installed in the median of divided highways or near any intersections where the sign may be seen from approaching traffic.
3. Signs installed on wooden skids shall not be turned at 90 degree angles to the roadway. These signs should be removed or completely covered when not required.
4. When signs are covered, the material used shall be opaque, such as heavy mil black plastic, or other materials which will cover the entire sign face and maintain their opaque properties under automobile headlights at night, without damaging the sign sheeting.
5. Burlap shall NOT be used to cover signs.
6. Duct tape or other adhesive material shall NOT be affixed to a sign face. These materials can damage the retroreflectivity of sheeting.
7. Signs and anchor stubs shall be removed and holes backfilled upon completion of work.

SIGN SUPPORT WEIGHTS

1. Where sign supports require the use of weights to keep from turning over, the use of sandbags with dry, cohesionless sand is recommended.
2. The sandbags will be tied shut to keep the sand from spilling and to maintain a constant weight.
3. Rock, concrete, iron, steel or other solid objects shall not be permitted for use as sign support weights.
4. Sandbags should weigh a minimum of 35 lbs and a maximum of 50 lbs.
5. Sandbags shall be made of a durable material that tears upon vehicular impact.
6. Rubber (such as tire inner tubes) shall NOT be used for sandbags.
7. Rubber ballasts designed for channelizing devices should not be used for ballast on portable sign supports. Sign supports designed and manufactured with rubber bases may be used when shown on the CWZTCD list.
8. Sandbags shall only be placed along or laid over the base supports of the traffic control device and shall not be suspended above ground level or hung with rope, wire, chains or other fasteners. Sandbags shall be placed along the length of the skids to weigh down the sign support.
9. Sandbags shall NOT be placed under the skid and shall not be used to level sign supports placed on slopes.

STANDARD PLANS
Texas Department of Transportation
Traffic Operations Division

BARRICADE AND CONSTRUCTION TEMPORARY SIGN NOTES STANDARD

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REVISIONS 9-07	STATE DISTRICT	FEDERAL REGION	FEDERAL AID PROJECT			SHEET
		6				
	COUNTY			CONTROL	SECTION	JOB	HIGHWAY

104

C1.10

PI NO: 1393-08-087

DWG NO: 1393-08-087-07A.DWG

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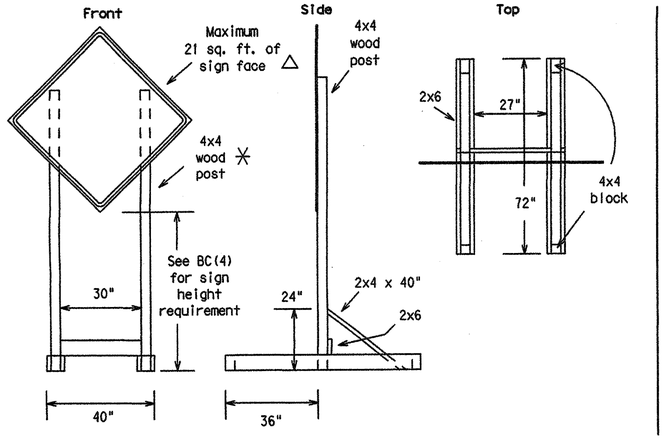
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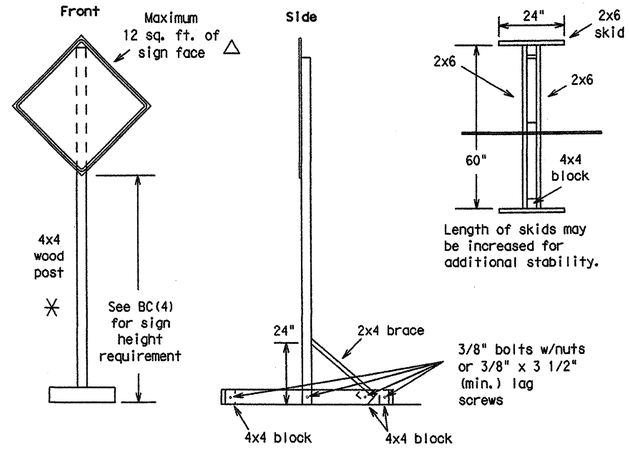
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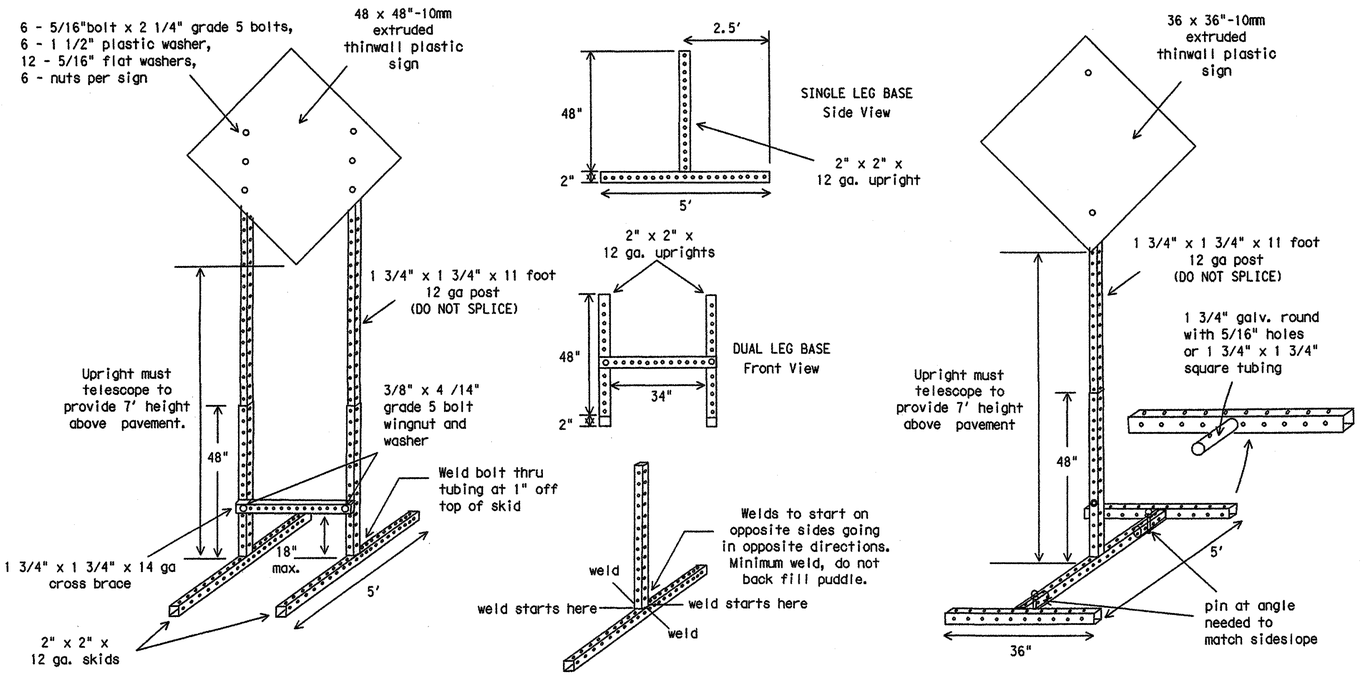
SKID MOUNTED WOOD SIGN SUPPORTS

LONG/INTERMEDIATE TERM STATIONARY - PORTABLE SKID MOUNTED SIGN SUPPORTS □





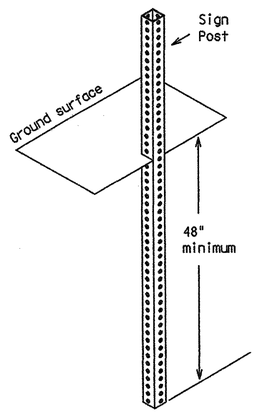
SKID MOUNTED PERFORATED SQUARE STEEL TUBING SIGN SUPPORTS



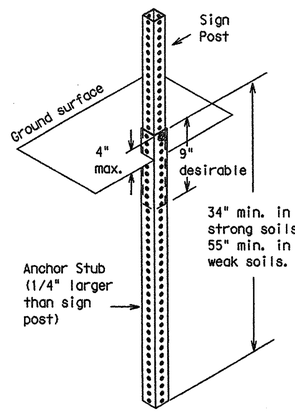
GROUND MOUNTED SIGN SUPPORTS

Refer to the CWZTCD and the manufacturer's installation procedure for each type sign support.
The maximum sign square footage shall adhere to the manufacturer's recommendation.
Two post installations can be used for larger signs.

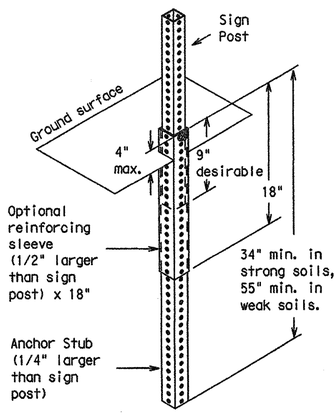
PERFORATED SQUARE METAL TUBING



OPTION 1
(Direct Embedment)



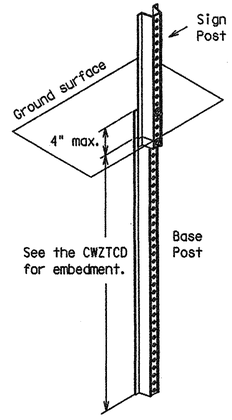
OPTION 2
(Anchor Stub)



OPTION 3
(Anchor Stub and Reinforcing Sleeve))

WING CHANNEL

Lap-splice/base bolted anchor



GENERAL NOTES

1. Nails may be used in the assembly of wooden sign supports, but 3/8" bolts with nuts or 3/8" x 3 1/2" lag screws must be used on every joint for final connection.
2. More details of approved Long/Intermediate and Short Term supports can be found on the CWZTCD list. See BC(1) for website location.
3. No more than 2 sign posts shall be placed within a 7 ft. circle, except for specific materials noted on the CWZTCD List.
4. When project is completed, all sign supports and foundations shall be removed from the project site. This will be considered subsidiary to Item 502.

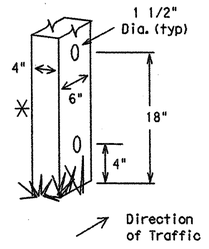
□ See BC(4) for definition of "Work Duration."

✳ Wood sign posts MUST be one piece. Splicing will NOT be allowed. Posts shall be painted white.

△ See the CWZTCD for the type of sign substrate that can be used for each approved sign support.

WEDGE ANCHORS

Both steel and plastic Wedge Anchor Systems as shown on the SMD Standard Sheets may be used as temporary sign supports for signs up to 10 square feet of sign face. They may be set in concrete or in sturdy soils if approved by the Engineer. (See web address for "Traffic Engineering Standard Sheets" on BC(1)).



WOOD POST SYSTEM FOR GROUND MOUNTED SIGN SUPPORTS

Nominal Post Size	No. of Posts	Maximum Sq. feet of Sign Face	Minimum Soil Embedment	Drilled Hole(s) Required
4 x 4	1	12	36"	NO
4 x 4	2	21	36"	NO
4 x 6	1	21	36"	YES
4 x 6	2	36	36"	YES

LEVELS DISPLAYED
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32
33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48
49 50 51 52 53 54 55 56 57 58 59 60 61 62 63

ACC:

STANDARD PLANS
Texas Department of Transportation
Traffic Operations Division

BARRICADE AND CONSTRUCTION TYPICAL SIGN SUPPORT STANDARD

5 of 12 BC(5)-07

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REVISIONS 9-07	STATE DISTRICT	FEDERAL REGION	FEDERAL AID PROJECT			SHEET
		6				
	COUNTY		CONTROL	SECTION	JOB	HIGHWAY

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C1.11

PI NO: 1393-08-087

DWG NO: 1393-08-087-07A.DWG

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TEXAS BOARD OF PROFESSIONAL ENGINEERS, CERTIFICATE OF REGISTRATION #F-000461; TEXAS BOARD OF PROFESSIONAL LAND SURVEYING, CERTIFICATE OF REGISTRATION 100421-00

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PORTABLE CHANGEABLE MESSAGE SIGNS

1. The Engineer/Inspector shall approve all messages used on portable changeable message signs (PCMS).
2. Messages on PCMS should contain no more than 8 words (about four to eight characters per word), not including simple words such as "TO," "FOR," "AT," etc.
3. Messages should consist of a single phase, or two phases that alternate. Three-phase messages are not allowed. Each phase of the message should convey a single thought, and must be understood by itself.
4. Use the word "EXIT" to refer to an exit ramp on a freeway; i.e., "EXIT CLOSED." Do not use the term "RAMP."
5. Always use the route or interstate designation (IH, US, SH, FM) along with the number when referring to a roadway.
6. When in use the bottom of a stationary PCMS message panel should be a minimum 7 feet above the roadway, where possible.
7. The message term "WEEKEND" should be used only if the work is to start on Saturday morning and end by Sunday evening at midnight. Actual days and hours of work should be displayed on the PCMS if work is to begin on Friday evening and/or continue into Monday morning.
8. The Engineer/Inspector may select one of two options which are available for displaying a two-phase message on a PCMS. Each phase may be displayed for either four seconds each or for three seconds each.
9. Do not "flash" messages or words included in a message. The message should be steady burn or continuous while displayed.
10. Do not present redundant information on a two-phase message; i.e., keeping two lines of the message the same and changing the third line.
11. Do not use the word "Danger" in message.
12. Do not display the message "LANES SHIFT LEFT" or "LANES SHIFT RIGHT" on a PCMS. Drivers do not understand the message.
13. Do not display messages that scroll horizontally or vertically across the face of the sign.
14. The following table lists abbreviated words and two-word phrases that are acceptable for use on a PCMS. Both words in a phrase must be displayed together. Words or phrases not on this list should not be abbreviated.
15. PCMS character height should be at least 18 inches for trailer mounted units. They should be visible from at least 1/2 (.5) mile and the text should be legible from at least 720 feet. Truck mounted units must have a character height of 10 inches and must be legible from at least 400 feet.
16. Each line of text should be centered on the message board rather than left or right justified.
17. If disabled, the PCMS should default to an illegible display that will not alarm motorists and will only be used to alert workers that the PCMS has malfunctioned. A pattern such as a series of horizontal solid bars is appropriate.

Word or Phrase	Abb.	Word or Phrase	Abb.
Access Road	ACCS RD	Major	MAJ
Air Quality	AIR QLTY	Miles	MI
Alternate	ALT	Miles Per Hour	MPH
Avenue	AVE	Minor	MNR
Best Route	BEST RTE	Monday	MON
Boulevard	BLVD	Normal	NORM
Bridge	BRDG	North	N
Cannot	CANT	Northbound	(route) N
Center	CNTR	Parking	PKING
Construction Ahead	CONST AHEAD	Parking Lot	PRK LOT
Detour Route	DETOUR RTE	Road	RD
Do Not	DONT	Right Lane	RGT LN
East	E	Saturday	SAT
Eastbound	(route) E	Service Road	SERV RD
Emergency	EMER	Shoulder	SHLDR
Emergency Vehicle	EMER VEH	Slippery	SLIP
Entrance, Enter	ENT	South	S
Express Lanes	EXP LANE	Southbound	(route) S
Expressway	EXPWY	Speed	SPD
XXXX Feet	XXXX FT	Street	ST
Fog Ahead	FOG AHD	Sunday	SUN
Freeway	FRWY, FWY	Telephone	PHONE
Freeway Blocked	FWY BLKD	Temporary	TEMP
Friday	FRI	Thursday	THURS
Hazardous Driving	HAZ DRIVING	To Downtown	TO DWNTN
Hazardous Material	HAZMAT	Traffic	TRAF
High-Occupancy Vehicle	HOV	Travelers	TRVLRS
Highway	HWY	Tuesday	TUES
Hours	HR	Time Minutes	TIME MIN
Information	INFO	Upper Level	UPPR LVL
It Is	ITS	Vehicle	VEH
Junction	JCT	Warning	WARN
Left	LFT	Wednesday	WED
Left Lane	LFT LN	Weight Limit	WT LIMIT
Lane Closed	LN CLSD	West	W
Lower Level	LOWR LVL	Westbound	(route) W
Maintenance	MAINT	Wet Pavement	WET PVMT
		Will Not	WONT

Roadway designation # IH-number, US-number, SH-number, FM-number

WHEN NOT IN USE, REMOVE THE PCMS FROM THE RIGHT-OF-WAY OR PLACE THE PCMS BEHIND BARRIER OR GUARDRAIL WITH SIGN PANEL TURNED PARALLEL TO TRAFFIC

RECOMMENDED PHASES AND FORMATS FOR PCMS MESSAGES DURING ROADWORK ACTIVITIES

(The Engineer may approve other messages not specifically covered here.)

Phase 1: Condition Lists

Road/Lane/Ramp Closure List

- FREEWAY CLOSED X MILE
- FRONTAGE ROAD CLOSED
- ROAD CLOSED AT SH XXX
- SHOULDER CLOSED XXX FT
- ROAD CLSD AT FM XXXX
- RIGHT LN CLOSED XXX FT
- RIGHT X LANES CLOSED
- RIGHT X LANES OPEN
- CENTER LANE CLOSED
- DAYTIME LANE CLOSURES
- NIGHT LANE CLOSURES
- I-XX SOUTH EXIT CLOSED
- VARIOUS LANES CLOSED
- EXIT XXX CLOSED X MILE
- EXIT CLOSED
- RIGHT LN TO BE CLOSED
- MALL DRIVEWAY CLOSED
- X LANES CLOSED TUE - FRI
- XXXXXXXX BLVD CLOSED

Other Condition List

- ROADWORK XXX FT
- ROAD REPAIRS XXXX FT
- FLAGGER XXXX FT
- LANE NARROWS XXXX FT
- RIGHT LN NARROWS XXXX FT
- TWO-WAY TRAFFIC XX MILE
- MERGING TRAFFIC XXXX FT
- CONST TRAFFIC XXX FT
- LOOSE GRAVEL XXXX FT
- UNEVEN LANES XXXX FT
- DETOUR X MILE
- ROUGH ROAD XXXX FT
- ROADWORK PAST SH XXXX
- ROADWORK NEXT FRI-SUN
- BUMP XXXX FT
- US XXX EXIT X MILES
- TRAFFIC SIGNAL XXXX FT
- LANES SHIFT *

* LANES SHIFT in Phase 1 must be used with STAY IN LANE in Phase 2.

Phase 2: Possible Component Lists

Action to Take/Effect on Travel List

- MERGE RIGHT
- FORM X LINES RIGHT
- DETOUR NEXT X EXITS
- USE XXXXX RD EXIT
- USE EXIT XXX
- USE EXIT I-XX NORTH
- STAY ON US XXX SOUTH
- USE I-XX E TO I-XX N
- TRUCKS USE US XXX N
- WATCH FOR TRUCKS
- WATCH FOR TRUCKS
- EXPECT DELAYS
- EXPECT DELAYS
- PREPARE TO STOP
- REDUCE SPEED XXX FT
- END SHOULDER USE
- USE OTHER ROUTES
- WATCH FOR WORKERS
- STAY IN LANE *

Location List

- AT FM XXXX
- BEFORE RAILROAD CROSSING
- NEXT X MILES
- PAST US XXX EXIT
- XXXXXXX TO XXXXXXX
- US XXX TO FM XXXX

Warning List

- SPEED LIMIT XX MPH
- MAXIMUM SPEED XX MPH
- MINIMUM SPEED XX MPH
- ADVISORY SPEED XX MPH
- RIGHT LANE EXIT
- USE CAUTION
- DRIVE SAFELY
- DRIVE WITH CARE

** Advance Notice List

- TUE-FRI XX AM- X PM
- APR XX-XX X PM-X AM
- BEGINS MONDAY
- BEGINS MAY XX
- MAY X-X XX PM - XX AM
- NEXT FRI-SUN
- XX AM TO XX PM
- NEXT TUE AUG XX
- TONIGHT XX PM- XX AM

** See Application Guidelines Note 6.

Application Guidelines

1. Only 1 or 2 phases are to be used on a PCMS.
2. The 1st phase (or both) should be selected from the "Road/Lane/Ramp Closure List" and the "Other Condition List".
3. A 2nd phase can be selected from the "Action to Take/Effect on Travel, Location, General Warning, or Advance Notice Phase Lists".
4. A Location Phase is necessary only if a distance or location is not included in the first phase selected.
5. If two PCMS are used in sequence, they must be separated by a minimum of 1000 ft. Each PCMS shall be limted to two phases, and should be understandable by themselves.
6. For advance notice, when the current date is within seven days of the actual work date, calendar days should be replaced with days of the week. Advance notification should typically be for no more than one week prior to the work

Wording Alternatives

1. The words RIGHT, LEFT and ALL can be interchanged as appropriate.
2. Roadway designations IH, US, SH, FM and LP can be interchanged as appropriate.
3. EAST, WEST, NORTH and SOUTH (or abbreviations E, W, N and S) can be interchanged as appropriate.
4. Highway names and numbers replaced as appropriate.
5. ROAD, HIGHWAY and FREEWAY can be interchanged as needed.
6. AHEAD may be used instead of distances if necessary.
7. FT and MI, MILE and MILES interchanged as appropriate.
8. AT, BEFORE and PAST interchanged as needed.
9. Distances or AHEAD can be eliminated from the message if a location phase is used.

PCMS SIGNS WITHIN THE R.O.W. SHALL BE BEHIND GUARDRAIL OR CONCRETE BARRIER OR SHALL HAVE A MINIMUM OF FOUR (4) PLASTIC DRUMS PLACED PERPENDICULAR TO TRAFFIC ON THE UPSTREAM SIDE OF THE PCMS.

FULL MATRIX PCMS SIGNS

1. When Full Matrix PCMS signs are used, the character height and legibility/visibility requirements shall be maintained as listed in Note 15 under "PORTABLE CHANGEABLE MESSAGE SIGNS" above.
2. When symbol signs, such as the CW20-7a Flagger Symbol, are represented graphically on the Full Matrix PCMS sign and, with the approval of the Engineer, it shall maintain the legibility/visibility requirement listed above.
3. When symbol signs are represented graphically on the Full Matrix PCMS, they shall only supplement the use of the static sign represented, and shall not substitute for, or replace that sign.
4. A full matrix PCMS may be used to simulate a flashing arrow panel provided it meets the visibility, flash rate and dimming requirements on BC(7), for the same size arrow.

STANDARD PLANS
Texas Department of Transportation
Traffic Operations Division

BARRICADE AND CONSTRUCTION PORTABLE CHANGEABLE MESSAGE SIGN (PCMS) STANDARD

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REVISIONS 9-07	STATE DISTRICT	FEDERAL REGION 6	FEDERAL AID PROJECT	SHEET
	COUNTY	CONTROL	SECTION	JOB	HIGHWAY

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C1.12

PI NO: 1393-08-087

DWG NO: 1393-08-087-07A.DWG

TEXAS BOARD OF PROFESSIONAL ENGINEERS, CERTIFICATE OF REGISTRATION #F-000481; TEXAS BOARD OF PROFESSIONAL LAND SURVEYING, CERTIFICATE OF REGISTRATION 100421-00

TMWILLIAMS 04/29/2010 - 3:46PM
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LEVELS DISPLAYED

LET	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	17	9	25	5	21	13	29	3	19	11	27	7	23	15	31	6
2	18	10	26	14	22	30	4	12	20	28	2	24	32	8	16	32
3	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
4	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	

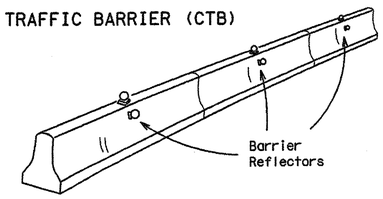
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BARRIER REFLECTORS FOR CONCRETE TRAFFIC BARRIER AND ATTENUATORS

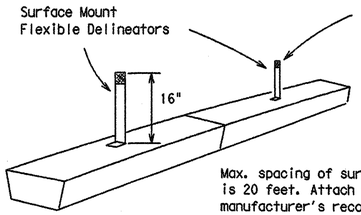
1. Barrier Reflectors shall be prequalified, and conform to the color and reflectivity requirements of DMS-8600. A list of prequalified Barrier Reflectors (Type C Delineators) can be found at the Material Producer List web address shown on BC(1).
2. Color of Barrier Reflectors shall be as specified in the TMUTCD. The cost of the reflectors shall be considered subsidiary to Item 502.

CONCRETE TRAFFIC BARRIER (CTB)



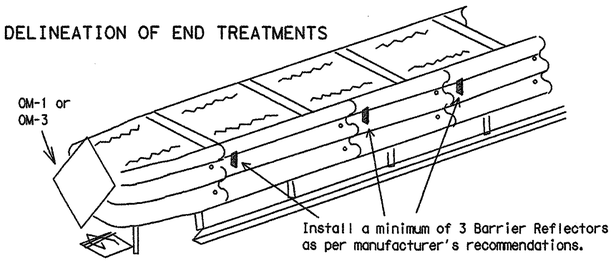
3. Where traffic is on one side of the CTB, two (2) Barrier Reflectors shall be mounted in approximately the midsection of each section of CTB. An alternate mounting location is uniformly spaced at one end of each CTB. This will allow for attachment of a barrier grapple without damaging the reflector. The Barrier Reflector mounted on the side of the CTB shall be located directly below the reflector mounted on top of the barrier, as shown in the detail above.
4. Where CTB separates two-way traffic, three barrier reflectors shall be mounted on each section of CTB. The reflector unit on top shall have two yellow reflective faces (Bi-Directional)while the reflectors on each side of the barrier shall have one yellow reflective face, as shown in the detail above.
5. When CTB separates traffic traveling in the same direction, no barrier reflectors will be required on top of the CTB.
6. Barrier Reflector units shall be yellow or white in color to match the edgeline being supplemented. Yellow Barrier Reflectors shall be made with Type E Fluorescent Prismatic Yellow Retroreflective Sheeting. White reflectors shall be made with Type D White Prismatic sheeting.
7. Maximum spacing of Barrier Reflectors is forty (40) feet.
8. Pavement markers or temporary flexible-reflective roadway marker tabs shall NOT be used as CTB delineation.
9. Attachment of Barrier Reflectors to CTB shall be per manufacturer's recommendations.
10. Missing or damaged Barrier Reflectors shall be replaced as directed by the Engineer.
11. Single slope barriers shall be delineated as shown on the above detail.

LOW PROFILE CONCRETE BARRIER (LPCB)



Max. spacing of surface mount flexible delineators is 20 feet. Attach the delineators as per manufacturer's recommendations.

DELINEATION OF END TREATMENTS



	APPROACHING TRAFFIC	
	BOTH SIDES	ONE SIDE
DELINEATION	OM-1	OM-3 or Vertical Panel

END TREATMENTS FOR CTB'S USED IN WORK ZONES

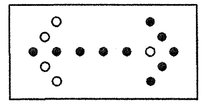
End treatments used on CTB's in work zones shall meet crashworthy standards as defined in the National Cooperative Highway Research Report 350. Refer to the CWZTCD List for approved end treatments and manufacturers.

TYPICAL FLASHING ARROW PANEL

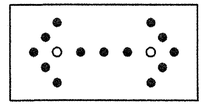
Arrow Panels may be located behind channelizing devices in place for a shoulder taper or merging taper, otherwise they shall be delineated with four (4) channelizing devices placed perpendicular to traffic on the upstream side of traffic.

1. The Flashing Arrow Panel should be used for all lane closures on multi-lane roadways, or slow moving maintenance or construction activities on the travel lanes.
2. Flashing Arrow Panels should not be used on two-lane, two-way roadways, detours, diversions or work on shoulders unless the "CAUTION" display (see detail below) is used.
3. The Engineer/Inspector shall choose all appropriate signs, barricades and/or other traffic control devices that should be used in conjunction with the Flashing Arrow Panel.
4. The Flashing Arrow Panel should be able to display the following symbols:

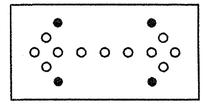
Flashing RIGHT (LEFT) ARROW



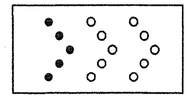
Flashing DOUBLE ARROW



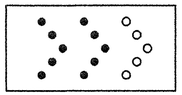
Flashing CAUTION

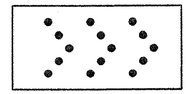


5. The "CAUTION" display consists of four corner lamps flashing simultaneously.
6. The straight line caution display is NOT ALLOWED.
7. The Flashing Arrow Panel shall be capable of minimum 50 percent dimming from rated lamp voltage. The flashing rate of the lamps shall not be less than 25 nor more than 40 flashes per minute.
8. Minimum lamp "on time" shall be approximately 50 percent for the flashing arrow and equal intervals of 25 percent for each sequential phase of the flashing chevron.
9. The sequential arrow display is NOT ALLOWED.
10. The flashing arrow display is the TxDOT standard; however, the sequential Chevron display may be used during daylight operations.



Sequential Chevron





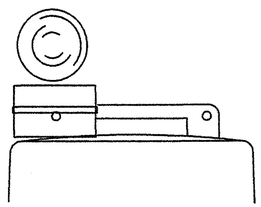
REQUIREMENTS

TYPE	MINIMUM SIZE	MINIMUM NUMBER OF PANEL LAMPS	MINIMUM VISIBILITY DISTANCE
B	30 x 60	13	3/4 mile
C	48 x 96	15	1 mile

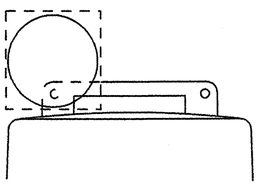
ATTENTION: Flashing Arrow Panels shall be equipped with automatic dimming devices.

WHEN NOT IN USE, REMOVE THE ARROW PANEL FROM THE RIGHT-OF-WAY OR PLACE THE ARROW PANEL BEHIND CONCRETE TRAFFIC BARRIER OR GUARDRAIL.

11. The Flashing Arrow Panel shall be mounted on a vehicle, trailer or other suitable support.
12. A Flashing Arrow Panel SHALL NOT BE USED to laterally shift traffic.
13. A full matrix PCMS may be used to simulate a Flashing Arrow Panel provided it meets visibility, flash rate and dimming requirements on this sheet for the same size arrow.
14. Minimum mounting height of trailer mounted arrow panels should be 7 feet from roadway to bottom of panel.



Type C Warning Light or approved substitute mounted adjacent to the travel way.



Warning reflector may be round or square. Must have a reflective surface area of at least 30 square inches

WARNING LIGHTS

1. Warning lights shall meet the requirements of the TMUTCD.
2. Warning lights shall NOT be installed on barricades.
3. Type A-Low Intensity Flashing Warning Lights are commonly used with drums. They are intended to warn of or mark a potentially hazardous area. Their use shall be as indicated on this sheet and/or other sheets of the plans by the designation "FL". The Type A Warning Lights shall not be used with signs manufactured with Type E Sheeting (Fluorescent Prismatic) meeting the requirements of Departmental Material Specification DMS-8300.
4. Type-C and Type D 360 degree Steady Burn Lights are intended to be used in a series for delineation to supplement other traffic control devices. Their use shall be as indicated on this sheet and/or other sheets of the plans by the designation "SB".
5. The Engineer/Inspector or the plans shall specify the location and type of warning lights to be installed on the traffic control devices.
6. When required by the Engineer, the Contractor shall furnish a copy of the warning lights certification. The warning light manufacturer will certify the warning lights meet the requirements of the latest ITE Purchase Specifications for Flashing and Steady-Burn Warning Lights.
7. When used to delineate curves, Type-C and Type D Steady Burn Lights should only be placed on the outside of the curve, not the inside.

WARNING LIGHTS MOUNTED ON PLASTIC DRUMS

1. Type A flashing warning lights are intended to warn drivers that they are approaching or are in a potentially hazardous area.
2. Type A random flashing warning lights are not intended for delineation and shall not be used in a series.
3. A series of sequential flashing warning lights placed on channelizing devices to form a merging taper may be used for delineation. If used, the successive flashing of the sequential warning lights should occur from the beginning of the taper to the end of the merging taper in order to identify the desired vehicle path. The rate of flashing for each light shall be 65 flashes per minute, plus or minus 10 flashes.
4. Type C and D steady-burn warning lights are intended to be used in a series to delineate the edge of the travel lane on detours, on lane changes, on lane closures, and on other similar conditions.
5. Type A, Type C and Type D warning lights shall be installed at locations as detailed on other sheets in the plans.
6. Warning lights shall not be installed on a drum that has a sign, chevron or vertical panel.
7. The maximum spacing for warning lights on drums should be identical to the channelizing device spacing.

WARNING REFLECTORS MOUNTED ON PLASTIC DRUMS AS A SUBSTITUTE FOR TYPE C (STEADY BURN) WARNING LIGHTS

1. A warning reflector or approved substitute may be mounted on a plastic drum as a substitute for a Type C, steady burn warning light at the discretion of the Contractor unless otherwise noted in the plans.
2. The warning reflector shall be yellow in color and shall be manufactured using a sign substrate approved for use with plastic drums listed on the CWZTCD.
3. The warning reflector shall have a minimum retroreflective surface area (one-side) of 30 square inches.
4. Round reflectors shall be fully reflectorized, including the area where attached to the drum.
5. Square substrates must have a minimum of 30 square inches of reflectorized sheeting. They do not have to be reflectorized where it attaches to the drum.
6. The side of the warning reflector facing approaching traffic shall have sheeting meeting the color and retroreflectivity requirements for DMS 8300-Type D (Non-fluorescent Prismatic).
7. When used near two-way traffic, both sides of the warning reflector shall be reflectorized.
8. The warning reflector should be mounted on the side of the handle nearest approaching traffic.
9. The maximum spacing for warning reflectors should be identical to the channelizing device spacing requirements.

TRUCK-MOUNTED ATTENUATORS

1. Truck-mounted attenuators (TMA) used on TxDOT facilities must meet the requirements outlined in the National Cooperative Highway Research Report No. 350 (NCHRP 350).
2. Refer to the CWZTCD for the requirements of Level 2 or Level 3 TMAs.
3. Refer to the dates shown in the CWZTCD to ensure that the TMA meets the age requirements and the crashworthiness criteria established by the Federal Highway Administration (FHWA) for TMAs.
4. Refer to the CWZTCD for a list of approved TMAs.
5. TMAs are required on freeways unless otherwise noted in the plans.
6. A TMA should be used anytime that it can be positioned approximately 30 to 100 feet in advance of the area of crew exposure without adversely affecting the work performance.
7. The only reason a TMA should not be required is when a work area is spread down the roadway and the work crew is an extended distance from the TMA.

STANDARD PLANS
Texas Department of Transportation
Traffic Operations Division

BARRICADE AND CONSTRUCTION ARROW PANEL, REFLECTORS, WARNING LIGHTS & ATTENUATOR STANDARD

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REVISIONS 9-07	STATE DISTRICT	FEDERAL REGION 6	FEDERAL AID PROJECT	SHEET
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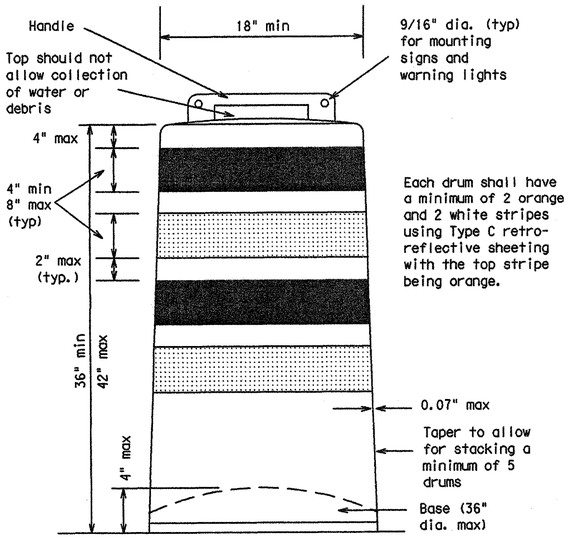
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GENERAL NOTES

1. For long term stationary work zones on freeways, drums shall be used as the primary channelizing device.
2. For intermediate term stationary work zones on freeways, drums should be used as the primary channelizing device but may be replaced in tangent sections by vertical panels, or 42" two-piece cones. In tangent sections one-piece cones may be used with the approval of the Engineer but only if personnel are present on the project at all times to maintain the cones in proper position and location.
3. For short term stationary work zones on freeways, drums are the preferred channelizing device but may be replaced in tapers, transitions and tangent sections by vertical panels, two-piece cones ar one-piece cones as approved by the Engineer.
4. Drums and all related items shall comply with the requirements of the current version of the "Texas Manual on Uniform Traffic Control Devices" (TMUTCD) and the "Compliant Work Zone Traffic Control Devices List" (CWZTCD).
5. Drums, bases, and related materials shall exhibit good workmanship and shall be free from objectionable marks or defects that would adversely affect their appearance or serviceability.
6. The Contractor shall have a maximum of 24 hours to replace any plastic drums identified for replacement by the Engineer/Inspector. The replacement device must be an approved device.

GENERAL DESIGN REQUIREMENTS

Prequalified plastic drums shall meet the following requirements:

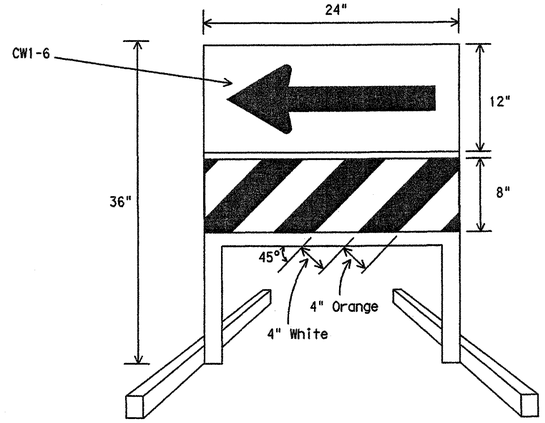
1. Plastic drums shall be a two-piece design; the "body" of the drum shall be the top portion and the "base" shall be the bottom.
2. The body and base shall lock together in such a manner that the body separates from the base when impacted by a vehicle traveling at a speed of 20 MPH or greater but prevents accidental separation due to normal handling and/or air turbulence created by passing vehicles.
3. Plastic drums shall be constructed of lightweight flexible, and deformable materials. The Contractor shall NOT use metal drums or single piece plastic drums as channelization devices or sign supports.
4. Drums shall present a profile that is a minimum of 18 inches in width at the 36 inch height when viewed from any direction. The height of drum unit (body installed on base) shall be a minimum of 36 inches and a maximum of 42 inches.
5. The top of the drum shall have a built-in handle for easy pickup and shall be designed to drain water and not collect debris. The handle shall have a minimum of two widely spaced 9/16 inch diameter holes to allow attachment of a warning light, warning reflector unit or approved compliant sign.
6. The exterior of the drum body shall have a minimum of four alternating orange and white retroreflective circumferential stripes not less than 4 inches nor greater than 8 inches in width. Any non-reflectorized space between any two adjacent stripes shall not exceed 2 inches in width.
7. Bases shall have a maximum width of 36 inches, a maximum height of 4 inches, and a minimum of two footholds of sufficient size to allow base to be held down while separating the drum body from the base.
8. Plastic drums shall be constructed of ultra-violet stabilized, orange, high-density polyethylene (HDPE) or other approved material.
9. Drum body shall have a minimum unballasted weight of 7.7 lbs. and maximum unballasted weight of 11 lbs. The wall of the drum body shall be a minimum of 0.07 inch in thickness. Weight of any drum supplied shall not vary more than 0.5 lb. from that of the prequalified sample.
10. Drum and base shall be marked with manufacturer's name and model number.

RETROREFLECTIVE SHEETING

1. The stripes used on drums shall be constructed of sheeting meeting the color and retroreflectivity requirements of Departmental Materials Specification DMS-8300, "Flat Surface Reflective Sheeting." High Specific Intensity (Type C) retroreflective sheeting shall be supplied unless otherwise specified in the plans.
2. The sheeting shall be suitable for use on and shall adhere to the drum surface such that, upon vehicular impact, the sheeting shall remain adhered in-place and exhibit no delaminating, cracking, or loss of retroreflectivity other than that loss due to abrasion of the sheeting surface.

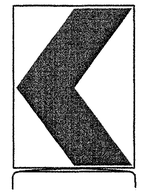
BALLAST

1. Unballasted bases shall be large enough to hold up to 50 lbs. of sand. This base, when filled with the ballast material, should weigh between 35 lbs (minimum) and 50 lbs (maximum). The ballast may be sand in one to three sandbags separate from the base, sand in a sand-filled plastic base, or other ballasting devices as approved by the Engineer. Stacking of sandbags will be allowed, however height of sandbags above pavement surface may not exceed 12 inches.
2. Bases with built-in ballast shall weigh between 40 lbs. and 50 lbs. Built-in ballast can be constructed of an integral crumb rubber base or a solid rubber base.
3. The ballast shall not be heavy objects, water, or any material that would become hazardous to motorists, pedestrians, or workers when the drum is struck by a vehicle.
4. When used in regions susceptible to freezing, drums shall have drainage holes in the bottoms so that water will not collect and freeze becoming a hazard when struck by a vehicle.
5. Ballast shall not be placed on top of drums.
6. Adhesives may be used to secure base of drums to pavement.

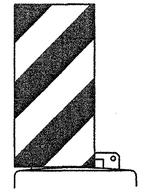


DIRECTION INDICATOR BARRICADE

1. The Direction Indicator Barricade may be used in tapers, transitions, and other areas where specific directional guidance to drivers is necessary.
2. If used, the Direction Indicator Barricade should be used in series to direct the driver through the transition and into the intended travel lane.
3. The Direction Indicator Barricade shall consist of One-Direction Large Arrow (CW1-6) sign in the size shown with a black arrow on a background of Type E Fluoprescent Prismatic Orange above a rail with Type C High Specific Intensity retroreflective sheeting in alternation 4" white and orange stripes sloping downward at an angle of 45 degrees in the direction road users are to pass.
4. Double arrows on the Direction Indicator Barricade will not be allowed.
5. Approved manufacturers are shown on the CWZTCD List. Ballast shall be as approved by the manufacturers instructions.



18" x 24" Sign
(Maximum Sign Dimension)
Chevron CW1-8, Opposing Traffic Lane Divider, Driveway sign D70a, Keep Right R4 series or other signs as approved by Engineer



12" x 24"
Vertical Panel
mount with diagonals sloping down towards travel way

Plywood, Aluminum or Metal sign substrates shall NOT be used on plastic drums

SIGNS, CHEVRONS, AND VERTICAL PANELS MOUNTED ON PLASTIC DRUMS

1. Signs used on plastic drums shall be manufactured using substrates listed on the CWZTCD.
2. Chevrons and other work zone signs with an orange background shall be manufactured with Type E (Fluorescent Prismatic) sheeting meeting the color and retroreflectivity requirements of DMS-8300, "Sign Face Material," unless otherwise specified in the plans.
3. Vertical Panels shall be manufactured with orange and white sheeting meeting the requirements of DMS-8300 Type C (High Specific Intensity). Diagonal stripes on Vertical Panels shall slope down toward the intended traveled lane.
4. Other sign messages (text or symbolic) may be used as approved by the Engineer. Sign dimensions shall not exceed 18 inches in width or 24 inches in height.
5. Signs shall be installed using a 1/2 inch bolt (nominal) and nut, two washers, and one locking washer for each connection.
6. Mounting bolts and nuts shall be fully engaged and adequately torqued. Bolts should not extend more than 1/2 inch beyond nuts.
7. Chevrons may be placed on drums on the outside of curves, on merging tapers or on shifting tapers. When used in these locations they may be placed on every drum or spaced not more than on every third drum. A minimum of three (3) should be used at each location called for in the plans.
8. R9-9, R9-10, R9-11 and R9-11a Sidewalk Closed signs which are 24 inches wide may be mounted on plastic drums, with approval of the Engineer.

STANDARD PLANS
Texas Department of Transportation
Traffic Operations Division

BARRICADE AND CONSTRUCTION CHANNELIZING DEVICES STANDARD

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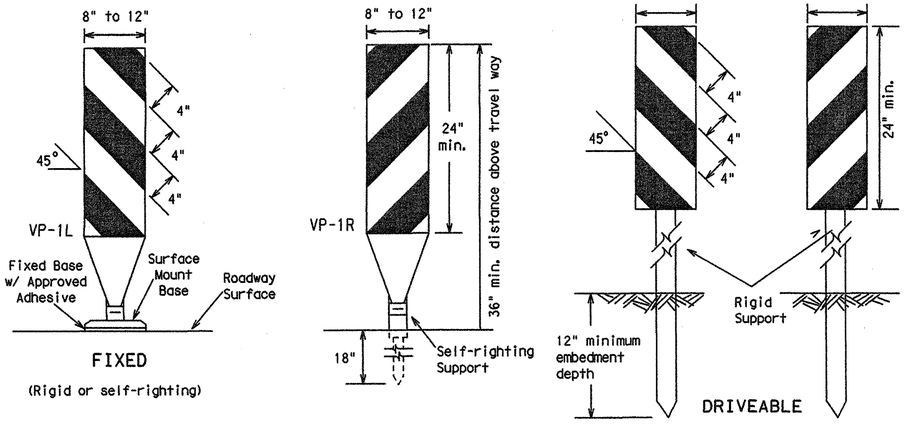
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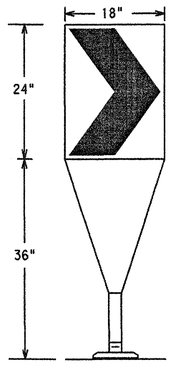
CHANNELIZING DEVICES

VERTICAL PANELS (VPs)



1. Vertical Panels (VP's) are normally used to channelize traffic or divide opposing lanes of traffic.
2. VP's may be used in daytime or nighttime situations. They may be used at the edge of shoulder drop-offs and other areas such as lane transitions where positive daytime and nighttime delineation is required. The Engineer/Inspector shall refer to the Roadway Design Manual Appendix B "Treatment of Pavement Drop-offs in Work Zones" for additional guidelines on the use of VP's for drop-offs.
3. VP's should be mounted back to back if used at the edge of cuts adjacent to two-way two lane roadways. Stripes are to be reflective orange and reflective white and should always slope downward toward the travel lane.
4. VP's used on expressways and freeways or other high speed roadways, shall have a minimum of 270 square inches of retroreflective area facing traffic.
5. Self-righting supports are available with portable base. See "Compliant Work Zone Traffic Control Devices List" (CWZTCD).
6. Sheeting for the VP's shall be retroreflective Type C (High Specific Intensity) conforming to Departmental Material Specification DMS-8300, unless noted otherwise.
7. Where the height of reflective material on the vertical panel is greater than 36 inches, a panel stripe of 6 inches shall be used.

CHEVRONS

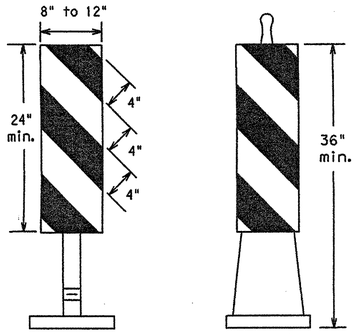


Fixed Base w/ Approved Adhesive (Driveable Base, or Flexible Support can be used)

1. The chevron shall be a vertical rectangle with a minimum size of 12 by 18 inches.
2. Chevrons are intended to give notice of a sharp change of alignment with the direction of travel and provide additional emphasis and guidance for vehicle operators with regard to changes in horizontal alignment of the roadway.
3. Chevrons, when used, shall be erected on the outside of a sharp curve or turn, or on the far side of an intersection. They shall be in line with and at right angles to approaching traffic. Spacing should be such that the motorist always has three in view, until the change in alignment eliminates its need.
4. To be effective, the chevron should be visible for at least 500 feet.
5. Chevrons shall be orange with a black nonreflective legend. Sheeting for the chevron shall be retroreflective Type E (Fluorescent Prismatic) conforming to Departmental Material Specification DMS-8300, unless noted otherwise. The legend shall be black vinyl non-reflective decal sheeting meeting the requirements of DMS-8300.
6. For Long Term Stationary use on tapers or transitions on freeways and divided highways self-righting chevrons may be used to supplement plastic drums but not to replace plastic drums.

GENERAL NOTES:

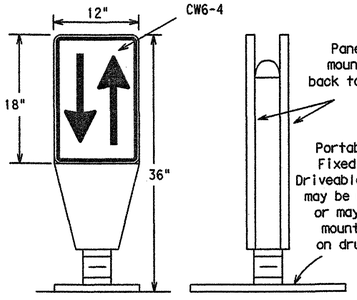
1. Work Zone channelizing devices illustrated on this sheet may be installed in close proximity to traffic and are suitable for use on high or low speed roadways. The Engineer/Inspector shall ensure that spacing and placement is uniform and in accordance with the "Texas Manual on Uniform Traffic Control Devices" (TMUTCD).
2. Channelizing devices shown on this sheet may have a driveable, fixed or portable base. The requirement for self-righting channelizing devices must be specified in the General Notes or other plan sheets.
3. Channelizing devices on self-righting supports should be used in work zone areas where channelizing devices are frequently impacted by errant vehicles or vehicle related wind gusts making alignment of the channelizing devices difficult to maintain. Locations of these devices shall be detailed elsewhere in the plans. These devices shall conform to the TMUTCD and the "Compliant Work Zone Traffic Control Devices List" (CWZTCD).
4. The Contractor shall maintain devices in a clean condition and replace damaged, nonreflective, faded, or broken devices and bases as required by the Engineer/Inspector. The Contractor shall be required to maintain proper device spacing and alignment.
5. Portable bases shall be fabricated from virgin and/or recycled rubber. The portable bases shall weigh approximately 35 lbs.
6. Pavement surfaces shall be prepared in a manner that ensures proper bonding between the adhesives, the fixed mount bases and the pavement surface. Adhesives shall be prepared and applied according to the manufacturer's recommendations.
7. The installation and removal of channelizing devices shall not cause detrimental effects to the final pavement surfaces, including pavement surface discoloration or surface integrity. Driveable bases shall not be permitted on final pavement surfaces. The Engineer/Inspector shall approve all application and removal procedures of fixed bases.
8. Examples on this sheet are commonly used channelizing devices in work zones. For other devices, refer to the CWZTCD.



(Rigid or self-righting)

PORTABLE

OPPOSING TRAFFIC LANE DIVIDERS (OTLD)

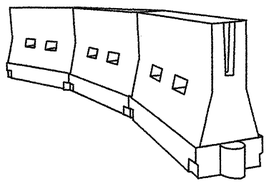


1. Opposing Traffic Lane Dividers (OTLD) are delineation devices designed to convert a normal one-way roadway section to two-way operation. OTLD's are used on temporary centerlines. The upward and downward arrows on the sign's face indicate the direction of traffic on either side of the divider. The base is secured to the pavement with an adhesive or rubber weight to minimize movement caused by a vehicle impact or wind gust.
2. The OTLD may be used in combination with simple tubular markers or VPs.
3. Spacing between the OTLD shall not exceed 500 feet. Tubular markers or VPs placed between the OTLD's should not exceed 100 foot spacing.
4. The OTLD shall be orange with a black nonreflective legend. Sheeting for the OTLD shall be retroreflective Type E (Fluorescent Prismatic) conforming to Departmental Material Specification DMS-8300, unless noted otherwise. The legend shall be black vinyl non-reflective decal sheeting meeting the requirements of DMS-8300.

Posted Speed	Formula	Minimum Desirable Taper Lengths ✕✕ 10′ Offset	11′ Offset	12′ Offset	Suggested Maximum Spacing of Channelizing Devices On a Taper	On a Tangent
30	$L=\frac{WS^2}{60}$	150′	165′	180′	30′	60′-75′
35		205′	225′	245′	35′	70′-90′
40		265′	295′	320′	40′	80′-100′
45	L=WS	450′	495′	540′	45′	90′-110′
50		500′	550′	600′	50′	100′-125′
55		550′	605′	660′	55′	110′-140′
60		600′	660′	720′	60′	120′-150′
65		650′	715′	780′	65′	130′-165′
70		700′	770′	840′	70′	140′-175′
75		750′	825′	900′	75′	150′-185′
80		800′	880′	960′	80′	160′-195′

✕✕Taper lengths have been rounded off.
L=Length of Taper (FT.) W=Width of Offset (FT.)
S=Posted Speed (MPH)

HOLLOW OR WATER BALLASTED SYSTEMS USED AS LONGITUDINAL CHANNELIZING DEVICES OR BARRIERS



LONGITUDINAL CHANNELIZING DEVICES

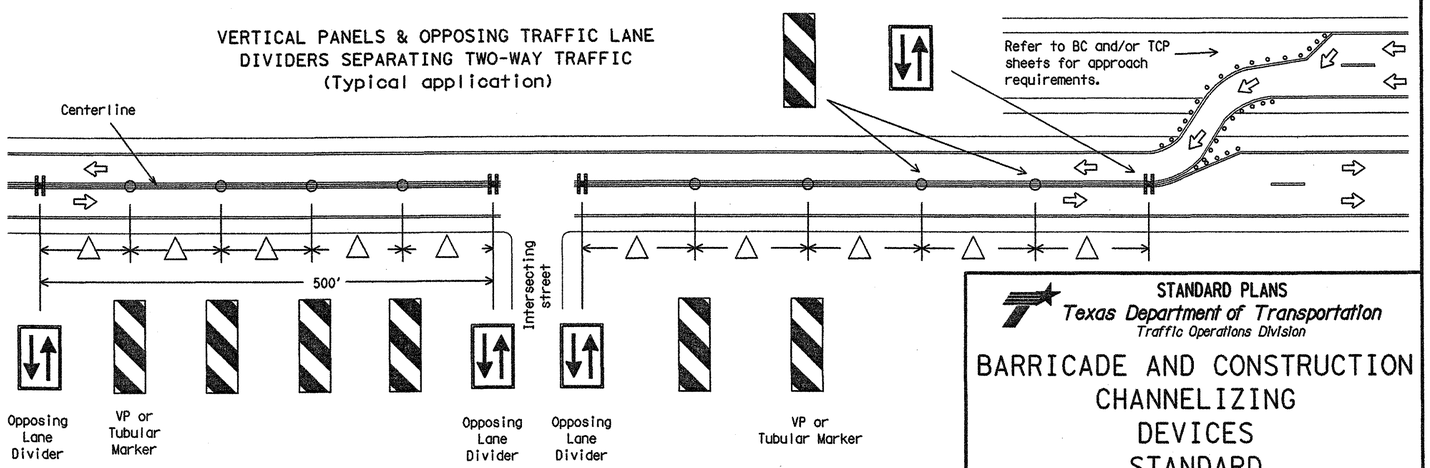
1. Longitudinal channelizing devices are crashworthy, lightweight, deformable devices that are highly visible, have good target value and can be connected together. **They are not designed to contain or redirect a vehicle on impact.**
2. Longitudinal channelizing devices may be used instead of a line of cones or drums.
3. Longitudinal channelizing devices shall be placed in accordance to application and installation requirements specific to the device, and used only when shown on the CWZTCD list.
4. Longitudinal channelizing devices should not be used to provide positive protection for obstacles, pedestrians or workers.
5. Longitudinal channelizing devices shall be retroreflective, or supplemented with retroreflective delineation as required for temporary barriers on BC(7)-07.

WATER BALLASTED SYSTEMS USED AS BARRIERS

1. Water ballasted systems used as barriers shall not be used solely to channelize road users, but also to protect the work space per the appropriate NCHRP 350 crashworthiness requirements based on roadway speed and barrier application.
2. Water ballasted systems used to channelize vehicular traffic shall be supplemented with retroreflective delineation or channelizing devices to improve daytime/nighttime visibility. They may also be supplemented with pavement markings.
3. Water ballasted systems used as barriers shall be placed in accordance to application and installation requirements specific to the device, and used only when shown on the CWZTCD list.
4. Water ballasted systems used as barriers should not be used for a merging taper except in low speed (less than 45 MPH) urban areas. When used on a taper in a low speed urban area, the taper shall be delineated and the taper length should be designed to optimize road user operations considering the available geometric conditions.
5. When water ballasted systems used as barriers have blunt ends exposed to traffic, they should be attenuated as per manufacturer recommendations or flared to point outside the clear zone.

If used to channelize pedestrians, longitudinal channelizing devices or water ballasted systems must have a continuous detectable bottom for users of long canes and the top of the unit shall be not less than 32 inches in height.

VERTICAL PANELS & OPPOSING TRAFFIC LANE DIVIDERS SEPARATING TWO-WAY TRAFFIC (Typical application)



△ Spacing between the VP's or tubular markers shall not exceed 100 feet. On roadways with speeds less than 45 MPH, spacing between the tubular markers or VP's shall be as shown on the channelizing spacing table shown on this page. If the table shows spacing greater than 100 feet based on the roadway speed, then use a maximum of 100 feet spacing between the tubular markers or VP's. Every fifth channelizing device shall be an OTLD, except when the OLTD must be spaced closer to accomodate an intersection. Spacing between the OTLD shall not exceed 500 feet.

STANDARD PLANS
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Traffic Operations Division

BARRICADE AND CONSTRUCTION CHANNELIZING DEVICES STANDARD

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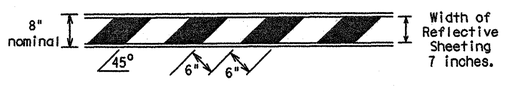
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TYPE III BARRICADES

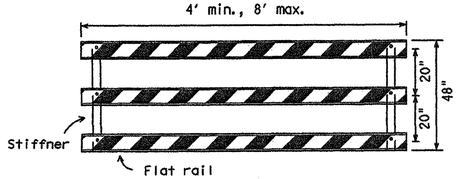
1. Refer to the Compliant Work Zone Traffic Control Devices List (CWZTCD) for details of the Type III Barricades and a list of all materials used in the construction of Type III Baricades.
2. Type III Barricades shall be used at each end of construction projects closed to all traffic.
3. Barricades extending across a roadway should have stripes that slope downward in the direction toward which traffic must turn in detouring. When both right and left turns are provided, the chevron striping may slope downward in both directions from the center of the barricade. Where no turns are provided at a closed road striping should slope downward in both directions toward the center of roadway.
4. Striping of rails, for the right side of the roadway, should slope downward to the left. For the left side of the roadway, striping should slope downward to the right.
5. Identification markings may be shown only on the back of the barricade rails. The maximum height of letters and/or company logos used for identification shall be 1".
6. Barricades shall not be placed parallel to traffic unless an adequate clear zone is provided.
7. Warning lights shall NOT be installed on barricades.
8. Where barricades require the use of weights to keep from turning over, the use of sandbags with dry, cohesionless sand is recommended. The sandbags will be tied shut to keep the sand from spilling and to maintain a constant weight. Sand bags shall not be stacked in a manner that covers any portion of a barricade rails reflective sheeting. Rock, concrete, iron, steel or other solid objects will NOT be permitted. Sandbags should weigh a minimum of 35 lbs and a maximum of 50 lbs. Sandbags shall be made of a durable material that tears upon vehicular impact. Rubber (such as tire inner tubes) shall not be used for sandbags. Sandbags shall only be placed along or upon the base supports of the device and shall not be suspended above ground level or hung with rope, wire, chains or other fasteners.
9. Sheeting for barricades shall be retroreflective Type C (High Specific Intensity) conforming to Departmental Material Specfication DMS-8300 unless otherwise noted.

Barricades shall NOT be used as a sign support.

TYPICAL STRIPING DETAIL FOR BARRICADE RAIL

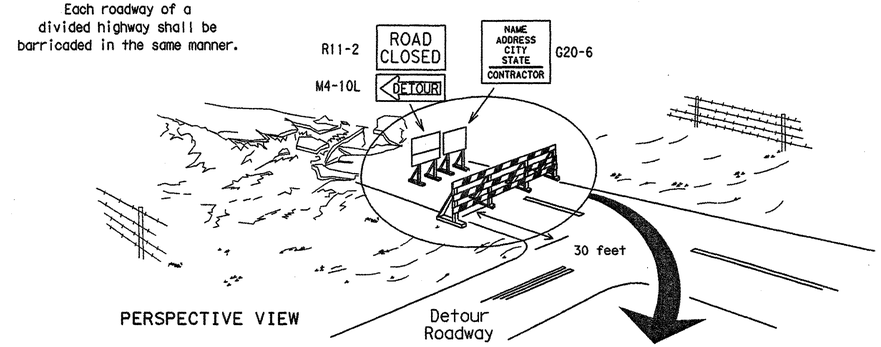


TYPICAL PANEL DETAIL FOR SKID OR POST TYPE BARRICADES



Stiffner may be inside or outside of support, but no more than 2 stiffeners shall be allowed on one barricade.

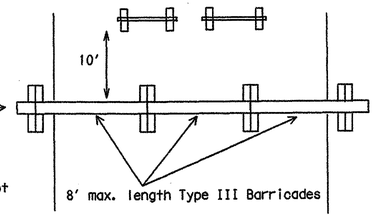
TYPE III BARRICADE (POST AND SKID) TYPICAL APPLICATION



PERSPECTIVE VIEW

The three rails on Type III barricades shall be reflectorized orange and reflective white stripes on one side facing one-way traffic and both sides for two-way traffic.

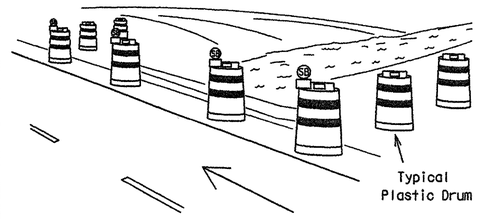
Barricade striping should slant downward in the direction of detour.



1. Signs should be mounted on independent supports at a 7 foot mounting height in center of roadway. The signs should be a minimum of 10 feet behind Type III Barricades.
2. Advance signing shall be as specified elsewhere in the plans.

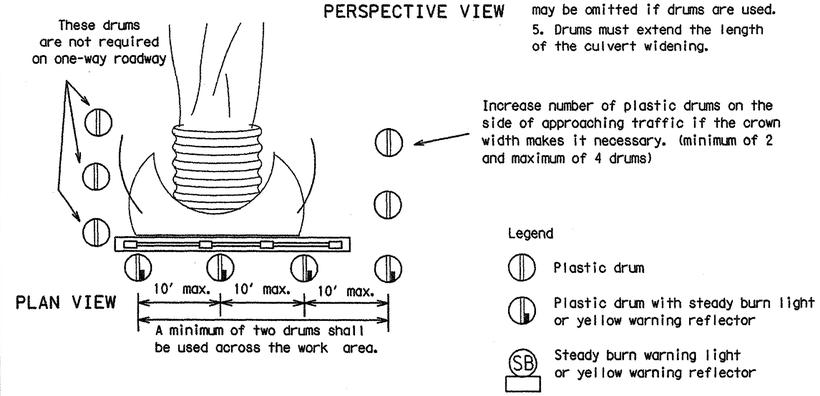
PLAN VIEW

CULVERT WIDENING OR OTHER ISOLATED WORK WITHIN THE PROJECT LIMITS



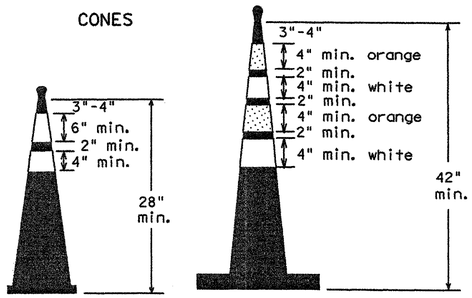
PERSPECTIVE VIEW

1. Where positive redirectional capability is provided, drums may be omitted.
2. Plastic construction fencing may be used with drums for safety as required in the plans.
3. Vertical Panels on flexible support may be substituted for drums when the shoulder width is less than 4 feet.
4. When the shoulder width is greater than 12 feet, steady-burn lights may be omitted if drums are used.
5. Drums must extend the length of the culvert widening.

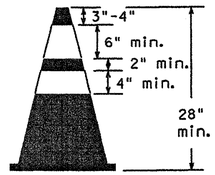


PLAN VIEW

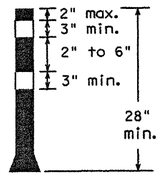
CONES



Two-Piece cones



One-Piece cones



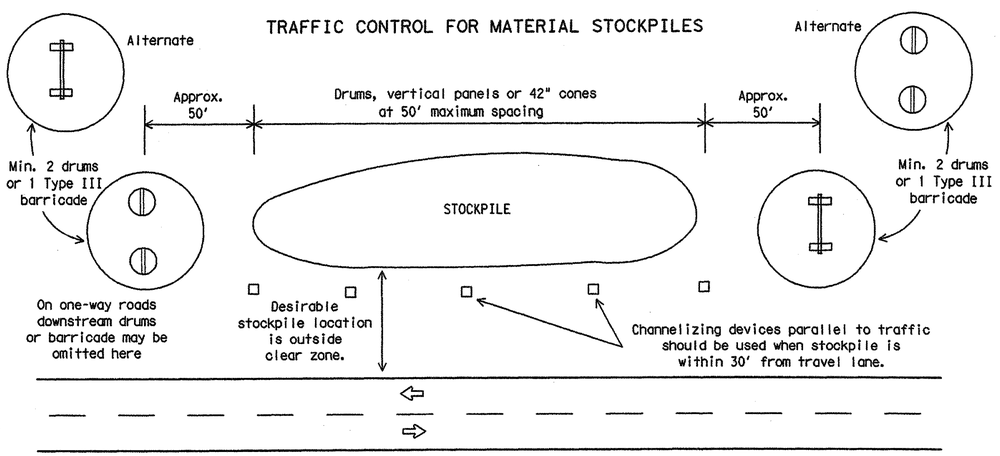
Tubular Marker

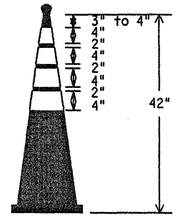
28" Cones shall have a minimum weight of 9 1/2 lbs.

42" 2-piece cones shall have a minimum weight of 30 lbs. including base.

1. Traffic cones and tubular markers shall be a minimum of 28 inches in height when used either on freeways or at nighttime.
2. Cones or tubular markers shall be predominantly orange, fluorescent red-orange, or fluorescent yellow-orange. They should be kept clean and bright for maximum visibility.
3. Cones used only for daytime operations do not require the reflectorized bands.
4. Cones and tubular markers used for nighttime operations shall be reflectorized. Reflectorized material shall have a smooth, sealed outer surface that displays the same approximate color during the day and night. The reflectorized bands shall be retroreflective Type C (High Specific Intensity) conforming to Departmental Material Specification DMS-8300, unless otherwise noted.
5. When used at night, appropriate personnel shall ensure that cones and tubular markers remain in their proper location and in an upright position.
6. Reflectorization of 28"cones shall consist of a minimum 6 inch band placed at least 3 inches but not more than 4 inches from the top, supplemented by a minimum 4 inch band spaced a minimum of 2 inches below the 6 inch band.
7. Reflectorization of 42" cones shall be provided by alternating 4 to 6" orange and white stripes with orange on top.
8. Reflectorization of tubular markers shall be a minimum of two 3 inch bands placed a maximum of 2 inches from the top with a maximum of 6 inches between bands.
9. One-piece cones or tubular markers are generally suitable for temporary usage (up to 8 hours) with other channelization devices such as vertical panels, drums or two-piece cones for long term usage. Care should be taken to ensure they remain in their proper location and in an upright position.
10. Cones or tubular markers used on each project shall be of the same size and shape.
11. The handle may be designed as a hook or other shape, fabricated from non-rigid materials similar to the cone material, and may extend up to a maximum of 8 inches above the top of cone. Length of the handle shall not be considered with regard to the overall height of the cone.

TRAFFIC CONTROL FOR MATERIAL STOCKPILES





EDGELINE CHANNELIZER

1. This device is intended only for use in place of a vertical panel to channelize traffic by indicating the edge of the travel lane. It is not intended to be used in transitions or tapers.
2. This device shall not be used to separate lanes of traffic (opposing or otherwise) or warn of objects.
3. This device is based on a 42 inch, two-piece cone with an alternate striping pattern: four 4 inch retroreflective bands, with an approximate 2 inch gap between bands. The color of the band should correspond to the color of the edgeline (yellow for left edgeline, white for right edgeline) for which the device is substituted or for which it supplements. The reflectorized bands shall be retroreflective Type C encapsulated bead (High Specific Intensity) conforming to Departmental Material Specification DMS-8300, unless otherwise noted.
4. The base must weigh a minimum of 30 lbs.

STANDARD PLANS
Texas Department of Transportation
Traffic Operations Division

BARRICADE AND CONSTRUCTION CHANNELIZING DEVICES STANDARD

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REVISIONS 9-07	STATE DISTRICT	FEDERAL REGION 6	FEDERAL AID PROJECT			SHEET
	COUNTY		CONTROL	SECTION	JOB	HIGHWAY

109A

C1.16

PI NO: 1393-08-087 DWG NO: 1393-08-087-07A.DWG

ACC:

LEVELS DISPLAYED																
1	2	3	4	5	6	7	8	9	10	11	12	31	41	51	61	62
71	81	91	201	211	221	231	241	251	261	271	281	291	301	311	321	322
331	341	351	361	371	381	391	401	411	421	431	441	451	461	471	481	482
491	501	511	521	531	541	551	561	571	581	591	601	611	621	631	641	643

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TEXAS BOARD OF PROFESSIONAL ENGINEERS, CERTIFICATE OF REGISTRATION #F-000461; TEXAS BOARD OF PROFESSIONAL LAND SURVEYING, CERTIFICATE OF REGISTRATION 100421-00

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WORK ZONE PAVEMENT MARKINGS

GENERAL

1. The Contractor shall be responsible for maintaining work zone and existing pavement markings, in accordance with the standard specifications and special provisions, on all roadways open to traffic within the CSJ limits unless otherwise stated in the plans.
2. Color, patterns and dimensions shall be in conformance with the "Texas Manual on Uniform Traffic Control Devices" (TMUTCD).
3. Additional supplemental pavement marking details may be found in the plans or specifications.
4. Pavement markings shall be installed in accordance with the TMUTCD and as shown on the plans.
5. When short term markings are required on the plans, short term markings shall conform with the TMUTCD, the plans and details as shown on the Standard Plan Sheet WZ(STPM).
6. When standard pavement markings are not in place and the roadway is opened to traffic, DO NOT PASS signs shall be erected to mark the beginning of the sections where passing is prohibited and PASS WITH CARE signs at the beginning of sections where passing is permitted.
7. All work zone pavement markings shall be installed in accordance with Item 662, "Work Zone Pavement Markings."

RAISED PAVEMENT MARKERS

1. Raised pavement markers are to be placed according to the patterns on BC(12).
2. All raised pavement markers used for work zone markings shall meet the requirements of Item 672, "RAISED PAVEMENT MARKERS" and Departmental Material Specification DMS-4200 or DMS-4300.

PREFABRICATED PAVEMENT MARKINGS

1. Removable prefabricated pavement markings shall meet the requirements of DMS-8241.
2. Non-removable prefabricated pavement markings (foil back) shall meet the requirements of DMS-8240.

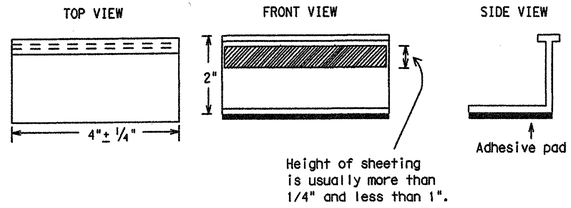
MAINTAINING WORK ZONE PAVEMENT MARKINGS

1. The Contractor will be responsible for maintaining work zone pavement markings within the work limits.
2. Work zone pavement markings shall be inspected in accordance with the frequency and reporting requirements of work zone traffic control device inspections as required by Form 599.
3. The markings should provide a visible reference for a minimum distance of 300 feet during normal daylight hours and 160 feet when illuminated by automobile low-beam headlights at night, unless sight distance is restricted by roadway geometrics.
4. Markings failing to meet this criteria within the first 30 days after placement shall be replaced at the expense of the Contractor as per Specification Item 662.

REMOVAL OF PAVEMENT MARKINGS

1. Pavement markings that are no longer applicable, could create confusion or direct a motorist toward or into the closed portion of the roadway, shall be removed or obliterated before the roadway is opened to traffic.
2. The above shall not apply to detours in place for less than two weeks, where flaggers and/or sufficient channelizing devices are used in lieu of markings to outline the detour route.
3. Pavement markings shall be removed to the fullest extent possible, so as not to leave a discernable marking. This shall be by any method approved by TxDOT Specification Item 677 for "Eliminating Existing Pavement Markings and Markers".
4. The removal of pavement markings may require resurfacing or seal coating portions of the roadway.
5. Subject to the approval of the Engineer, any method that proves to be successful on a particular type pavement may be used.
6. Blast cleaning may be used but will not be required unless specifically shown in the plans.
7. Over-painting of the markings SHALL NOT BE permitted.
8. Removal of raised pavement markers shall be as directed by the Engineer.
9. Removal of existing pavement markings and markers will be paid for directly in accordance with Item 677, "ELIMINATING EXISTING PAVEMENT MARKINGS AND MARKERS," unless otherwise stated in the plans.
10. Black-out marking tape may be used to cover conflicting existing markings for periods less than two weeks when approved by the Engineer.

Temporary Flexible-Reflective Roadway Marker Tabs



STAPLES OR NAILS SHALL NOT BE USED TO SECURE TEMPORARY FLEXIBLE-REFLECTIVE ROADWAY MARKER TABS TO THE PAVEMENT SURFACE

1. Temporary flexible-reflective roadway marker tabs used as guidemarks shall meet the requirements of DMS-8242.
2. Tabs detailed on this sheet are to be inspected and accepted by the Engineer or designated representative. Sampling and testing is not normally required, however at the option of the Engineer, either "A" or "B" below may be imposed to assure quality before placement on the roadway.
   A. Select five (5) or more tabs at random from each lot or shipment and submit to the Construction Division, Materials and Pavement Section to determine specification compliance.
   B. Select five (5) tabs and perform the following test. Affix five (5) tabs at 24 inch intervals on an asphaltic pavement in a straight line. Using a medium size passenger vehicle or pickup, run over the markers with the front and rear tires at a speed of 35 to 40 miles per hour, four (4) times in each direction. No more than one (1) out of the five (5) reflective surfaces shall be lost or displaced as a result of this test.
3. Small design variances may be noted between tab manufacturers.
4. See Standard Sheet WZ(STPM) for tab placement on new pavements. See Standard Sheet TCP(7-1) for tab placement on seal coat work.

Raised Pavement Markers used as Guidemarks

1. Raised pavement markers used as guidemarks shall be from the approved product list, and meet the requirements of DMS-4200.
2. All temporary construction raised pavement markers provided on a project shall be of the same manufacturer.
3. Adhesive for guidemarks shall be bituminous material hot applied or butyl rubber pad for all surfaces, or thermoplastic for concrete surfaces.

Guidemarks shall be designated as:
YELLOW - (two amber reflective surfaces with yellow body).
WHITE - (one silver reflective surface with white body).

DEPARTMENTAL MATERIAL SPECIFICATIONS

PAVEMENT MARKERS (REFLECTORIZED)	DMS-4200
TRAFFIC BUTTONS	DMS-4300
EPOXY AND ADHESIVES	DMS-6100
BITUMINOUS ADHESIVE FOR PAVEMENT MARKERS	DMS-6130
PREFABRICATED PAVEMENT MARKINGS-PERMANENT	DMS-8240
PREFABRICATED PAVEMENT MARKINGS-REMOVABLE	DMS-8241
TEMPORARY FLEXIBLE-REFLECTIVE ROADWAY MARKER TABS	DMS-8242

A list of prequalified reflective raised pavement markers, non-reflective traffic buttons, roadway marker tabs and other pavement markings can be found at the Material Producer List web address shown on BC(1).

LEVELS DISPLAYED																		ACC:
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16			
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32			
33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48			
49	50	51	52	53	54	55	56	57	58	59	60	61	62	63				

STANDARD PLANS
Texas Department of Transportation
Traffic Operations Division

BARRICADE AND CONSTRUCTION PAVEMENT MARKINGS STANDARD

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REVISIONS	STATE DISTRICT	FEDERAL REGION	FEDERAL AID PROJECT	SHEET
2-98		6		
1-02				
11-02	COUNTY	CONTROL	SECTION JOB	HIGHWAY
9-07				

109B

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PI NO: 1393-08-087

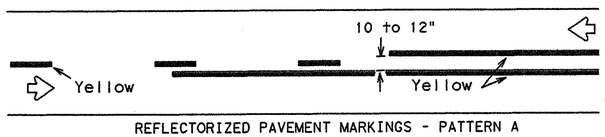
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TEXAS BOARD OF PROFESSIONAL ENGINEERS, CERTIFICATE OF REGISTRATION #F-000491; TEXAS BOARD OF PROFESSIONAL LAND SURVEYING, CERTIFICATE OF REGISTRATION 100421-00

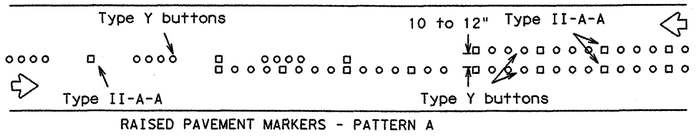
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PAVEMENT MARKING PATTERNS

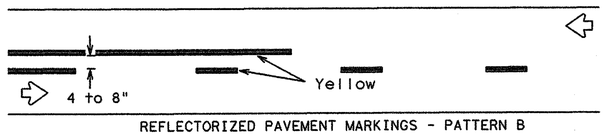
CENTER LINE & NO-PASSING ZONE BARRIER LINES FOR TWO-LANE, TWO-WAY HIGHWAYS



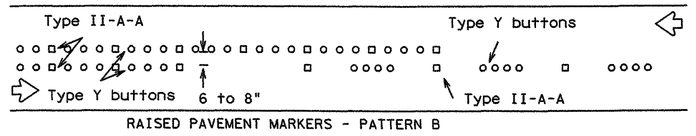
REFLECTORIZED PAVEMENT MARKINGS - PATTERN A



RAISED PAVEMENT MARKERS - PATTERN A



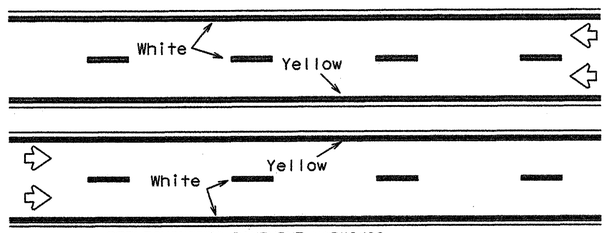
REFLECTORIZED PAVEMENT MARKINGS - PATTERN B



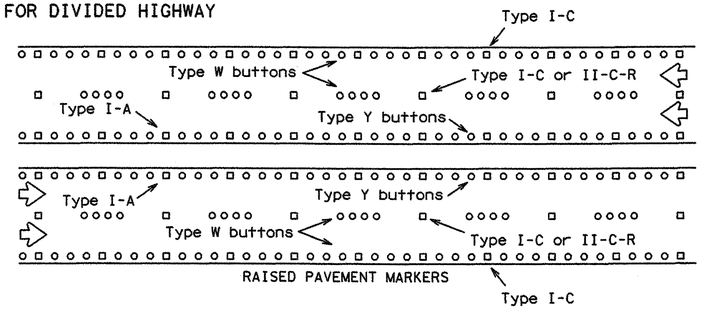
RAISED PAVEMENT MARKERS - PATTERN B

Pattern A is the TXDOT Standard, however Pattern B may be used if approved by the Engineer.
Prefabricated markings may be substituted for reflectorized pavement markings.

EDGE & LANE LINES FOR DIVIDED HIGHWAY



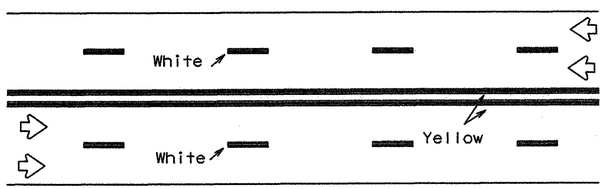
REFLECTORIZED PAVEMENT MARKINGS



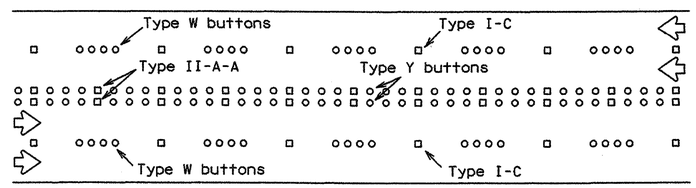
RAISED PAVEMENT MARKERS

Prefabricated markings may be substituted for reflectorized pavement markings.

LANE & CENTER LINES FOR MULTILANE UNDIVIDED HIGHWAYS



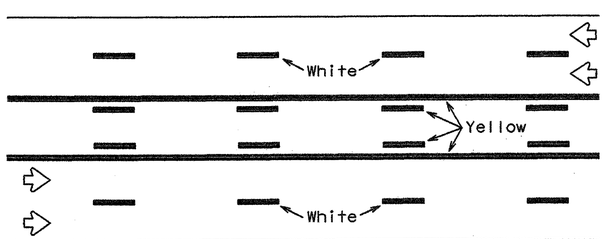
REFLECTORIZED PAVEMENT MARKINGS



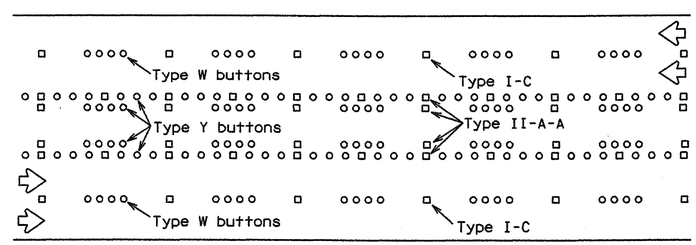
RAISED PAVEMENT MARKERS

Prefabricated markings may be substituted for reflectorized pavement markings.

TWO-WAY LEFT TURN LANE



REFLECTORIZED PAVEMENT MARKINGS



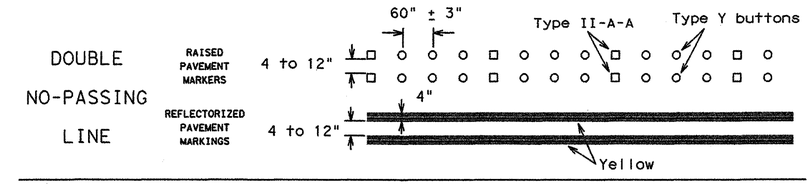
RAISED PAVEMENT MARKERS

Prefabricated markings may be substituted for reflectorized pavement markings.

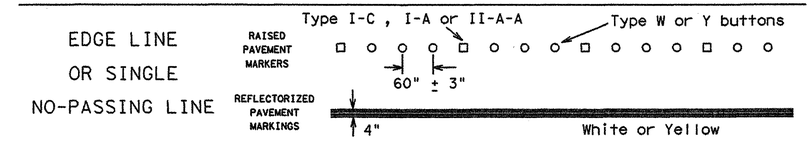
STANDARD WORK ZONE PAVEMENT MARKINGS DETAILS

SOLID LINES

DOUBLE NO-PASSING LINE

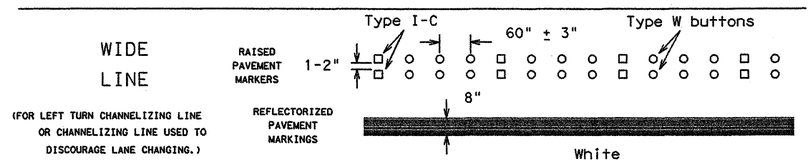


EDGE LINE OR SINGLE NO-PASSING LINE



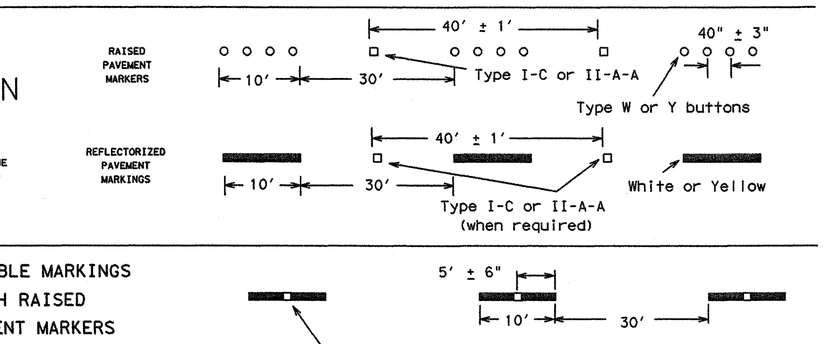
WIDE LINE

(FOR LEFT TURN CHANNELIZING LINE OR CHANNELIZING LINE USED TO DISCOURAGE LANE CHANGING.)



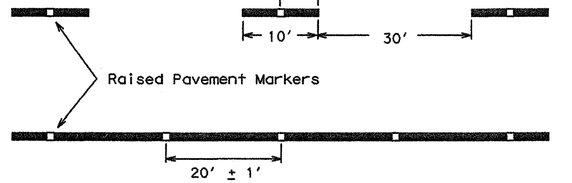
BROKEN LINE

(FOR CENTER LINE OR LANE LINE.)



REMOVABLE MARKINGS WITH RAISED PAVEMENT MARKERS

If raised pavement markers are used to supplement REMOVABLE markings, the markers shall be applied to the top of the tape at the approximate mid length of tape used for broken lines or at 20 foot spacing for solid lines. This allows an easier removal of raised pavement markers and tape.



Centerline only - not to be used on edge lines

Raised pavement markers used as standard pavement markings shall be from the approved products list and meet the requirements of Item 672 "RAISED PAVEMENT MARKERS."

STANDARD PLANS
Texas Department of Transportation
Traffic Operations Division

BARRICADE AND CONSTRUCTION PAVEMENT MARKING PATTERNS STANDARD

12 of 12 BC(12)-07

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REVISIONS	STATE DISTRICT	FEDERAL REGION	FEDERAL AID PROJECT	SHEET
1-97				
2-98		6		
11-02	COUNTY		CONTROL SECTION JOB	HIGHWAY
9-07				

109C

C1.18

PI NO: 1393-08-087

DWG NO: 1393-08-087-07A.DWG

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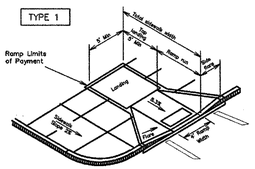
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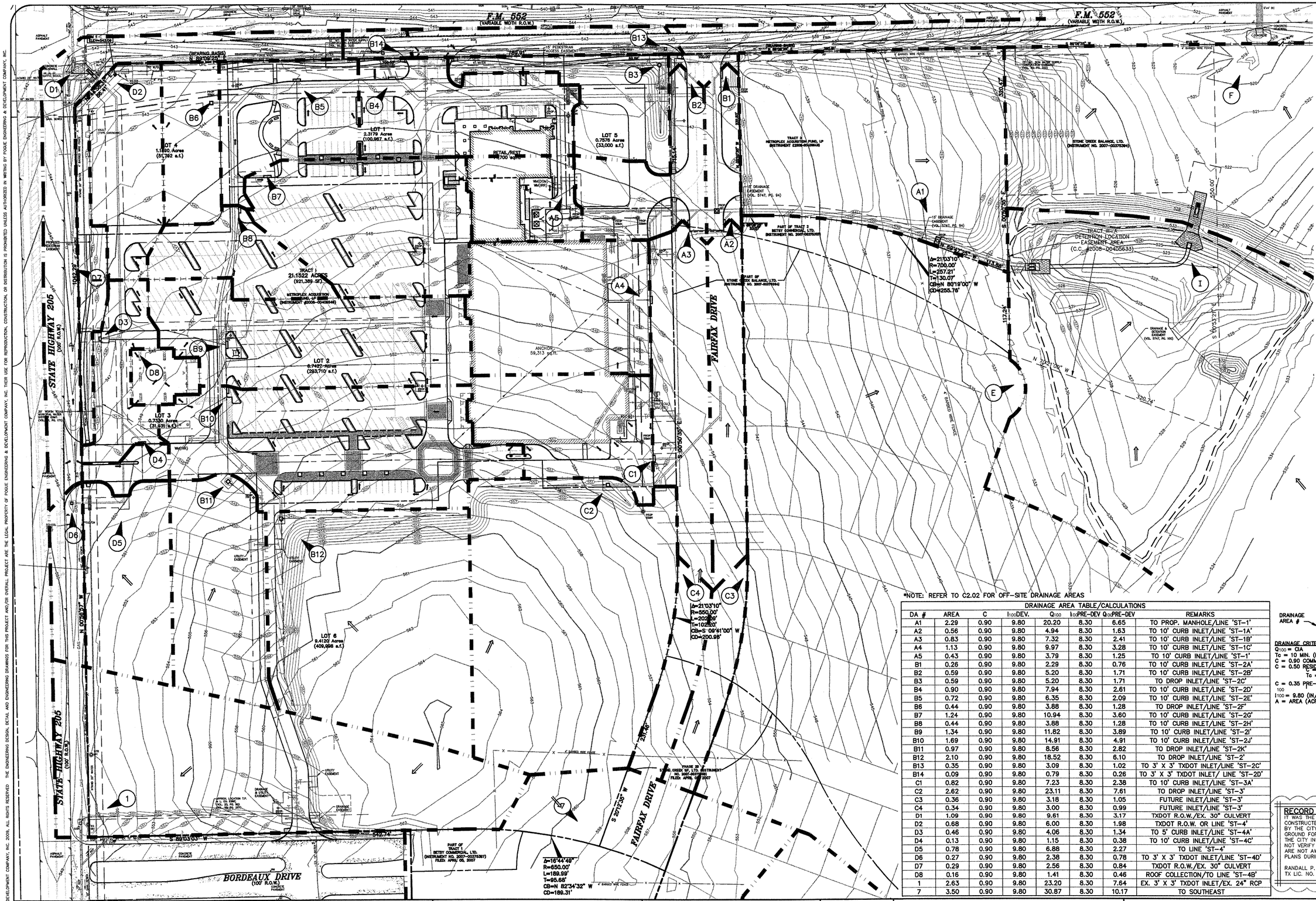
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33 43 53 63 73 83 93 04 14 24 34 44 54 64 74 84
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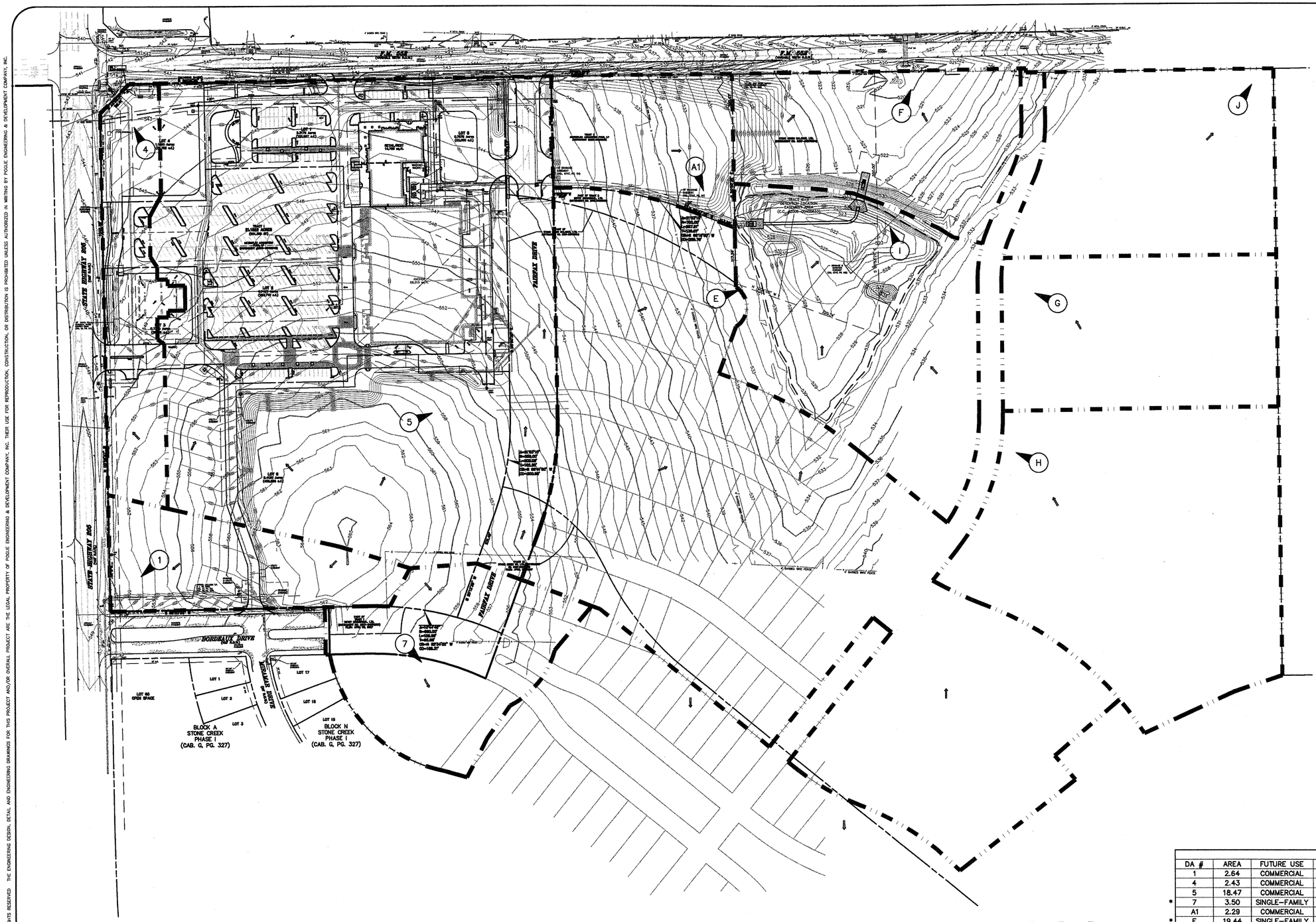
ACC:

TEXAS BOARD OF PROFESSIONAL ENGINEERS, CERTIFICATE OF REGISTRATION #F-000481; TEXAS BOARD OF PROFESSIONAL LAND SURVEYING, CERTIFICATE OF REGISTRATION 100421-00

TYPE 1


Ramp Limits of Payment
Landing
Ramp
Width
Width
Width


F.M. 552
(VARIABLE WIDTH R.O.W.)
STATE HIGHWAY 205
(100' R.O.W.)
FAIRFAX DRIVE
BORDEAUX DRIVE
(100' R.O.W.)
LOT 1
2.3179 Acres
(100,967 s.f.)
LOT 2
6.7497 Acres
(293,710 s.f.)
LOT 3
0.7330 Acres
(31,931 s.f.)
LOT 4
1.1800 Acres
(51,392 s.f.)
LOT 5
0.7576 Acres
(33,000 s.f.)
LOT 6
9.4120 Acres
(409,998 s.f.)
TRACT 1
21.1522 ACRES
(921,389 SF)
RETAIL/REST.
(8,700 sq.ft.)
ANCHOR
59,313 sq.ft.
TRACT 3
METROPLEX ACQUISITION FUND, LP
(INSTRUMENT #2006-0046648)
STONE CREEK BALANCE, LTD.
(INSTRUMENT NO. 2007-00375394)
PART OF TRACT 2
BETSY COMMERCIAL, LTD.
(INSTRUMENT NO. 2007-00375397)
TRACT III-A
DETENTION LOCATION
EASEMENT AREA
(C.C.# 2008-0040633)
PHASE 2B OF
STONE CREEK BALANCE, LTD. (INSTRUMENT NO. 2007-00375394)
FILED: APRIL 06, 2007
PART OF TRACT
BETSY COMMERCIAL LTD.
(INSTRUMENT NO. 2007-00375397)
FILED: APRIL 06, 2007
Δ=21°03'10"
R=700.00'
L=257.21'
T=130.07
CB=N 80°18'00" W
CD=255.76'
Δ=21°03'10"
R=550.00'
L=202.06'
T=102.20'
CB=S 09°41'00" W
CD=200.98'
Δ=16°44'49"
R=850.00'
L=189.99'
T=95.68'
CB=N 82°34'32" W
CD=189.31'
N 89°47'25" W 113.98'
S 00°12'35" W 237.46'
S 00°03'32" E 112.25'
N 00°12'35" E 320.74'
S 00°50'57" E 450.00'
N 00°50'57" W 1042.29'
S 89°03'03" W 642.74'
N 89°09'03" E 789.91'
S 00°50'57" W 1042.29'
S 00°50'57" W 1042.29'
S 00°50'57" W 450.47'
S 00°50'57" W 1042.29'
S 00°50'57" W 1042.29'
(BEARING BASIS)
N 89°09'03" E
789.91'
ANCHOR
59,313 sq.ft.
RETAIL/REST.
(8,700 sq.ft.)
TRACT 1
21.1522 ACRES
(921,389 SF)
LOT 1
2.3179 Acres
(100,967 s.f.)
LOT 2
6.7497 Acres
(293,710 s.f.)
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S 00°50'57" W 1042.29'
S 00°50'57" W 1042.29'
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0 50 100 200 300

GRAPHIC SCALE IN FEET
SCALE: 1" = 100'

LEGEND

B	BOLLARD
EM	ELECTRIC METER
PP	POWER POLE
LS	LIGHT STANDARD
WM	WATER METER
WV	WATER VALVE
ICV	IRRIGATION CONTROL VALVE
FH	FIRE HYDRANT
FDC	FIRE DEPARTMENT CONNECTION
CO	CLEAN OUT
MH	MANHOLE
GM	GAS METER
TSC	TRAFFIC SIGNAL CONTROL
TSP	TRAFFIC SIGNAL POLE
SIGN	TRAFFIC SIGN
TELE	TELEPHONE BOX
TV	TV BOX
FP	FLAG POLE
L.A.	LANDSCAPE AREA
	PROPERTY LINE
O/HL	O.H. POWER LINES
TEL	U/G TELEPHONE LINES
WATER	U/G WATER LINE
GAS	U/G GAS LINE
	FENCE
500	EXISTING CONTOURS
XXX.XX	EXISTING SPOT GRADES
(C.M.)	CONTROLLING MONUMENT
SIR	5/8-INCH IRON ROD WITH "POGUE ENG & DEV" CAP SET
XXX	PROPOSED CONTOURS
TC XXX.XX	PROPOSED SPOT GRADES
G XXX.XX	
	PROPOSED EROSION CONTROL
	PROPOSED DRAINAGE DIVIDES

RECORD DRAWINGS:
IT WAS THE INTENT THAT THE IMPROVEMENTS SHOWN BE CONSTRUCTED ACCORDING TO THESE PLANS AS APPROVED BY THE CITY. THE LINES AND GRADES WERE SET ON THE GROUND FOR CONSTRUCTION ACCORDING TO SAID PLANS. THE CITY INSPECTED THE CONSTRUCTION. THE ENGINEER DID NOT VERIFY LINES OR GRADES AFTER CONSTRUCTION. WE ARE NOT AWARE OF ANY CHANGES OR REVISIONS TO THESE PLANS DURING CONSTRUCTION OTHER THAN THOSE SHOWN.

RANDALL P. POGUE, P.E.
TX LIC. NO. 84780

DATE: APRIL 15, 2010 (4)

DRAINAGE AREA TABLE/CALCULATIONS

	DA #	AREA	FUTURE USE	C	I_{100}DEV.	Q_{100}	REMARKS
	1	2.64	COMMERCIAL	0.90	9.80	23.3	TO EX. 24" RCP UNDER BORDEAUX DRIVE
	4	2.43	COMMERCIAL	0.90	9.80	21.4	TO EX. 36" RCP AT SH 205/FM 552 INTERSECTION
	5	18.47	COMMERCIAL	0.90	9.80	162.9	TO PROPOSED DETENTION POND
*	7	3.50	SINGLE-FAMILY	0.50	9.80	17.1	TO SOUTHEAST
	A1	2.29	COMMERCIAL	0.90	9.80	20.2	TO PROPOSED DETENTION POND
*	E	19.44	SINGLE-FAMILY	0.50	9.80	95.3	TO PROPOSED DETENTION POND
*	F	3.82	PARK	0.35	8.30	11.1	TO EX. 6'X4' RCBC UNDER F.M. 552
*	G	4.29	SCHOOL	0.70	9.80	29.4	TO PROPOSED DETENTION POND
*	H	8.15	PARK	0.35	8.30	23.7	TO PROPOSED DETENTION POND
*	I	6.06	PARK	0.35	8.30	17.6	TO PROPOSED DETENTION POND
*	J	4.53	SCHOOL	0.70	9.80	31.1	TO NORTHEAST CORNER

* DRAINAGE AREAS REFLECTED PER PLANS TITLED "STONE CREEK NORTHERN BASIN DETENTION ANALYSIS", AS PREPARED BY CORWIN ENGINEERING, INC., DATED AUGUST 1, 2008.

NO.	DATE	REVISION / DESCRIPTION
4	04-15-10	RECORD DRAWINGS
3	02-24-10	ADDED RIGHT TURN LANE ON S.H. 205
2	07-17-09	SANITARY SEWER & ADA ROUTE REVISIONS
1	06-19-09	TXDOT COMMENTS

DESIGN	DRAWN	DATE	SCALE	NOTES
BEC	WTW	05-21-09	AS SHOWN	-

OWNER
METROPLEX ACQUISITION FUND, LP
8214 WESTCHESTER, SUITE 850
DALLAS, TEXAS 75225
MR. GREY STOGNER
(214) 343-4477 PHONE
(214) 340-2029 FAX

DEVELOPER
CRESTVIEW REAL ESTATE, L.L.C.
8214 WESTCHESTER, SUITE 850
DALLAS, TEXAS 75225
MR. GREY STOGNER
(214) 343-4477 PHONE
(214) 340-2029 FAX

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY BRANDON E. COX, P.E. 101037 ON 05-21-09. ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT.

Brandon E. Cox 05-21-09

STATE OF TEXAS
BRANDON E. COX
101037
LICENSED
PROFESSIONAL ENGINEER

POGUE
ENGINEERING & DEVELOPMENT COMPANY, INC.
1512 BRAY CENTRAL DRIVE
SUITE 100
McKINNEY, TEXAS 75069
(214) 544-8880 PHONE
(214) 544-8882 FAX
www.PogueEngineering.com

REGIONAL DRAINAGE AREA MAP

STONE CREEK RETAIL
BLOCK A, LOTS 1-6, STONE CREEK RETAIL ADDITION
W.T. DEWEESE SURVEY, ABSTRACT NO. 71
CITY OF ROCKWALL, TEXAS

SHEET NO. C2.02

PI NO: 1393-08-087

DWG NO: 1393-08-087-07A.DWG

STONE CREEK RETAIL - ROCKWALL

TEXAS BOARD OF PROFESSIONAL ENGINEERS, CERTIFICATE OF REGISTRATION #F-00461; TEXAS BOARD OF PROFESSIONAL LAND SURVEYING, CERTIFICATE OF REGISTRATION 100421-00

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TWILLIAMS 04/29/2010 - 3:52PM
N:\JOBS\1300-1399\1393-08-087\DWG\1393-08-087-07A.DWG

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TWILLIAMS 04/29/2010 - 3:52PM
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AREAS DRAINING TO POND				
DA #	AREA	FUTURE USE	C	CA
5	18.39	COMMERCIAL	0.90	16.56
A1	2.29	COMMERCIAL	0.90	2.06
E	19.44	SINGLE-FAMILY	0.50	9.72
G	4.29	SCHOOL	0.70	3.00
H	8.15	PARK	0.35	2.85
I	6.06	PARK	0.35	2.12
TOTAL	58.62	WEIGHTED C VALUE	0.62	36.31

STAGE-STORAGE TABLE	
ELEVATION	VOLUME (CF)
525.00	0
526.00	6,382
527.00	38,397
528.00	92,727
529.00	164,508
530.00	257,701
530.50	313,425

6/18/2009
1:13 PM

100-YR DESIGN

CITY OF ROCKWALL DETENTION BASIN DESIGN
MODIFIED RATIONAL METHOD

PI#: 1393-08-087
Date: 5/18/2009
Time: 1:12 PM

GIVEN:
Total Area = 58.6200 AC
Prop C = 0.62
Prop Tc = 10 min
$Q_{developed}$ = 356.19 cfs
Q_{bypass} = 137.90 cfs
Q_p = 170.29 cfs
Exist C = 0.35
Exist Tc = 20 min

BYPASS & FLOW THRU:
Bypass Area = 0 AC
Area Routed to Pond = 58.6200 AC
Flow Thru Area = 0.0000 AC
Flow Thru Q_{bypass} = 0.00 cfs
Flow Thru A_{bypass} = 0 AC
Flow Thru Q_{bypass} = 0.00 cfs
Flow Thru Q_p = 0.00 cfs
TOTAL Q_p = 137.90 cfs

RESULT:
Maximum Required
Storage = 308,037 cf

5 min.	I=	10.10	Q=	0.62 x	10.1 x	58.62 = 367.06 cfs
10 min.	I=	9.80	Q=	0.62 x	9.8 x	58.62 = 356.18 cfs
15 min.	I=	9.00	Q=	0.62 x	9.0 x	58.62 = 327.10 cfs
20 min.	I=	8.30	Q=	0.62 x	8.3 x	58.62 = 301.66 cfs
30 min.	I=	6.90	Q=	0.62 x	8.9 x	58.62 = 250.76 cfs
40 min.	I=	5.80	Q=	0.62 x	5.8 x	58.62 = 210.80 cfs
50 min.	I=	5.00	Q=	0.62 x	5.0 x	58.62 = 181.72 cfs
60 min.	I=	4.50	Q=	0.62 x	4.5 x	58.62 = 163.56 cfs
70 min.	I=	4.10	Q=	0.62 x	4.1 x	58.62 = 149.01 cfs
80 min.	I=	3.90	Q=	0.62 x	3.9 x	58.62 = 141.74 cfs
90 min.	I=	3.60	Q=	0.62 x	3.6 x	58.62 = 130.84 cfs

5 min Storm	In	5 x	367.1 x	60 =			110,124 cf
	Out	0.5 x	15 x	137.9 x	60 =		62,055 cf
					Storage =		48,069 cf
10 min Storm	In	10 x	356.2 x	60 =			213,705 cf
	Out	0.5 x	20 x	137.9 x	60 =		82,740 cf
					Storage =		130,965 cf
15 min Storm	In	15 x	327.1 x	60 =			294,390 cf
	Out	0.5 x	25 x	137.9 x	60 =		103,425 cf
					Storage =		190,965 cf
20 min Storm	In	20 x	301.7 x	60 =			361,990 cf
	Out	0.5 x	30 x	137.9 x	60 =		124,110 cf
					Storage =		237,880 cf
30 min Storm	In	30 x	250.8 x	60 =			451,397 cf
	Out	0.5 x	40 x	137.9 x	60 =		165,480 cf
					Storage =		285,917 cf
40 min Storm	In	40 x	210.8 x	60 =			505,914 cf
	Out	0.5 x	50 x	137.9 x	60 =		206,850 cf
					Storage =		299,064 cf
50 min Storm	In	50 x	181.7 x	60 =			545,166 cf
	Out	0.5 x	60 x	137.9 x	60 =		248,220 cf
					Storage =		296,946 cf
60 min Storm	In	60 x	163.5 x	60 =			588,779 cf
	Out	0.5 x	70 x	137.9 x	60 =		289,590 cf
					Storage =		299,189 cf
70 min Storm	In	70 x	149.0 x	60 =			625,851 cf
	Out	0.5 x	80 x	137.9 x	60 =		330,960 cf
					Storage =		294,891 cf
80 min Storm	In	80 x	141.7 x	60 =			680,367 cf
	Out	0.5 x	90 x	137.9 x	60 =		372,330 cf
					Storage =		308,037 cf ← CONTROLS
90 min Storm	In	90 x	130.8 x	60 =			706,535 cf
	Out	0.5 x	100 x	137.9 x	60 =		413,700 cf
					Storage =		292,836 cf

50-YR DESIGN

CITY OF ROCKWALL DETENTION BASIN DESIGN
MODIFIED RATIONAL METHOD

PI#: 1312-08-094
Date: 5/18/2009
Time: 1:12 PM

GIVEN:
Total Area = 58.6200 AC
Prop C = 0.62
Prop Tc = 10 min
$Q_{developed}$ = 327.10 cfs
Q_{bypass} = 153.88 cfs
Q_p = 109.60 cfs
Exist C = 0.35
Exist Tc = 20 min

BYPASS & FLOW THRU:
Bypass Area = 0 AC
Area Routed to Pond = 58.6200 AC
Flow Thru Area = 0.0000 AC
Flow Thru Q_{bypass} = 0.00 cfs
Flow Thru A_{bypass} = 0 AC
Flow Thru Q_{bypass} = 0.00 cfs
Flow Thru Q_p = 0.00 cfs
TOTAL Q_p = 109.60 cfs

RESULT:
Maximum Required
Storage = 244,885 cf

5 min.	I=	9.20	Q=	0.62 x	9.2 x	58.62 = 334.37 cfs
10 min.	I=	8.30	Q=	0.62 x	8.3 x	58.62 = 301.66 cfs
15 min.	I=	7.40	Q=	0.62 x	7.4 x	58.62 = 268.95 cfs
20 min.	I=	6.60	Q=	0.62 x	6.6 x	58.62 = 239.87 cfs
30 min.	I=	5.50	Q=	0.62 x	5.5 x	58.62 = 199.89 cfs
40 min.	I=	4.60	Q=	0.62 x	4.6 x	58.62 = 167.18 cfs
50 min.	I=	4.00	Q=	0.62 x	4.0 x	58.62 = 145.36 cfs
60 min.	I=	3.50	Q=	0.62 x	3.5 x	58.62 = 127.21 cfs
70 min.	I=	3.30	Q=	0.62 x	3.3 x	58.62 = 119.94 cfs
80 min.	I=	3.10	Q=	0.62 x	3.1 x	58.62 = 112.67 cfs
90 min.	I=	2.90	Q=	0.62 x	2.9 x	58.62 = 105.40 cfs

5 min Storm	In	5 x	334.4 x	60 =			100,311 cf
	Out	0.5 x	15 x	109.6 x	60 =		49,320 cf
					Storage =		50,991 cf
10 min Storm	In	10 x	301.7 x	60 =			180,995 cf
	Out	0.5 x	20 x	109.6 x	60 =		65,760 cf
					Storage =		115,235 cf
15 min Storm	In	15 x	268.9 x	60 =			242,054 cf
	Out	0.5 x	25 x	109.6 x	60 =		82,200 cf
					Storage =		159,854 cf
20 min Storm	In	20 x	239.9 x	60 =			287,848 cf
	Out	0.5 x	30 x	109.6 x	60 =		98,640 cf
					Storage =		189,208 cf
30 min Storm	In	30 x	199.9 x	60 =			359,810 cf
	Out	0.5 x	40 x	109.6 x	60 =		131,520 cf
					Storage =		228,290 cf
40 min Storm	In	40 x	167.2 x	60 =			401,242 cf
	Out	0.5 x	50 x	109.6 x	60 =		164,400 cf
					Storage =		236,842 cf
50 min Storm	In	50 x	145.4 x	60 =			436,133 cf
	Out	0.5 x	60 x	109.6 x	60 =		197,280 cf
					Storage =		238,853 cf
60 min Storm	In	60 x	127.2 x	60 =			457,930 cf
	Out	0.5 x	70 x	109.6 x	60 =		230,160 cf
					Storage =		227,770 cf
70 min Storm	In	70 x	119.9 x	60 =			503,733 cf
	Out	0.5 x	80 x	109.6 x	60 =		263,040 cf
					Storage =		240,693 cf
80 min Storm	In	80 x	112.7 x	60 =			540,805 cf
	Out	0.5 x	90 x	109.6 x	60 =		295,920 cf
					Storage =		244,885 cf ← CONTROLS
90 min Storm	In	90 x	105.4 x	60 =			569,163 cf
	Out	0.5 x	100 x	109.6 x	60 =		328,800 cf
					Storage =		240,363 cf

25-YR DESIGN

CITY OF ROCKWALL DETENTION BASIN DESIGN
MODIFIED RATIONAL METHOD

PI#: 1312-08-094
Date: 5/18/2009
Time: 1:12 PM

GIVEN:
Total Area = 58.6200 AC
Prop C = 0.62
Prop Tc = 10 min
$Q_{developed}$ = 301.66 cfs
Q_{bypass} = 135.41 cfs
Q_p = 98.00 cfs
Exist C = 0.35
Exist Tc = 20 min

BYPASS & FLOW THRU:
Bypass Area = 0 AC
Area Routed to Pond = 58.6200 AC
Flow Thru Area = 0.0000 AC
Flow Thru Q_{bypass} = 0.00 cfs
Flow Thru A_{bypass} = 0 AC
Flow Thru Q_{bypass} = 0.00 cfs
Flow Thru Q_p = 0.00 cfs
TOTAL Q_p = 98.00 cfs

RESULT:
Maximum Required
Storage = 274,166 cf

5 min.	I=	8.50	Q=	0.62 x	8.5 x	58.62 = 308.62 cfs
10 min.	I=	7.60	Q=	0.62 x	7.6 x	58.62 = 276.91 cfs
15 min.	I=	6.80	Q=	0.62 x	6.8 x	58.62 = 247.79 cfs
20 min.	I=	6.20	Q=	0.62 x	6.2 x	58.62 = 225.89 cfs
30 min.	I=	5.10	Q=	0.62 x	5.1 x	58.62 = 185.83 cfs
40 min.	I=	4.30	Q=	0.62 x	4.3 x	58.62 = 156.62 cfs
50 min.	I=	3.70	Q=	0.62 x	3.7 x	58.62 = 134.82 cfs
60 min.	I=	3.30	Q=	0.62 x	3.3 x	58.62 = 120.20 cfs
70 min.	I=	3.00	Q=	0.62 x	3.0 x	58.62 = 109.28 cfs
80 min.	I=	2.80	Q=	0.62 x	2.8 x	58.62 = 101.70 cfs
90 min.	I=	2.60	Q=	0.62 x	2.6 x	58.62 = 94.50 cfs

5 min Storm	In	5 x	308.6 x	60 =			92,586 cf
	Out	0.5 x	15 x	98.0 x	60 =		44,100 cf
					Storage =		48,486 cf
10 min Storm	In	10 x	276.9 x	60 =			166,146 cf
	Out	0.5 x	20 x	98.0 x	60 =		58,800 cf
					Storage =		107,346 cf
15 min Storm	In	15 x	247.8 x	60 =			223,602 cf
	Out	0.5 x	25 x	98.0 x	60 =		73,500 cf
					Storage =		150,102 cf
20 min Storm	In	20 x	225.9 x	60 =			271,068 cf
	Out	0.5 x	30 x	98.0 x	60 =		88,200 cf
					Storage =		182,868 cf
30 min Storm	In	30 x	185.8 x	60 =			334,494 cf
	Out	0.5 x	40 x	98.0 x	60 =		117,600 cf
					Storage =		216,894 cf
40 min Storm	In	40 x	156.6 x	60 =			375,840 cf
	Out	0.5 x	50 x	98.0 x	60 =		147,000 cf
					Storage =		228,840 cf
50 min Storm	In	50 x	134.8 x	60 =			404,460 cf
	Out	0.5 x	60 x	98.0 x	60 =		176,400 cf
					Storage =		228,060 cf
60 min Storm	In	60 x	120.2 x	60 =			432,720 cf
	Out	0.5 x	70 x	98.0 x	60 =		205,800 cf
					Storage =		226,920 cf
70 min Storm	In	70 x	109.3 x	60 =			459,060 cf
	Out	0.5 x	80 x	98.0 x	60 =		235,200 cf
					Storage =		223,860 cf
80 min Storm	In	80 x	101.7 x	60 =			488,160 cf
	Out	0.5 x	90 x	98.0 x	60 =		264,600 cf
					Storage =		223,560 cf
90 min Storm	In	90 x	94.5 x	60 =			510,300 cf
	Out	0.5 x	100 x	98.0 x	60 =		294,000 cf
					Storage =		216,300 cf

10-YR DESIGN

CITY OF ROCKWALL DETENTION BASIN DESIGN
MODIFIED RATIONAL METHOD

PI#: 1312-08-094
Date: 5/18/2009
Time: 1:12 PM

GIVEN:
Total Area = 58.6200 AC
Prop C = 0.62
Prop Tc = 10 min
$Q_{developed}$ = 258.05 cfs
Q_{bypass} = 121.05 cfs
Q_p = 98.00 cfs
Exist C = 0.35
Exist Tc = 20 min

BYPASS & FLOW THRU:
Bypass Area = 0 AC
Area Routed to Pond = 58.6200 AC
Flow Thru Area = 0.0000 AC
Flow Thru Q_{bypass} = 0.00 cfs
Flow Thru A_{bypass} = 0 AC
Flow Thru Q_{bypass} = 0.00 cfs
Flow Thru Q_p = 0.00 cfs
TOTAL Q_p = 98.00 cfs

RESULT:
Maximum Required
Storage = 205,216 cf

5 min.	I=	7.10	Q=	0.62 x	7.1 x	58.62 = 258.05 cfs
10 min.	I=	6.50	Q=	0.62 x	6.5 x	58.62 = 236.24 cfs
15 min.	I=	5.90	Q=	0.62 x	5.9 x	58.62 = 214.43 cfs
20 min.	I=	5.40	Q=	0.62 x	5.4 x	58.62 = 196.15 cfs
30 min.	I=	4.80	Q=	0.62 x	4.8 x	58.62 = 174.45 cfs
40 min.	I=	4.00	Q=	0.62 x	4.0 x	58.62 = 145.36 cfs
50 min.	I=	3.50	Q=	0.62 x	3.5 x	58.62 = 127.21 cfs
60 min.	I=	3.00	Q=	0.62 x	3.0 x	58.62 = 109.03 cfs
70 min.	I=	2.80	Q=	0.62 x	2.8 x	58.62 = 101.76 cfs
80 min.	I=	2.60	Q=	0.62 x	2.6 x	58.62 = 94.50 cfs
90 min.	I=	2.50	Q=	0.62 x	2.5 x	58.62 = 90.86 cfs

5 min Storm	In	5 x	258.0 x	60 =			77,407 cf
	Out	0.5 x	15 x	98.0 x	60 =		44,100 cf
					Storage =		33,307 cf
10 min Storm	In	10 x	236.2 x	60 =			141,727 cf
	Out	0.5 x	20 x	98.0 x	60 =		58,800 cf
					Storage =		82,927 cf
15 min Storm	In	15 x	214.4 x	60 =			192,744 cf
	Out	0.5 x	25 x	98.0 x	60 =		73,500 cf
					Storage =		119,244 cf
20 min Storm	In	20 x	196.2 x	60 =			235,416 cf
	Out	0.5 x	30 x	98.0 x	60 =		88,200 cf
					Storage =		147,216 cf
30 min Storm	In	30 x	174.5 x	60 =			314,115 cf
	Out	0.5 x	40 x	98.0 x	60 =		117,600 cf
					Storage =		196,515 cf
40 min Storm	In	40 x	145.4 x	60 =			348,906 cf
	Out	0.5 x	50 x	98.0 x	60 =		147,000 cf
					Storage =		201,906 cf
50 min Storm	In	50 x	127.2 x	60 =			381,816 cf
	Out	0.5 x	60 x	98.0 x	60 =		176,400 cf
					Storage =		205,416 cf ← CONTROLS
60 min Storm	In	60 x	109.0 x	60 =			392,520 cf
	Out	0.5 x	70 x	98.0 x	60 =		205,800 cf
					Storage =		186,720 cf
70 min Storm	In	70 x	101.8 x	60 =			427,410 cf
	Out	0.5 x	80 x	98.0 x	60 =		235,200 cf
					Storage =		192,210 cf
80 min Storm	In	80 x	94.5 x	60 =			453,576 cf
	Out	0.5 x	90 x	98.0 x	60 =		264,600 cf
					Storage =		188,976 cf
90 min Storm	In	90 x	90.9 x	60 =			490,649 cf
	Out	0.5 x	100 x	98.0 x	60 =		294,000 cf
					Storage =		196,649 cf

DRAINAGE CALCULATIONS: (100-YR)
Q_{100} = KCIA
K * C < 1.0
K = 1.00
Tc = 20 MIN. (PRE-DEVELOPED)
I_{100} = 8.30 (IN/HR) PRE-DEVELOPED
C = 0.35 PRE-DEVELOPED
Tc = 10 MIN. (DEVELOPED)
I_{100} = 9.80 (IN/HR) DEVELOPED
C = 0.62 DEVELOPED (WEIGHTED VALUE)
A = DRAINAGE BASIN (OFF-SITE) = 0.00 ACRES
Q PASS THROUGH (Tc=20 MIN; C=0.35) = 0.00 CFS
A = DRAINAGE BASIN (SITE) = 58.62 ACRES
Q DEVELOPED = 356.19 CFS
Q PRE-DEVELOPED = 170.29 CFS
A (BYPASS) = 3.82 ACRES (DRAINAGE AREA F)
Q DEVELOPED (BYPASS) = 11.1 CFS (C=0.35, I=8.30)
BYPASS AREA IS ON-SITE AREA THAT DOES NOT ROUTE THROUGH POND
Q ALLOWED TO RELEASE AT DETENTION POND = Qr
Qr = Q PRE-DEV - Q DEV (BYPASS) + Q PASS THROUGH
Qr = 170.29 - 11.1 + 0.00 = 159.19 CFS
*DOWNSTREAM CULVERT WILL ONLY ACCEPT 149.0 CFS
Qr=149.0-DRAINAGE AREA F (11.1 CFS) = 137.90 CFS
VOLUME REQUIRED = 308,037 CF

OUTLET CONTROL (ORIFICE) 100-YR
Q = CA * √(2gH)
Q = Qr = Q ALLOWED (CFS) = 137.90 CFS
C = 0.66
A = ORIFICE AREA (SF)
g = GRAVITATIONAL CONSTANT = 32.2 FT/S^2
H = HYDRAULIC HEAD (FT)
H = 530.50 - 525.00 = 5.50
A = 11.1019 SF
USE 36" X 35" RECTANGULAR OPENING, 40" X 2 ½" RECTANGULAR OPENING, 40" X 3.5" RECTANGULAR OPENING & 40" X 2 ½" RECTANGULAR OPENING AT OUTLET STRUCTURE, REFER TO 03/C5.08
A = 11.1111 SF, WITHIN 1% TOLERANCE

DRAINAGE CALCULATIONS: (50-YR)
Q_{50} = KCIA
K * C ≤ 1.0
K = 1.00
Tc = 20 MIN. (PRE-DEVELOPED)
I_{50} = 7.50 (IN/HR) PRE-DEVELOPED
C = 0.35 PRE-DEVELOPED
Tc = 10 MIN. (DEVELOPED)
I_{50} = 9.00 (IN/HR) DEVELOPED
C = 0.62 DEVELOPED (WEIGHTED VALUE)
A = DRAINAGE BASIN (OFF-SITE) = 0.00 ACRES
Q PASS THROUGH (Tc=20 MIN; C=0.35) = 0.00 CFS
A = DRAINAGE BASIN (SITE) = 58.62 ACRES
Q DEVELOPED = 327.10 CFS
Q PRE-DEVELOPED = 153.88 CFS
A (BYPASS) = 3.82 ACRES (DRAINAGE AREA F)
Q DEVELOPED (BYPASS) = 10.0 CFS (C=0.35, I=7.50)
BYPASS AREA IS ON-SITE AREA THAT DOES NOT ROUTE THROUGH POND
Q ALLOWED TO RELEASE AT DETENTION POND = Qr
Qr = Q PRE-DEV - Q DEV (BYPASS) + Q PASS THROUGH
Qr = 153.88 - 10.0 + 0.00 = 143.88 CFS
*DOWNSTREAM CULVERT WILL ONLY ACCEPT 134.60 CFS
Qr = 134.60-DRAINAGE AREA F (10.0 CFS) = 124.60 CFS
VOLUME REQUIRED = 274,166 CF

OUTLET CONTROL (ORIFICE) 50-YR
Q = CA * √(2gH)
Q = Qr = Q ALLOWED (CFS) = 124.60 CFS
C = 0.66
A = ORIFICE AREA (SF)
g = GRAVITATIONAL CONSTANT = 32.2 FT/S^2
H = HYDRAULIC HEAD (FT)
H = 530.15 - 525.00 = 5.15
A = 10.3664 SF
USE 36" X 35" RECTANGULAR OPENING, 40" X 2 ½" RECTANGULAR OPENING & 40" X 3.5" RECTANGULAR OPENING AT OUTLET STRUCTURE, REFER TO 03/C5.08
A = 10.3694 SF, WITHIN 1% TOLERANCE

DRAINAGE CALCULATIONS: (25-YR)
Q_{25} = KCIA
K * C < 1.0
K = 1.00
Tc = 20 MIN. (PRE-DEVELOPED)
I_{25} = 6.60 (IN/HR) PRE-DEVELOPED
C = 0.35 PRE-DEVELOPED
Tc = 10 MIN. (DEVELOPED)
I_{25} = 8.30 (IN/HR) DEVELOPED
C = 0.62 DEVELOPED (WEIGHTED VALUE)
A = DRAINAGE BASIN (OFF-SITE) = 0.00 ACRES
Q PASS THROUGH (Tc=20 MIN; C=0.35) = 0.00 CFS
A = DRAINAGE BASIN (SITE) = 58.62 ACRES
Q DEVELOPED = 301.66 CFS
Q PRE-DEVELOPED = 135.41 CFS
A (BYPASS) = 3.82 ACRES (DRAINAGE AREA F)
Q DEVELOPED (BYPASS) = 8.8 CFS (C=0.35, I=6.6)
BYPASS AREA IS ON-SITE AREA THAT DOES NOT ROUTE THROUGH POND
Q ALLOWED TO RELEASE AT DETENTION POND = Qr
Qr = Q PRE-DEV - Q DEV (BYPASS) + Q PASS THROUGH
Qr = 135.41 - 8.8 + 0.00 = 126.61 CFS
*DOWNSTREAM CULVERT WILL ONLY ACCEPT 118.40 CFS
Qr = 118.40-DRAINAGE AREA F (8.8 CFS) = 109.60 CFS
VOLUME REQUIRED = 244,885 CF

OUTLET CONTROL (ORIFICE) 25-YR
Q = CA * √(2gH)
Q = Qr = Q ALLOWED (CFS) = 109.60 CFS
C = 0.66
A = ORIFICE AREA (SF)
g = GRAVITATIONAL CONSTANT = 32.2 FT/S^2
H = HYDRAULIC HEAD (FT)
H = 529.85 - 525.00 = 4.85
A = 9.3962 SF
USE 36" X 35" RECTANGULAR OPENING & 40" X 2 ½" RECTANGULAR OPENING AT OUTLET STRUCTURE, REFER TO 03/C5.08
A = 9.3972 SF, WITHIN 1% TOLERANCE

DRAINAGE CALCULATIONS: (10-YR)
Q_{10} = KCIA
K * C < 1.0
K = 1.00
Tc = 20 MIN. (PRE-DEVELOPED)
I_{10} = 5.90 (IN/HR) PRE-DEVELOPED
C = 0.35 PRE-DEVELOPED
Tc = 10 MIN. (DEVELOPED)
I_{10} = 7.10 (IN/HR) DEVELOPED
C = 0.62 DEVELOPED (WEIGHTED VALUE)
A = DRAINAGE BASIN (OFF-SITE) = 0.00 ACRES
Q PASS THROUGH (Tc=20 MIN; C=0.35) = 0.00 CFS
A = DRAINAGE BASIN (SITE) = 58.62 ACRES
Q DEVELOPED = 258.05 CFS
Q PRE-DEVELOPED = 121.05 CFS
A (BYPASS) = 3.82 ACRES (DRAINAGE AREA F)
Q DEVELOPED (BYPASS) = 7.9 CFS (C=0.35, I=5.9)
BYPASS AREA IS ON-SITE AREA THAT DOES NOT ROUTE THROUGH POND
Q ALLOWED TO RELEASE AT DETENTION POND = Qr
Qr = Q PRE-DEV - Q DEV (BYPASS) + Q PASS THROUGH
Qr = 121.05 - 7.9 + 0.00 = 113.15 CFS
*DOWNSTREAM CULVERT WILL ONLY ACCEPT 105.90 CFS
Qr = 105.90-DRAINAGE AREA F (7.9 CFS) = 98.00 CFS
VOLUME REQUIRED = 205,216 CF

OUTLET CONTROL (ORIFICE) 10-YR
Q = CA * √(2gH)
Q = Qr = Q ALLOWED (CFS) = 98.00 CFS
C = 0.66
A = ORIFICE AREA (SF)
g = GRAVITATIONAL CONSTANT = 32.2 FT/S^2
H = HYDRAULIC HEAD (FT)
H = 529.45 - 525.00 = 4.45
A = 8.7712 SF
USE 36"x35" RECTANGULAR OPENING AT OUTLET STRUCTURE, REFER TO 03/C5.08
A = 8.7500 SF, WITHIN 1% TOLERANCE

RECORD DRAWINGS:
IT WAS THE INTENT THAT THE IMPROVEMENTS SHOWN BE CONSTRUCTED ACCORDING TO THESE PLANS AS APPROVED BY THE CITY. THE LINES AND GRADES WERE SET ON THE GROUND FOR CONSTRUCTION ACCORDING TO SAID PLANS. THE CITY INSPECTED THE CONSTRUCTION. THE ENGINEER DID NOT VERIFY LINES OR GRADES AFTER CONSTRUCTION. WE ARE NOT AWARE OF ANY CHANGES OR REVISIONS TO THESE PLANS DURING CONSTRUCTION OTHER THAN THOSE SHOWN.

RANDALL P. POGUE, P.E.
TX LIC. NO. 84780
DATE: APRIL 15, 2010
4

FOR DETAIL OF ORIFICE, REFER TO SHEET C5.08

NO.	DATE	REVISION / DESCRIPTION
4	04-15-10	RECORD DRAWINGS
3	02-24-10	ADDED RIGHT TURN LANE ON S.H. 205
2	07-17-09	SANITARY SEWER & ADA ROUTE REVISIONS
1	06-19-09	TXDOT COMMENTS

DESIGN	DRAWN	DATE	SCALE	NOTES
BEC	WTW	05-21-09	AS SHOWN	-

OWNER
METROPLEX ACQUISITION FUND, LP
8214 WESTCHESTER, SUITE 850
DALLAS, TEXAS 75225
MR. GREY STOGNER
(214) 343-4477 PHONE
(214) 340-2029 FAX

DEVELOPER
CRESTVIEW REAL ESTATE, L.L.C.
8214 WESTCHESTER, SUITE 850
DALLAS, TEXAS 75225
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THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY BRANDON E. COX, P.E. 101037 ON 05-21-09. ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT.
Brandon E. Cox 05-21-09

STATE OF TEXAS
BRANDON E. COX
101037
LICENSED
PROFESSIONAL ENGINEER

POGUE
ENGINEERING & DEVELOPMENT COMPANY, INC.
1512 BRAY CENTRAL DRIVE
SUITE 100
McKINNEY, TEXAS 75069
(214) 544-8880 PHONE
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DETENTION CALCULATIONS

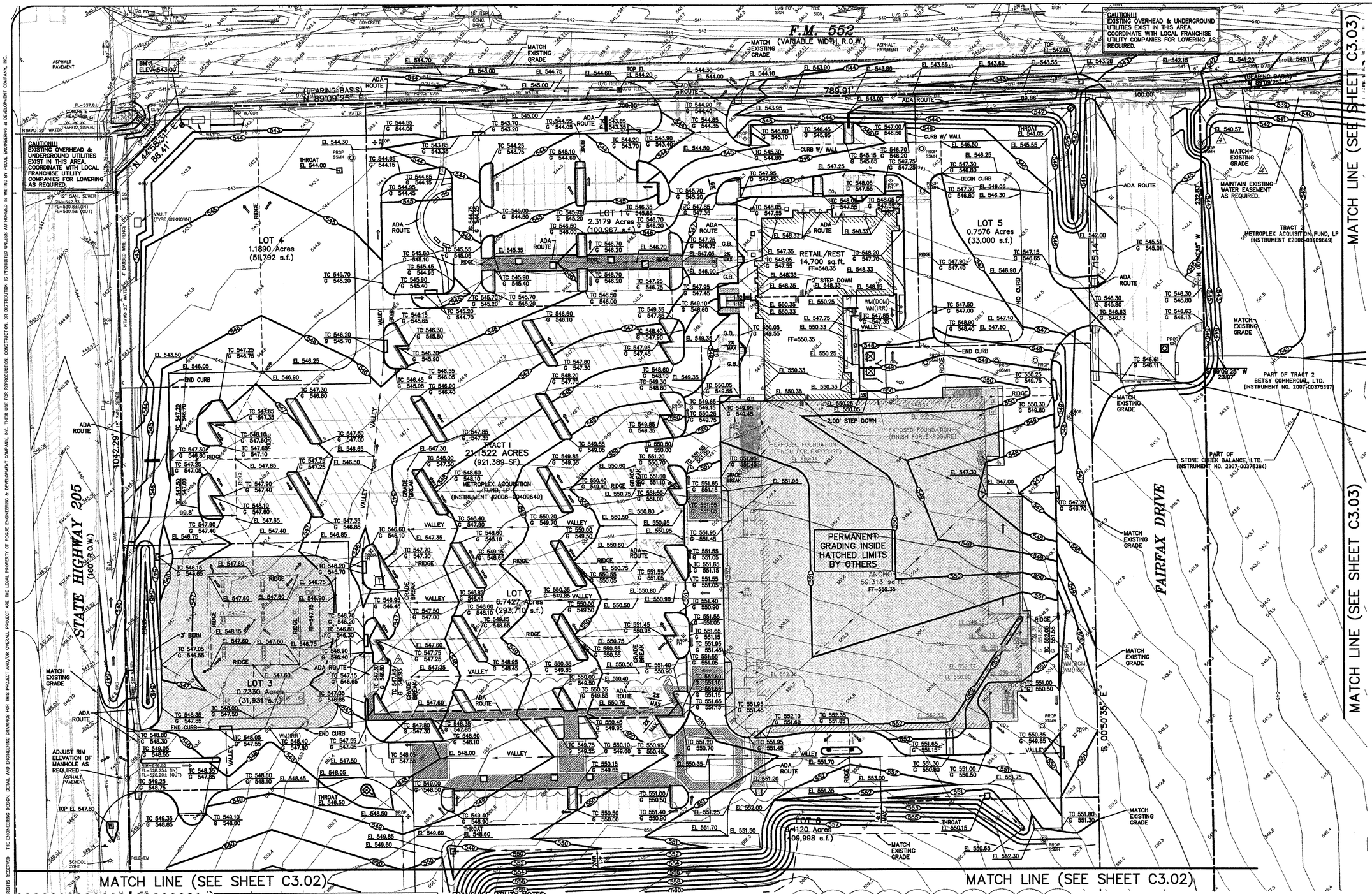
STONE CREEK RETAIL
BLOCK A, LOTS 1-6, STONE CREEK RETAIL ADDITION
W.T. DEWEESE SURVEY, ABSTRACT NO. 71
CITY OF ROCKWALL, TEXAS

SHEET NO. C2.03

PI NO: 1393-08-087
DWG NO: 1393-08-087-07A.DWG

STONE CREEK RETAIL - ROCKWALL

TEXAS BOARD OF PROFESSIONAL ENGINEERS, CERTIFICATE OF REGISTRATION #F-000481; TEXAS BOARD OF PROFESSIONAL LAND SURVEYING, CERTIFICATE OF REGISTRATION 100421-00



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TWILLIAMS 04/29/2010 - 3:56PM
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GRAPHIC SCALE IN FEET
SCALE: 1" = 40'

0 20 40 80 120

LEGEND

B.	BOLLARD
EM	ELECTRIC METER
PP	POWER POLE
LS	LIGHT STANDARD
WM	WATER METER
WV	WATER VALVE
ICV	IRRIGATION CONTROL VALVE
FH	FIRE HYDRANT
FDC	FIRE DEPARTMENT CONNECTION
CO	CLEAN OUT
MH	MANHOLE
GM	GAS METER
TSC	TRAFFIC SIGNAL CONTROL
TSP	TRAFFIC SIGNAL POLE
SIGN	TRAFFIC SIGN
TELE	TELEPHONE BOX
TV	TV BOX
FP	FLAG POLE
L.A.	LANDSCAPE AREA
	PROPERTY LINE
OHL	O.H. POWER LINES
TEL	U/G TELEPHONE LINES
WATER	U/G WATER LINE
GAS	U/G GAS LINE
	FENCE
500	EXISTING CONTOURS
XXX.XX	EXISTING SPOT GRADES
(C.M.)	CONTROLLING MONUMENT
SIR	5/8-INCH IRON ROD WITH "POGUE ENG & DEV" CAP SET
XXX	PROPOSED CONTOURS
TC XXX.XX G XXX.XX	PROPOSED SPOT GRADES
	PROPOSED EROSION CONTROL
	PROPOSED DRAINAGE DIVIDES

ADA ROUTE
NOTE:
MAXIMUM SLOPE FOR ALL ADA PATHS 5% MAX. CROSS FALL IS 2% FOR THE FIRST FIVE FOOT FROM THE DOOR A 2% SLOPE (MAX.) MUST BE MAINTAINED

NOTE:
ALL FILL IS TO BE COMPACTED TO A MINIMUM OF 95% USING A SHEEPSFOOT ROLLER.

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...

BENCH MARK LIST:

BENCHMARK #1
SQUARE CUT SET AT SOUTHWESTCORNER OF WATER VAULT LOCATEDED AT THE SOUTHEAST CORNER OF THE INTERSECTION OF THE EAST RIGHT-OF-WAY LINE OF SH 205 AND THE SOUTH RIGHT-OF-WAY LINE OF FM 552.
ELEVATION = 543.09

BENCHMARK #2
CITY OF ROCKWALL MONUMENT (R010) FOUND.
ELEVATION = 524.788

FRANCHISE UTILITY NOTES:
1. TXU ENERGY CONSTRUCTION SERVICES – (800) 711-9112
2. ATMOS ENERGY (GAS) – 903-457-2092 – DINAH WOOD
3. AT&T (PHONE) – 903-457-2092 – DWAYNE WELLS

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RANDALL P. POGUE, P.E. DATE: APRIL 15, 2010
TX LIC. NO. 84780

NO.	DATE	REVISION / DESCRIPTION
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2	07-17-09	SANITARY SEWER & ADA ROUTE REVISIONS
1	06-19-09	TXDOT COMMENTS

DESIGN	DRAWN	DATE	SCALE	NOTES
BEC	WTW	05-21-09	AS SHOWN	-

OWNER
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GRADING PLAN (1 of 3)

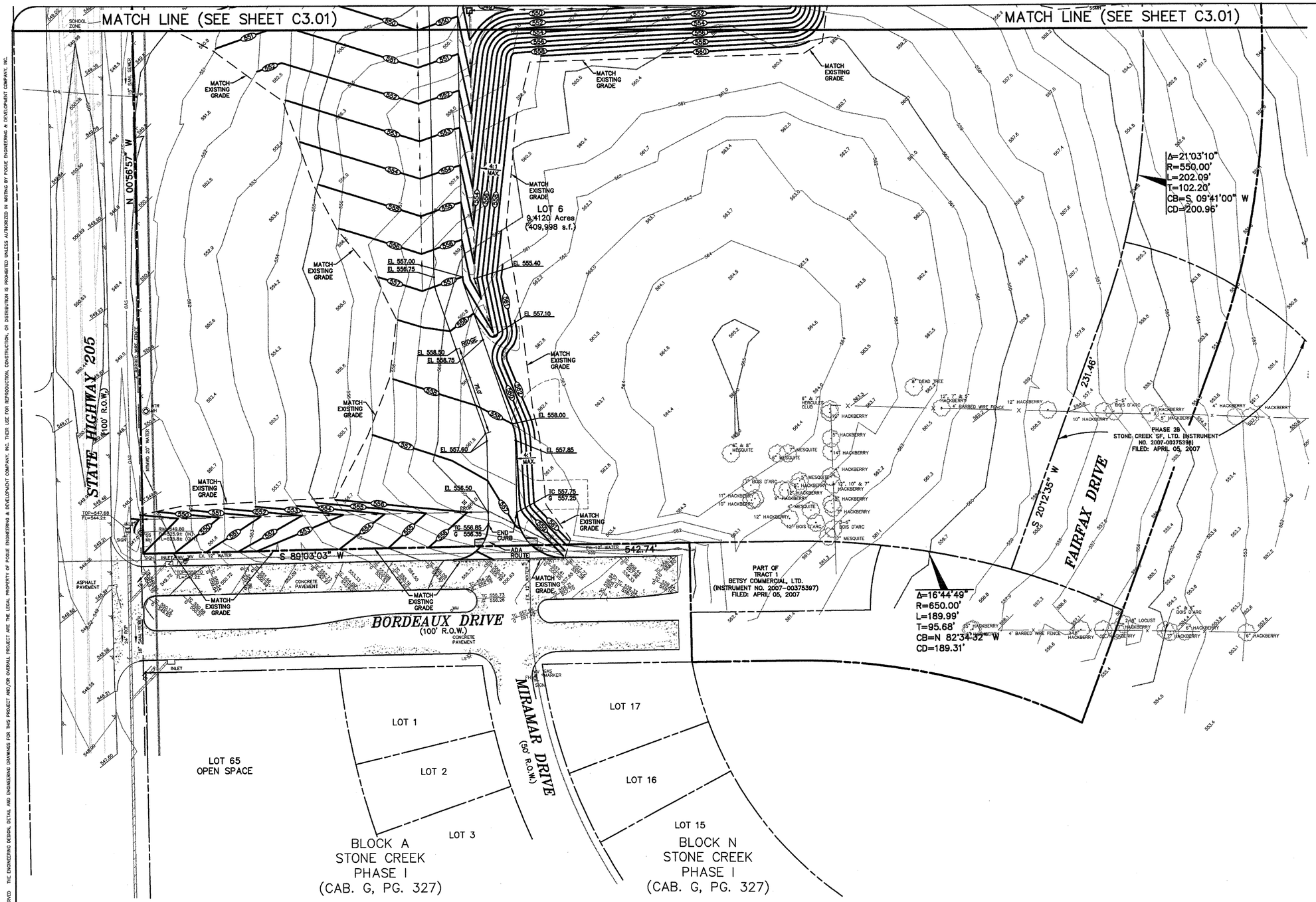
STONE CREEK RETAIL
BLOCK A, LOTS 1-6, STONE CREEK RETAIL ADDITION
W.T. DEWEESE SURVEY, ABSTRACT NO. 71
CITY OF ROCKWALL, TEXAS

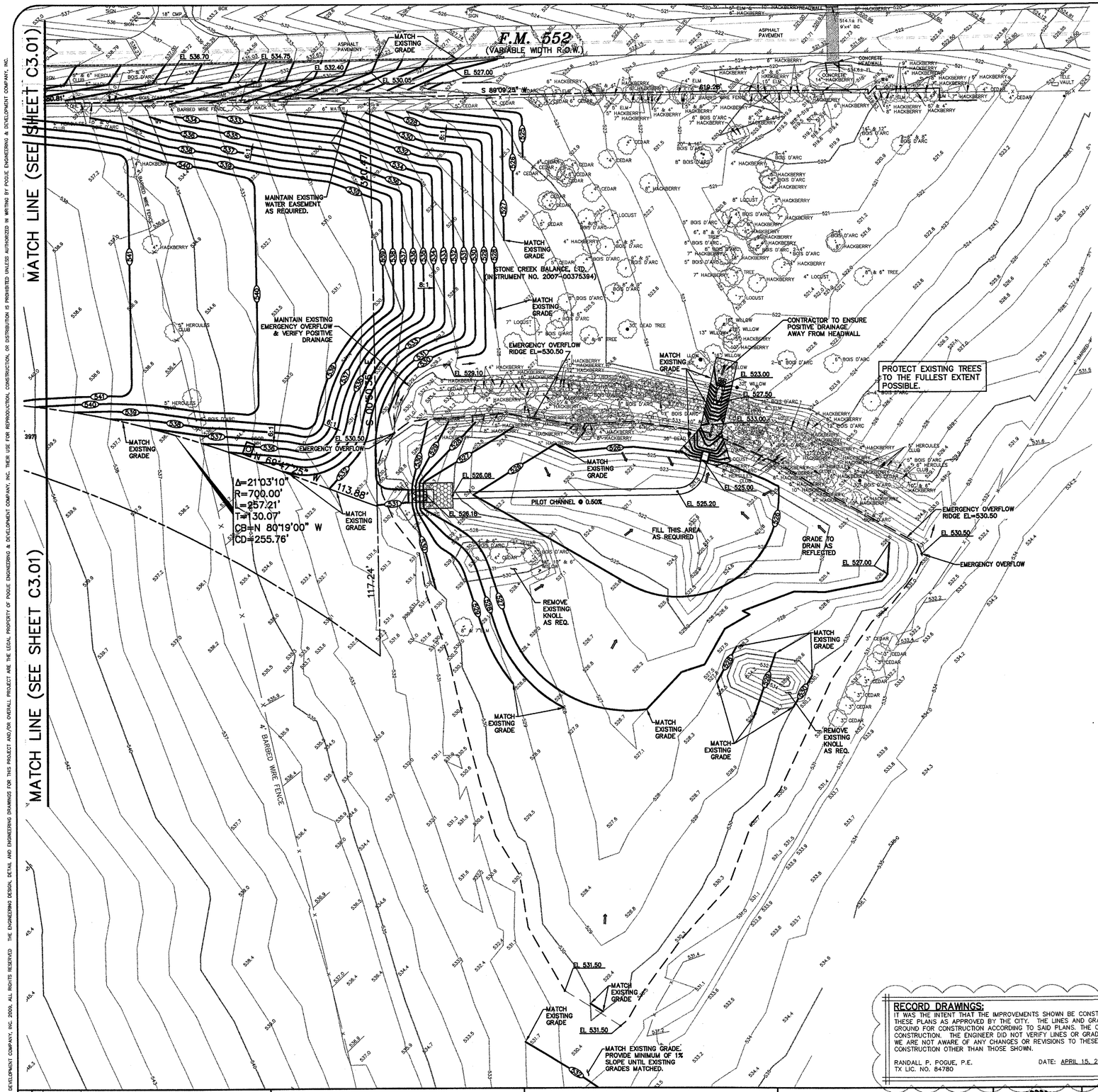
SHEET NO. C3.01

PI NO: 1393-08-087
DWG NO: 1393-08-087-07A.DWG

STONE CREEK RETAIL – ROCKWALL

TEXAS BOARD OF PROFESSIONAL ENGINEERS, CERTIFICATE OF REGISTRATION #F-000481; TEXAS BOARD OF PROFESSIONAL LAND SURVEYING, CERTIFICATE OF REGISTRATION 100421-00


MATCH LINE (SEE SHEET C3.01)
MATCH LINE (SEE SHEET C3.01)
STATE HIGHWAY 205
(100' R.O.W.)
BORDEAUX DRIVE
(100' R.O.W.)
FAIRFAX DRIVE
MIRAMAR DRIVE
(50' R.O.W.)
N 00°56'57" W
S 89°03'03" W
542.74'
S 20°12'35" W
231.46'
Δ=21°03'10"
R=550.00'
L=202.09'
T=102.20'
CB=S 09°41'00" W
CD=200.96'
Δ=16°44'49"
R=650.00'
L=189.99'
T=95.68'
CB=N 82°34'32" W
CD=189.31'
LOT 6
9.4120 Acres
(409,998 s.f.)
PART OF
TRACT 1
BETSY COMMERCIAL, LTD.
(INSTRUMENT NO. 2007-00375397)
FILED: APRIL 05, 2007
PHASE 2B
STONE, CREEK SF, LTD. INSTRUMENT
NO. 2007-00375398
FILED: APRIL 05, 2007
LOT 65
OPEN SPACE
LOT 1
LOT 2
LOT 3
LOT 17
LOT 16
LOT 15
BLOCK A
STONE CREEK
PHASE I
(CAB. G, PG. 327)
BLOCK N
STONE CREEK
PHASE I
(CAB. G, PG. 327)
MATCH EXISTING GRADE
EL 557.00
EL 556.75
EL 555.40
EL 557.10
EL 558.50
EL 558.75
EL 558.00
EL 557.85
EL 557.60
EL 556.50
TC 557.75
G 557.25
TC 556.85
G 556.35
END CURB
ADA ROUTE
RIDGE
4:1 MAX.
TOP=547.68
FL=544.22
RIM=549.80
I=525.93 (W)
I=525.84 (E)
TC 555.73
G 555.23
TC 555.28
G 554.78
TC 554.78
G 554.28
TC 554.33
G 553.83
TC 553.83
G 553.33
TC 553.38
G 552.88
TC 552.93
G 552.43
TC 552.48
G 551.98
TC 552.03
G 551.53
TC 551.58
G 551.08
TC 551.13
G 550.63
TC 550.68
G 550.18
TC 550.23
G 549.73
TC 549.78
G 549.28
TC



STAGE-STORAGE TABLE	
ELEVATION	VOLUME (CF)
525.00	0
526.00	6,382
527.00	38,397
528.00	92,727
529.00	164,508
530.00	257,701
530.50	313,425

GRAPHIC SCALE IN FEET
SCALE: 1" = 40'

LEGEND

B.	BOLLARD
EM	ELECTRIC METER
PP	POWER POLE
LS	LIGHT STANDARD
WM	WATER METER
WV	WATER VALVE
ICV	IRRIGATION CONTROL VALVE
FH	FIRE HYDRANT
FDC	FIRE DEPARTMENT CONNECTION
CO	CLEAN OUT
MH	MANHOLE
GM	GAS METER
TSC	TRAFFIC SIGNAL CONTROL
TSP	TRAFFIC SIGNAL POLE
SIGN	TRAFFIC SIGN
TELE	TELEPHONE BOX
TV	TV BOX
FP	FLAG POLE
L.A.	LANDSCAPE AREA
	PROPERTY LINE
OHL	O.H. POWER LINES
TEL	U/G TELEPHONE LINES
WATER	U/G WATER LINE
GAS	U/G GAS LINE
	FENCE
500	EXISTING CONTOURS
XXX.XX	EXISTING SPOT GRADES
(C.M.)	CONTROLLING MONUMENT
SIR	5/8-INCH IRON ROD WITH "POGUE ENG & DEV" CAP SET
XXX TO XXX.XX	PROPOSED CONTOURS
XXX.XX	PROPOSED SPOT GRADES
	PROPOSED EROSION CONTROL
	PROPOSED DRAINAGE DIVIDES

NOTE:
OFF-SITE PAVING, GRADING, DRAINAGE, AND EROSION CONTROL IMPROVEMENTS TO BE APPROVED BY ADJACENT PROPERTY OWNER VIA A LETTER OF PERMISSION.

NOTE:
WHERE SOIL IS DISTURBED, SIDES AND BOTTOM OF DISTURBED AREAS TO BE EITHER SODDED OR STABILIZED WITH ANCHORED SEEDED CURLEX PRIOR TO CITY ACCEPTANCE AND/OR PAVEMENT INSTALLATION.

NOTE:
ALL FILL IS TO BE COMPACTED TO A MINIMUM OF 95% USING A SHEEPSFOOT ROLLER.

ADA ROUTE

NOTE:
MAXIMUM SLOPE FOR ALL ADA PATHS 5% MAX. CROSS FALL IS 2% FOR THE FIRST FIVE FOOT FROM THE DOOR. A 2% SLOPE (MAX.) MUST BE MAINTAINED

BENCH MARK LIST:

BENCHMARK #1
SQUARE CUT SET AT SOUTHWESTCORNER OF WATER VAULT LOCATEDED AT THE SOUTHEAST CORNER OF THE INTERSECTION OF THE EAST RIGHT-OF-WAY LINE OF SH 205 AND THE SOUTH RIGHT-OF-WAY LINE OF FM 552.
ELEVATION = 543.09

BENCHMARK #2
CITY OF ROCKWALL MONUMENT (R010) FOUND.
ELEVATION = 524.788

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RANDALL P. POGUE, P.E.
TX LIC. NO. 84780
DATE: APRIL 15, 2010
4

FRANCHISE UTILITY NOTES:
1. TXU ENERGY CONSTRUCTION SERVICES – (800) 711-9112
2. ATMOS ENERGY (GAS) – 903-457-2092 – DINAH WOOD
3. AT&T (PHONE) – 903-457-2092 – DWAYNE WELLS

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...

NO.	DATE	REVISION / DESCRIPTION
4	04-15-10	RECORD DRAWINGS
3	02-24-10	ADDED RIGHT TURN LANE ON S.H. 205
2	07-17-09	SANITARY SEWER & ADA ROUTE REVISIONS
1	06-19-09	TXDOT COMMENTS

DESIGN	DRAWN	DATE	SCALE	NOTES
BEC	WTW	05-21-09	AS SHOWN	–

OWNER
METROPLEX ACQUISITION FUND, LP
8214 WESTCHESTER, SUITE 850
DALLAS, TEXAS 75225
MR. GREY STOGNER
(214) 343-4477 PHONE
(214) 340-2029 FAX

DEVELOPER
CRESTVIEW REAL ESTATE, L.L.C.
8214 WESTCHESTER, SUITE 850
DALLAS, TEXAS 75225
MR. GREY STOGNER
(214) 343-4477 PHONE
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Brandon E. Cox 05-21-09

STATE OF TEXAS
BRANDON E. COX
101037
LICENSED
PROFESSIONAL ENGINEER

POGUE
ENGINEERING & DEVELOPMENT COMPANY, INC.
1512 BRAY CENTRAL DRIVE
SUITE 100
McKINNEY, TEXAS 75069
(214) 544-8880 PHONE
(214) 544-8882 FAX
www.PogueEngineering.com

GRADING PLAN (3 of 3)

SHEET NO. C3.03

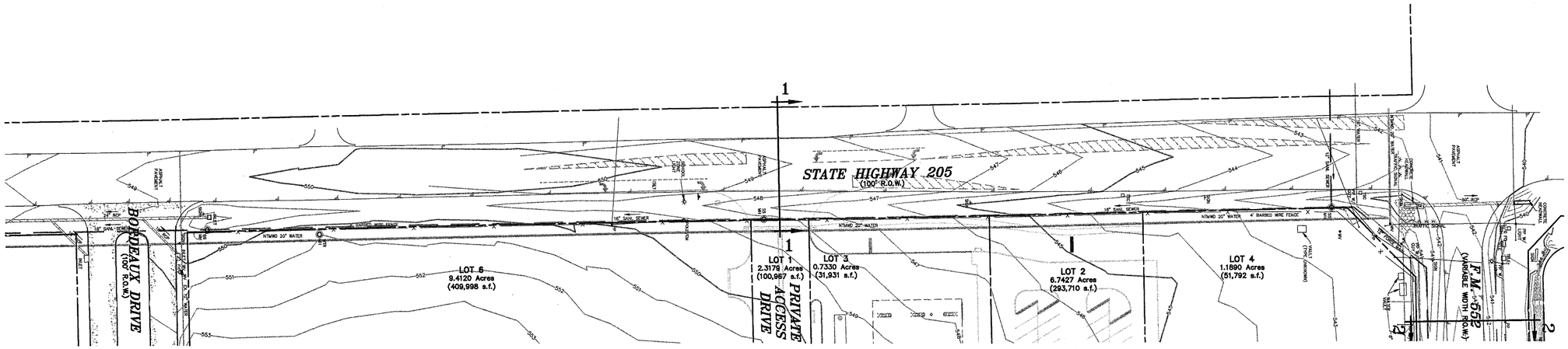
STONE CREEK RETAIL
BLOCK A, LOTS 1-6, STONE CREEK RETAIL ADDITION
W.T. DEWEESE SURVEY, ABSTRACT NO. 71
CITY OF ROCKWALL, TEXAS

PI NO: 1393-08-087
DWG NO: 1393-08-087-07A.DWG

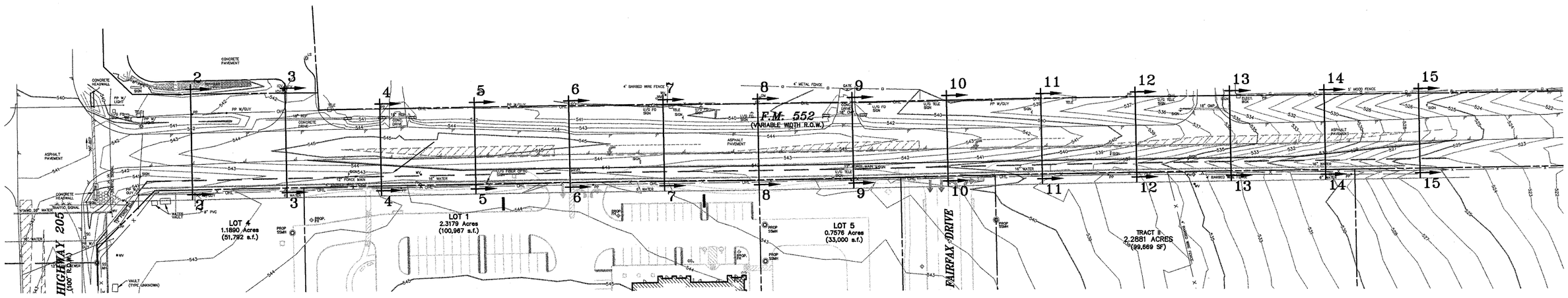
STONE CREEK RETAIL - ROCKWALL

TEXAS BOARD OF PROFESSIONAL ENGINEERS, CERTIFICATE OF REGISTRATION #F-000461; TEXAS BOARD OF PROFESSIONAL LAND SURVEYING, CERTIFICATE OF REGISTRATION 100421-00

TWILLIAMS 04/29/2010 - 3:58PM
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0 25 50 100 150
GRAPHIC SCALE IN FEET
SCALE: 1" = 50'



0 25 50 100 150
GRAPHIC SCALE IN FEET
SCALE: 1" = 50'

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RANDALL P. POGUE, P.E.
TX LIC. NO. 84780

DATE: APRIL 15, 2010 (4)

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8214 WESTCHESTER, SUITE 850
DALLAS, TEXAS 75225
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Brandon E. Cox 05-21-09

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www.PogueEngineering.com

ROADWAY CROSS SECTIONS (1 of 2)

STONE CREEK RETAIL
BLOCK A, LOTS 1-6, STONE CREEK RETAIL ADDITION
W.T. DEWEESE SURVEY, ABSTRACT NO. 71
CITY OF ROCKWALL, TEXAS

SHEET NO. C3.04

PI NO: 1393-08-087
DWG NO: 1393-08-087-07A.DWG

STONE CREEK RETAIL – ROCKWALL

TEXAS BOARD OF PROFESSIONAL ENGINEERS, CERTIFICATE OF REGISTRATION #F-000481; TEXAS BOARD OF PROFESSIONAL LAND SURVEYING, CERTIFICATE OF REGISTRATION 100421-00

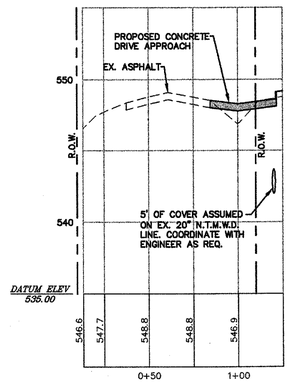
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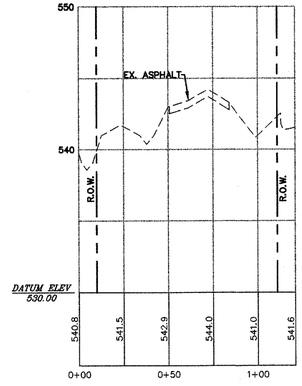
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STONE CREEK RETAIL - ROCKWALL

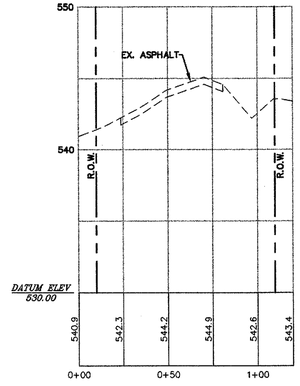
SCALE
1"=40' H
1"=5' V



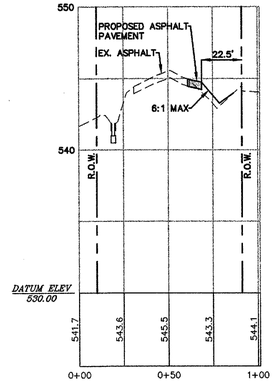
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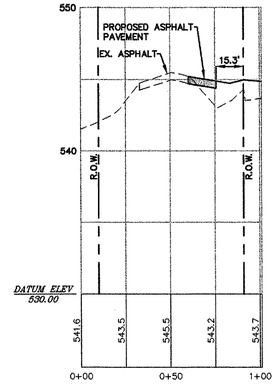
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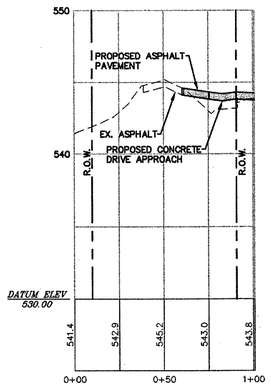
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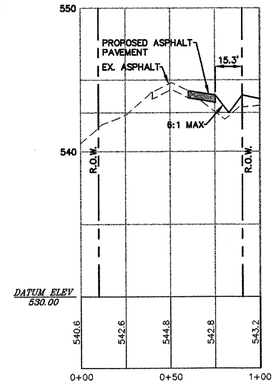
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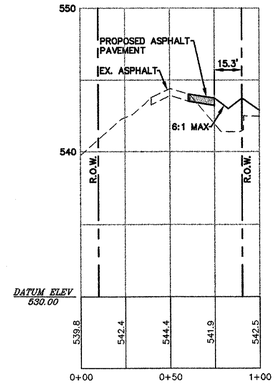
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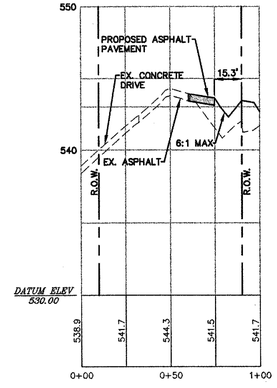
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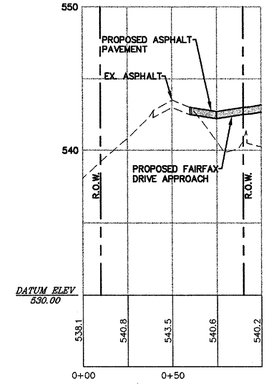
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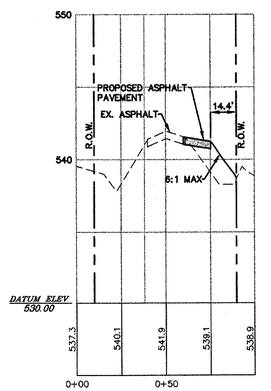
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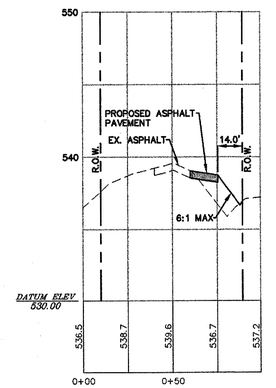
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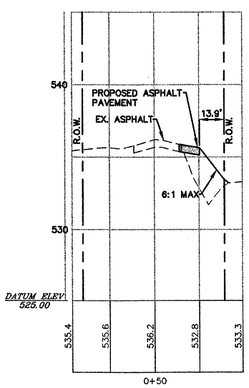
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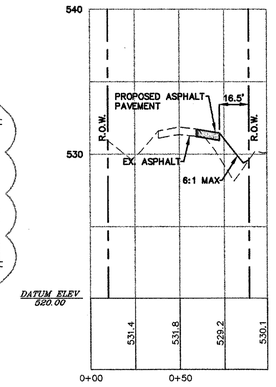
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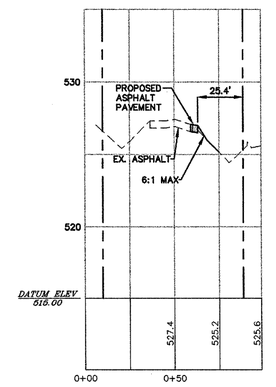
CROSS SECTION #13

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RANDALL P. POGUE, P.E. DATE: APRIL 15, 2010
TX LIC. NO. 84780 4



CROSS SECTION #14



CROSS SECTION #15

NO.	DATE	REVISION / DESCRIPTION
4	04-15-10	RECORD DRAWINGS
3	02-24-10	ADDED RIGHT TURN LANE ON S.H. 205
2	07-17-09	SANITARY SEWER & ADA ROUTE REVISIONS
1	06-19-09	TXDOT COMMENTS

DESIGN	DRAWN	DATE	SCALE	NOTES
BEC	WTW	05-21-09	AS SHOWN	-

OWNER
METROPLEX ACQUISITION FUND, LP
8214 WESTCHESTER, SUITE 850
DALLAS, TEXAS 75225
MR. GREY STOGNER
(214) 343-4477 PHONE
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STATE OF TEXAS · BRANDON E. COX · 101037 · LICENSED · PROFESSIONAL ENGINEER

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1512 BRAY CENTRAL DRIVE
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ROADWAY CROSS SECTIONS (2 of 2)

STONE CREEK RETAIL
BLOCK A, LOTS 1-6, STONE CREEK RETAIL ADDITION
W.T. DEWEESE SURVEY, ABSTRACT NO. 71
CITY OF ROCKWALL, TEXAS

SHEET NO. C3.05

PJ NO: 1393-08-087
DWG NO: 1393-08-087-07A.DWG

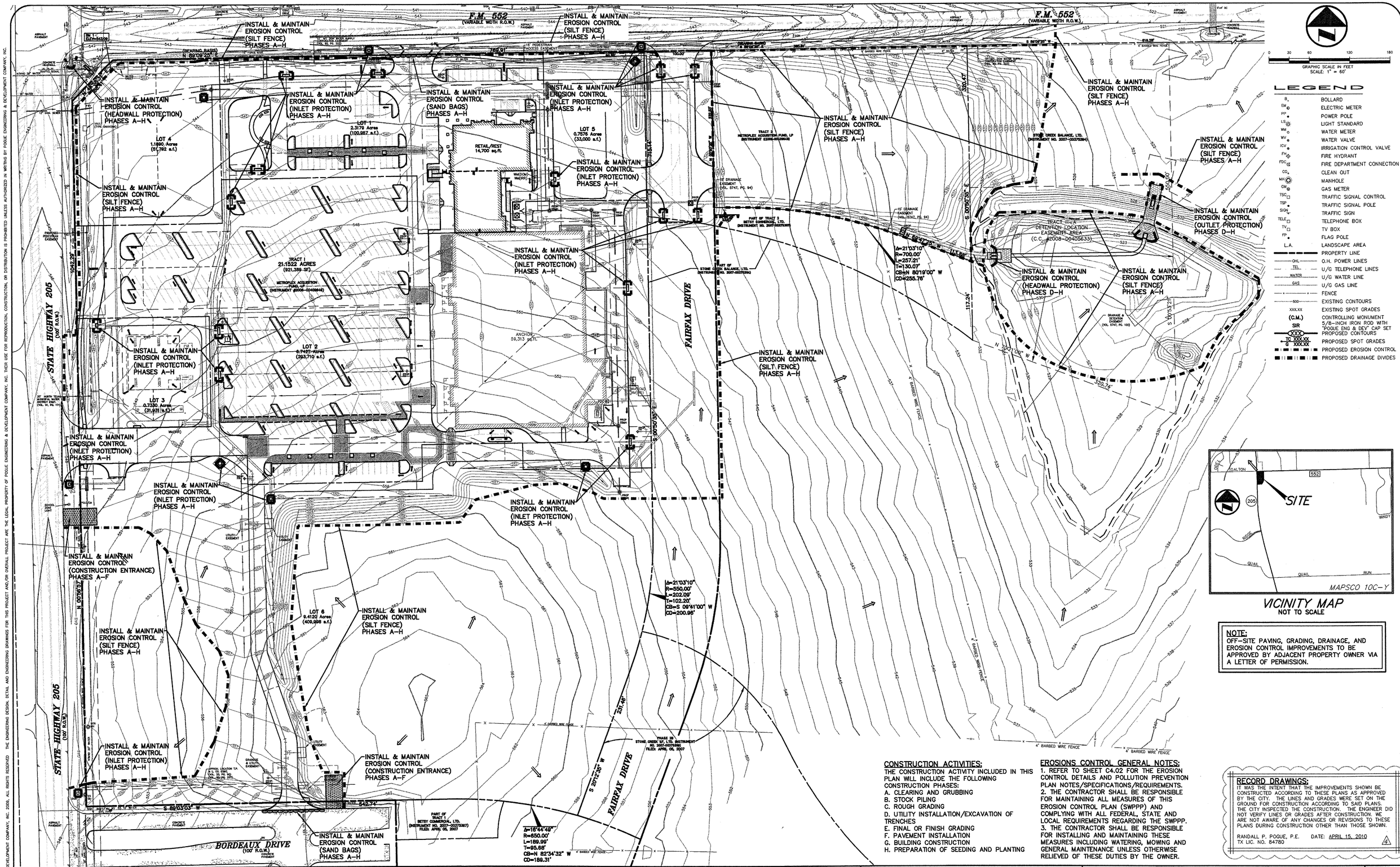
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STONE CREEK RETAIL – ROCKWALL

TEXAS BOARD OF PROFESSIONAL ENGINEERS, CERTIFICATE OF REGISTRATION #F-000481; TEXAS BOARD OF PROFESSIONAL LAND SURVEYING, CERTIFICATE OF REGISTRATION 100421-00



VICINITY MAP
NOT TO SCALE

NOTE:
OFF-SITE PAVING, GRADING, DRAINAGE, AND EROSION CONTROL IMPROVEMENTS TO BE APPROVED BY ADJACENT PROPERTY OWNER VIA A LETTER OF PERMISSION.

CONSTRUCTION ACTIVITIES:
THE CONSTRUCTION ACTIVITY INCLUDED IN THIS PLAN WILL INCLUDE THE FOLLOWING CONSTRUCTION PHASES:
A. CLEARING AND GRUBBING
B. STOCK PILING
C. ROUGH GRADING
D. UTILITY INSTALLATION/EXCAVATION OF TRENCHES
E. FINAL OR FINISH GRADING
F. PAVEMENT INSTALLATION
G. BUILDING CONSTRUCTION
H. PREPARATION OF SEEDING AND PLANTING

EROSIONS CONTROL GENERAL NOTES:
1. REFER TO SHEET C4.02 FOR THE EROSION CONTROL DETAILS AND POLLUTION PREVENTION PLAN NOTES/SPECIFICATIONS/REQUIREMENTS.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL MEASURES OF THIS EROSION CONTROL PLAN (SWPPP) AND COMPLYING WITH ALL FEDERAL, STATE AND LOCAL REQUIREMENTS REGARDING THE SWPPP.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING AND MAINTAINING THESE MEASURES INCLUDING WATERING, MOWING AND GENERAL MAINTENANCE UNLESS OTHERWISE RELIEVED OF THESE DUTIES BY THE OWNER.

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METROPLEX ACQUISITION FUND, LP
8214 WESTCHESTER, SUITE 850
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EROSION CONTROL SITE PLAN (SWPPP)

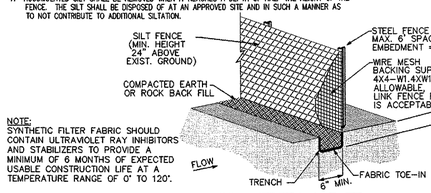
STONE CREEK RETAIL
BLOCK A, LOTS 1-6, STONE CREEK RETAIL ADDITION
W.T. DEWEESE SURVEY, ABSTRACT NO. 71
CITY OF ROCKWALL, TEXAS

SHEET NO. C4.01

PI NO: 1393-08-087 DWG NO: 1393-08-087-07A.DWG

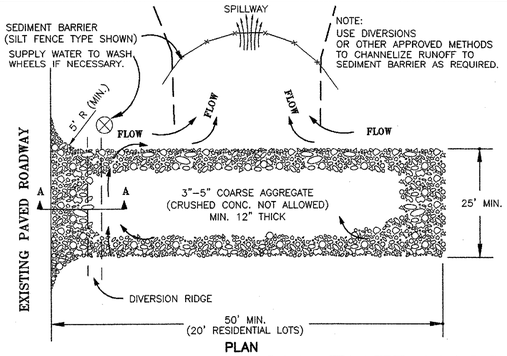
SILT FENCE GENERAL NOTES:

1. STEEL POSTS WHICH SUPPORT THE SILT FENCE SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MINIMUM OF ONE FOOT.
2. THE TOE OF THE SILT FENCE SHALL BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWN SLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW. WHERE FENCE CANNOT BE TRENCHED IN (E.G. PAVEMENT), WOVEN FABRIC FLAP WITH ROCK ON UPHILL SIDE TO PREVENT FLOW FROM SEEPING UNDER FENCE.
3. THE TRENCH MUST BE A MINIMUM OF 6 INCHES DEEP AND 6 INCHES WIDE TO ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACK FILLED WITH COMPACTED MATERIAL.
4. SILT FENCE SHOULD BE SECURELY FASTENED TO EACH STEEL SUPPORT POST OR TO WOVEN WIRE, WHICH IN TURN IS ATTACHED TO THE STEEL FENCE POST. THERE SHALL BE A 3 FOOT OVERLAP, SECURELY FASTENED WHERE ENDS OF FABRIC MEET.
5. INSPECTION SHALL BE MADE EVERY TWO WEEKS AND AFTER EACH 1/2" RAINFALL. REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
6. SILT FENCE SHALL BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.
7. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF HALF THE HEIGHT OF THE FENCE. THE SILT SHALL BE DISPOSED OF AT AN APPROVED SITE AND IN SUCH A MANNER AS TO NOT CONTRIBUTE TO ADDITIONAL SILTATION.



NOTE: SYNTHETIC FILTER FABRIC SHOULD CONTAIN ULTRAVIOLET RAY INHIBITORS AND STABILIZERS TO PROVIDE A MINIMUM OF 6 MONTHS OF EXPECTED USABLE CONSTRUCTION LIFE AT A TEMPERATURE RANGE OF 0° TO 120°.

01 C4.02 **SILT FENCE**
NOT TO SCALE

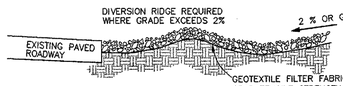


PLAN

02 C4.02 **CONSTRUCTION ENTRANCE**
NOT TO SCALE

STABILIZED CONSTRUCTION ENTRANCE GENERAL NOTES:

1. **STONE SHALL BE 3 TO 5 INCH DIAMETER CRUSHED ROCK. NO CRUSHED PORTLAND CEMENT CONCRETE IS ALLOWED.**
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 50 FEET.**
3. **THE THICKNESS SHALL NOT BE LESS THAN 12 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 AND THE STABILIZED ENTRANCE. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, 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.**



SECTION A – A

SOLID WASTE MANAGEMENT

DESCRIPTION
LARGE VOLUMES OF SOLID WASTE ARE OFTEN GENERATED AT CONSTRUCTION SITES INCLUDING: PACKAGING, PALLETS, WOOD WASTE, CONCRETE WASTE, SOIL, ELECTRICAL WIRING, CUTTINGS, AND A VARIETY OF OTHER MATERIALS. THE SOLID WASTE MANAGEMENT PRACTICE LISTS TECHNIQUES TO MINIMIZE THE POTENTIAL OF STORM WATER CONTAMINATION FROM SOLID WASTE THROUGH APPROPRIATE STORAGE AND DISPOSAL PRACTICES.

PRIMARY USE
THESE PRACTICES SHOULD BE A PART OF ALL CONSTRUCTION PRACTICES. BY LIMITING THE TRASH AND DEBRIS ON SITE, STORM WATER QUALITY IS IMPROVED ALONG WITH REDUCED CLEAN UP REQUIREMENTS AT THE COMPLETION OF THE PROJECT.

APPLICATIONS
THE SOLID WASTE MANAGEMENT PRACTICE FOR CONSTRUCTION SITES IS BASED ON PROPER STORAGE AND DISPOSAL PRACTICES BY CONSTRUCTION WORKERS AND SUPERVISORS.. KEY ELEMENTS OF THE PROGRAM ARE EDUCATION AND MODIFICATION OF IMPROPER DISPOSAL HABITS.. COOPERATION AND VIGILANCE IS REQUIRED ON THE PART OF SUPERVISORS AND WORKERS TO ENSURE THAT THE RECOMMENDATIONS AND PROCEDURES ARE FOLLOWED. FOLLOWING ARE LISTS DESCRIBING THE TARGETED MATERIALS AND RECOMMENDED PROCEDURES:

- ☐ TARGETED SOLID WASTE MATERIALS
  - PAPER AND CARDBOARD CONTAINERS
  - PLASTIC PACKAGING
  - STYROFOAM PACKING AND FORMS
  - INSULATION MATERIALS (NON-HAZARDOUS)
  - WOOD PALLETS
  - WOOD CUTTINGS
  - PIPE AND ELECTRICAL CUTTINGS
  - CONCRETE, BRICK, AND MORTAR WASTE
  - SHINGLE CUTTINGS AND WASTE
  - ROOFING TAR
  - STEEL (CUTTINGS, NAILS, RUST RESIDUE)
  - GYPSUM BOARD CUTTINGS AND WASTE
  - SHEATHING CUTTINGS AND WASTE
  - MISCELLANEOUS CUTTINGS AND WASTE
  - FOOD WASTE
  - DEMOLITION WASTE

STORAGE PROCEDURES
- ☐ WHEREVER POSSIBLE, MINIMIZE PRODUCTION OF SOLID WASTE MATERIALS.
- ☐ DESIGNATE A FOREMAN OR SUPERVISOR TO OVERSEE AND ENFORCE PROPER SOLID WASTE PROCEDURES.
- ☐ INSTRUCT CONSTRUCTION WORKERS IN PROPER SOLID WASTE PROCEDURES.
- ☐ SEGREGATE POTENTIALLY HAZARDOUS WASTE FROM NON-HAZARDOUS CONSTRUCTION SITE DEBRIS.
- ☐ KEEP SOLID WASTE MATERIALS UNDER COVER IN EITHER A CLOSED DUMPSTER OR OTHER ENCLOSED TRASH CONTAINER THAT LIMITS CONTACT WITH RAIN AND RUNOFF.
- ☐ STORE WASTE MATERIALS AWAY FROM DRAINAGE DITCHES, SWALES AND CATCH BASINS.
- ☐ DO NOT ALLOW TRASH CONTAINERS TO OVERFLOW.
- ☐ DO NOT ALLOW WASTE MATERIALS TO ACCUMULATE ON THE GROUND.
- ☐ PROHIBIT LITTERING BY WORKERS AND VISITORS.
- ☐ POLICE AREA DAILY FOR LITTER AND DEBRIS.
- ☐ ENFORCE SOLID WASTE HANDLING AND STORAGE PROCEDURES.

DISPOSAL PROCEDURES
- ☐ IF FEASIBLE, SEGREGATE RECYCLABLE WASTES FROM NON-RECYCLABLE WASTE MATERIALS AND DISPOSE OF PROPERLY.
- ☐ GENERAL CONSTRUCTION DEBRIS MAY BE HAULED TO A LICENSED CONSTRUCTION DEBRIS LANDFILL (TYPICALLY LESS EXPENSIVE THAN A SANITARY LANDFILL).
- ☐ USE WASTE FACILITIES APPROVED BY LOCAL JURISDICTION.
- ☐ RUNOFF WHICH COMES INTO CONTACT WITH UNPROTECTED WASTE SHALL BE DIRECTED INTO STRUCTURAL TREATMENT SUCH AS SILT FENCE TO REMOVE DEBRIS.

EDUCATION
- ☐ EDUCATE ALL WORKERS ON SOLID WASTE STORAGE AND DISPOSAL PROCEDURES.
- ☐ INSTRUCT WORKERS IN IDENTIFICATION OF SOLID WASTE AND HAZARDOUS WASTE.
- ☐ HAVE REGULAR MEETINGS TO DISCUSS AND REINFORCE DISPOSAL PROCEDURES (INCORPORATE IN REGULAR SAFETY SEMINARS).
- ☐ CLEARLY MARK ON ALL SOLID WASTE CONTAINERS WHICH MATERIALS ARE ACCEPTABLE.

QUALITY CONTROL
- ☐ FOREMAN AND/OR CONSTRUCTION SUPERVISOR SHALL MONITOR ON-SITE SOLID WASTE STORAGE AND DISPOSAL PROCEDURES.
- ☐ DISCIPLINE WORKERS WHO REPEATEDLY VIOLATE PROCEDURES.

REQUIREMENTS
- ☐ JOB-SITE WASTE HANDLING AND DISPOSAL EDUCATION AND AWARENESS PROGRAM.
- ☐ COMMITMENT BY MANAGEMENT TO IMPLEMENT AND ENFORCE SOLID WASTE MANAGEMENT PROGRAM.
- ☐ COMPLIANCE BY WORKERS.
- ☐ SUFFICIENT AND APPROPRIATE WASTE STORAGE CONTAINERS.
- ☐ TIMELY REMOVAL OF STORED SOLID WASTE MATERIALS.
- ☐ POSSIBLE MODEST COST IMPACT FOR ADDITIONAL WASTE STORAGE CONTAINERS.
- ☐ MINIMAL OVERALL COST IMPACT.

LIMITATIONS
ONLY ADDRESSES NON-HAZARDOUS SOLID WASTE.
ONE PART OF A COMPREHENSIVE CONSTRUCTION SITE MANAGEMENT PROGRAM.

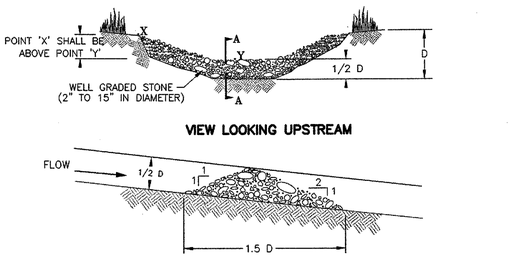
APPLICATIONS
PERIMETER CONTROL
SLOPE PROTECTION
SEDIMENT TRAPPING
CHANNEL PROTECTION
TEMPORARY STABILIZATION
PERMANENT STABILIZATION
Waste Management
Housekeeping Practices

TARGETED CONSTITUENTS
- ○ SEDIMENT
- ● NUTRIENTS TOXIC MATERIALS
- ○ OIL & GREASE
- ● FLOATABLE MATERIALS
- ● OTHER CONSTRUCTION WASTES

IMPLEMENTATION REQUIREMENTS
- ⊖ CAPITAL COSTS
- ⊖ MAINTENANCE
- ⊖ TRAINING
- ○ SUITABILITY FOR SLOPES > 5%

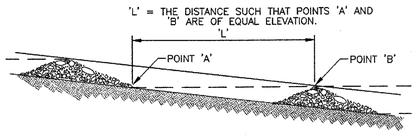
LEGEND
- ● SIGNIFICANT IMPACT
- ⊖ MEDIUM IMPACT
- ○ LOW IMPACT
- ? UNKNOWN OR QUESTIONABLE IMPACT

W-1



VIEW LOOKING UPSTREAM

SECTION A – A

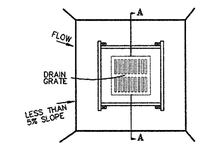


SPACING BETWEEN CHECK DAMS

03 C4.02 **ROCK CHECK DAM**
NOT TO SCALE

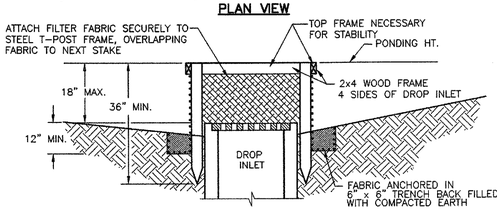
ROCK CHECK DAM NOTES:

1. **CHECK DAMS ARE NOT TO BE USED IN LIVE STREAMS.**
2. **DAM SPACING SHALL PROVIDE THAT THE TOE OF THE UPSTREAM DAM IS NEVER HIGHER THAN THE TOP OF THE DOWNSTREAM DAM.**
3. **THE CENTER OF THE DAM MUST BE 6 INCHES TO 9 INCHES LOWER THAN EITHER EDGE, AND MAXIMUM HEIGHT OF THE DAM SHOULD NOT EXCEED 24 INCHES.**
4. **THE CHECK DAM SHOULD BE AS MUCH AS 18 INCHES WIDER THAN BANKS OF THE CHANNEL TO PREVENT UNDERCUTTING AS OVERFLOW WATER REENTERING THE CHANNEL.**
5. **PROVIDE OUTLET STABILIZATION BELOW THE LOWEST CHECK DAM WHERE THE RISK OF EROSION IS THE GREATEST.**



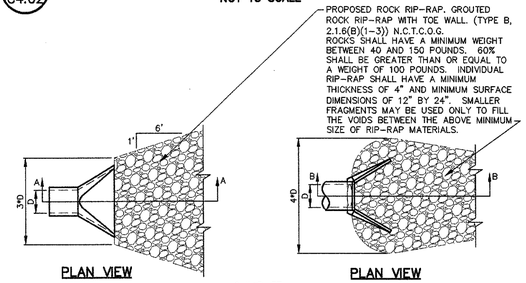
PLAN VIEW

NOTE: CONCENTRATED DITCH FLOW COMING FROM ONE OR MORE SIDES TOWARD THE DROP INLET MAY REQUIRE A STONE OVERFLOW STRUCTURE TO BE CONSTRUCTED ON ONE SIDE OF THE DROP INLET. HOG WIRE SHOULD BE USED TO SUPPORT THE FILTER FABRIC FOR INSTALLATIONS USED MORE THAN 90 DAYS

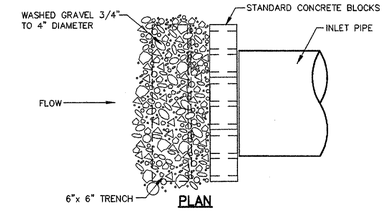


SECTION A–A

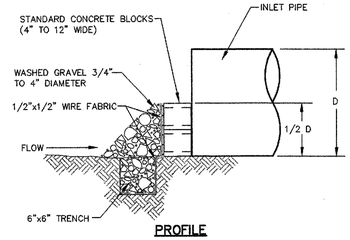
06 C4.02 **DROP INLET PROTECTION**
NOT TO SCALE



TYPICAL ROCK OUTLET PROTECTION DETAIL
07 C4.02
NOT TO SCALE

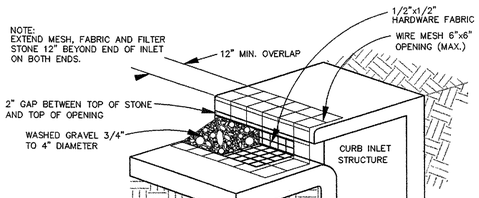


PLAN

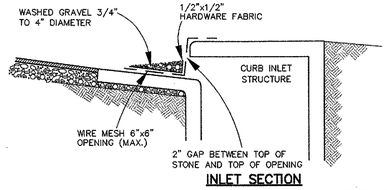


PROFILE

04 C4.02 **PIPE INLET PROTECTION**
NOT TO SCALE

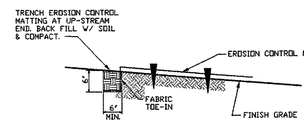


ISOMETRIC PLAN VIEW

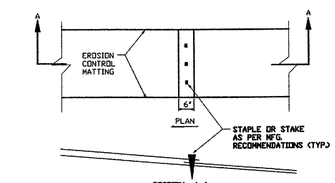


INLET SECTION

05 C4.02 **CURB INLET PROTECTION**
NOT TO SCALE



UPSTREAM ANCHORING



TYPICAL JOINT OVERLAP

08 C4.02 **EROSION CONTROL MATTING**
NOT TO SCALE

CONCRETE WASTE MANAGEMENT

DESCRIPTION
CONCRETE WASTE AT CONSTRUCTION SITES COMES IN TWO FORMS; 1)EXCESS FRESH CONCRETE MIX INCLUDING TRUCK AND EQUIPMENT WASHING, AND 2) CONCRETE DUST AND CONCRETE DEBRIS RESULTING FROM DEMOLITION. BOTH FORMS HAVE THE POTENTIAL TO IMPACT WATER QUALITY THROUGH STORM WATER RUNOFF CONTACT WITH THE WASTE.

PRIMARY USE
CONCRETE WASTE IS PRESENT AT MOST CONSTRUCTION SITES. THIS BMP SHOULD BE UTILIZED AT SITES IN WHICH CONCRETE WASTE IS PRESENT.

APPLICATIONS
A NUMBER OF WATER QUALITY PARAMETERS CAN BE AFFECTED BY INTRODUCTION OF CONCRETE – ESPECIALLY FRESH CONCRETE. CONCRETE AFFECTS THE PH OF RUNOFF, CAUSING SIGNIFICANT CHEMICAL CHANGES IN WATER BODIES AND HARMING AQUATIC LIFE. SUSPENDED SOLIDS IN THE FORM OF BOTH CEMENT AND AGGREGATE DUST ARE ALSO GENERATED FROM BOTH FRESH AND DEMOLISHED CONCRETE WASTE.

CURRENT UNACCEPTABLE WASTE CONCRETE DISPOSAL PRACTICES
- ☐ DUMPING IN VACANT AREAS ON THE JOB-SITE.
- ☐ ILLICIT DUMPING OFF-SITE.
- ☐ DUMPING INTO DITCHES OR DRAINAGE FACILITIES.

RECOMMENDED DISPOSAL PRACTICES
- ☐ AVOID UNACCEPTABLE DISPOSAL PRACTICES LISTED ABOVE.
- ☐ DEVELOP PREDETERMINED, SAFE CONCRETE DISPOSAL AREAS.
- ☐ PROVIDE A WASHOUT AREA WITH A MINIMUM OF 6 CUBIC FEET OF CONTAINMENT AREA VOLUME FOR EVERY 10 CUBIC YARDS OF CONCRETE POURED.
- ☐ NEVER DUMP WASTE CONCRETE ILLICITLY OR WITHOUT PROPERTY OWNERS KNOWLEDGE AND CONSENT.
- ☐ TREAT RUNOFF FROM STORAGE AREAS THROUGH THE USE OF STRUCTURAL CONTROLS AS REQUIRED.

EDUCATION
- ☐ DRIVERS AND EQUIPMENT OPERATORS SHOULD BE INSTRUCTED ON PROPER DISPOSAL AND EQUIPMENT WASHING PRACTICES (SEE ABOVE).
- ☐ SUPERVISORS MUST BE MADE AWARE OF THE POTENTIAL ENVIRONMENTAL CONSEQUENCES OF IMPROPERLY HANDLED CONCRETE WASTE.

ENFORCEMENT
- ☐ THE CONSTRUCTION SITE MANAGER OR FOREMAN MUST ENSURE THAT EMPLOYEES AND PREMIX COMPANIES FOLLOW PROPER PROCEDURES FOR CONCRETE DISPOSAL AND EQUIPMENT WASHING.
- ☐ EMPLOYEES VIOLATING DISPOSAL OR EQUIPMENT CLEANING DIRECTIVES MUST BE REEDUCATED OR DISCIPLINED IF NECESSARY.

DEMOLITION PRACTICES
- ☐ MONITOR WEATHER AND WIND DIRECTION TO ENSURE CONCRETE DUST IS NOT ENTERING DRAINAGE STRUCTURES AND SURFACE WATERS. WHERE APPROPRIATE, CONSTRUCT SEDIMENT TRAPS OR OTHER TYPES OF SEDIMENT DETENTION DEVICES DOWNSTREAM OF DEMOLITION ACTIVITIES.

REQUIREMENTS
- ☐ USE PREDETERMINED DISPOSAL SITES FOR WASTE CONCRETE.
- ☐ PROHIBIT DUMPING WASTE CONCRETE ANYWHERE BUT PREDETERMINED AREAS.
- ☐ ASSIGN PREDETERMINED TRUCK AND EQUIPMENT WASHING AREAS
- ☐ EDUCATE DRIVERS AND OPERATORS ON PROPER DISPOSAL AND EQUIPMENT CLEANING PROCEDURES.

EDUCATION
- ☐ MINIMAL COST IMPACT FOR TRAINING AND MONITORING.
- ☐ CONCRETE DISPOSAL COST DEPENDS ON AVAILABILITY AND DISTANCE TO SUITABLE DISPOSAL AREAS.
- ☐ ADDITIONAL COSTS INVOLVED IN EQUIPMENT WASHING COULD BE SIGNIFICANT.

LIMITATIONS
THIS CONCRETE WASTE MANAGEMENT PROGRAM IS ONE PART OF A COMPREHENSIVE CONSTRUCTION SITE WASTE MANAGEMENT PROGRAM.

APPLICATIONS
PERIMETER CONTROL
SLOPE PROTECTION
SEDIMENT TRAPPING
CHANNEL PROTECTION
TEMPORARY STABILIZATION
PERMANENT STABILIZATION
Waste Management
Housekeeping Practices

TARGETED CONSTITUENTS
- ○ SEDIMENT
- ● NUTRIENTS TOXIC MATERIALS
- ○ OIL & GREASE
- ● FLOATABLE MATERIALS
- ● OTHER CONSTRUCTION WASTES

IMPLEMENTATION REQUIREMENTS
- ⊖ CAPITAL COSTS
- ⊖ MAINTENANCE
- ⊖ TRAINING
- ○ SUITABILITY FOR SLOPES > 5%

LEGEND
- ● SIGNIFICANT IMPACT
- ⊖ MEDIUM IMPACT
- ○ LOW IMPACT
- ? UNKNOWN OR QUESTIONABLE IMPACT

W-3

RECORD DRAWINGS:
IT WAS THE INTENT THAT THE IMPROVEMENTS SHOWN BE CONSTRUCTED ACCORDING TO THESE PLANS AS APPROVED BY THE CITY. THE LINES AND GRADES WERE SET ON THE GROUND FOR CONSTRUCTION ACCORDING TO SAID PLANS. THE CITY INSPECTED THE CONSTRUCTION. THE ENGINEER DID NOT VERIFY LINES OR GRADES AFTER CONSTRUCTION. WE ARE NOT AWARE OF ANY CHANGES OR REVISIONS TO THESE PLANS DURING CONSTRUCTION OTHER THAN THOSE SHOWN.

RANDALL P. POGUE, P.E.
TX LIC. NO. 84780
DATE: APRIL 15, 2010

POLLUTION CONTROL GENERAL NOTES:

1. THIS PLAN HAS BEEN PREPARED TO PROVIDE MEANS TO PREVENT OR MINIMIZE POLLUTION OF STORM WATER.
2. THIS PROJECT CONSISTS OF THE DEVELOPMENT OF 6 LOTS ON A 21.15 ACRE TRACT FOR A COMMERCIAL USE.
3. THE CONSTRUCTION ACTIVITY INCLUDED IN THIS PLAN WILL INCLUDE: (CONSTRUCTION PHASES)
   A. CLEARING AND GRUBBING
   B. STOCK PILING
   C. ROUGH GRADING
   D. UTILITY INSTALLATION/EXCAVATION OF TRENCHES
   E. FINAL OR FINISH GRADING
   F. PAVEMENT INSTALLATION
   G. BUILDING CONSTRUCTION
   H. PREPARATION OF SEEDING OR PLANTING
4. BEST MANAGEMENT PRACTICES (STRUCTURAL PRACTICES) USED ON THIS PROJECT COULD INCLUDE: SILT FENCING, CONSTRUCTION ENTRANCE, INLET PROTECTION, OUTLET PROTECTION, SUBSURFACE DRAINS, CHECK DAMS, DRAINAGE SWALES, SEDIMENT TRAPS, EARTH DIKE, PIPE SLOPE DRAINS, EROSION CONTROL MATTING, DETENTION/RETENTION PONDS AND SEDIMENT BASINS.
5. THE TOTAL ESTIMATED SITE AREA IS 28.06 ACRES
   THE TOTAL ESTIMATED SITE AREA TO BE DISTURBED IS 18.31 ACRES
   THE TOTAL ESTIMATED SITE AREA NOT TO BE DISTURBED IS 9.75 ACRES
6. THE ESTIMATED RUNOFF COEFFICIENT PRIOR TO DEVELOPMENT OF THE PROJECT IS 0.35
7. THE ESTIMATED RUNOFF COEFFICIENT UPON COMPLETION OF THE PROJECT IS 0.90
8. THE SLOPES EXPECTED ON THE SITE UPON COMPLETION OF FINAL GRADING WILL RANGE BETWEEN 1% TO 30%
9. THE STORM WATER EXITING THE SITE IS COLLECTED IN AN EXISTING DRAINAGE SYSTEM MAINTAINED BY THE CITY OF ROCKWALL, TEXAS.
10. THE NAME OF THE RECEIVING WATER BODY IS LAKE RAY HUBBARD, LOCATED APPROXIMATELY 4,800 FEET FROM THE SUBJECT PROPERTY.
11. THE SOILS PRESENT AT THE SITE ARE GENERALLY EXPANSIVE CLAYS.
12. THE CONTRACTOR SHALL PROVIDE EROSION PROTECTION AROUND THE WORK AREA PERIMETER AND AT ALL INLET MOUTHS DURING CONSTRUCTION.
13. THE CONTRACTOR WILL REMOVE ALL EXCESS SOIL FROM CONSTRUCTION VEHICLES PRIOR TO EXITING THE SITE.
14. ALL DISTURBED AREAS WHICH WILL NOT BE RE-DISTURBED FOR A MINIMUM OF 14 DAYS MUST BE STABILIZED BY THE CONTRACTOR TO CONTROL EROSION.
15. THE CONTRACTOR SHALL UNDERTAKE PROPER METHODS TO REDUCE DUST GENERATION FROM THE SITE.
16. THE CONTRACTOR MUST COMPLY WITH FEDERAL, STATE AND LOCAL REGULATIONS REGARDING SEDIMENT AND EROSION CONTROL.
17. A COPY OF THE STORM WATER POLLUTION PREVENTION PLAN ALONG WITH THE EPA (NPDES) PERMIT MUST BE POSTED AT THE CONSTRUCTION SITE THROUGHOUT THE CONSTRUCTION OF THE PROJECT. IF THE PERMIT HAS NOT BEEN ISSUED, A COPY OF NOTICE OF INTENT (NOI) SHALL BE POSTED
18. CONTRACTOR SHALL BE RESPONSIBLE FOR SUBMITTAL OF THE EPA's REQUIREMENT OF A NOTICE OF INTENT (NOI) AND THE NOTICE OF TERMINATION (NOT) AND ANY ADDITIONAL REQUIREMENT PER THE EPA GUIDELINES FOR STORM WATER POLLUTION PREVENTION.
19. ALL EROSION CONTROL DEVICES ARE TO BE INSTALLED IN ACCORDANCE WITH THE APPROVED PLANS AND SPECIFICATIONS FOR THIS PROJECT. CHANGES ARE TO BE APPROVED BEFORE CONSTRUCTION BY THE DESIGN ENGINEER AND THE CITY.
20. IF OFF-SITE SOIL BORROW OR SPOIL SITES ARE USED IN CONJUNCTION WITH THIS PROJECT, THE CONTRACTOR SHALL NOTIFY THE CITY INSPECTOR AND BE RESPONSIBLE FOR EROSION CONTROL REQUIREMENTS AS PER FEDERAL, STATE AND LOCAL REQUIREMENTS.
21. INSPECTIONS SHALL BE MADE WEEKLY AND AFTER RAIN STORM EVENTS TO INSURE THAT THE DEVICES ARE FUNCTIONING PROPERLY. WHEN SEDIMENT OR MUD HAS CLOGGED THE VOID SPACES BETWEEN STONES OR MUD IS BEING TRACKED ONTO A PUBLIC ROADWAY THE AGGREGATE PAD MUST BE WASHED DOWN OR REPLACED. RUNOFF FROM THE WASH DOWN OPERATION SHALL NOT BE ALLOWED TO DRAIN DIRECTLY OFF-SITE WITHOUT FIRST FLOWING THROUGH ANOTHER BEST MANAGEMENT PRACTICE (BMP) TO CONTROL OFF-SITE SEDIMENTATION. PERIODIC RE-GRADING OR THE ADDITION OF NEW STONE MAY BE REQUIRED TO MAINTAIN EFFICIENCY OF THE INSTALLATION.
22. MAINTENANCE AND INSPECTIONS PROCEDURES: CONTROL MEASURES SHALL BE INSPECTED AT LEAST ONCE A WEEK OR WITHIN 24 HOURS OF ANY STORM EVENT OF 0.5 INCHES OR GREATER. IF REPAIR IS NECESSARY IT SHALL BE DONE AT THE EARLIEST PRACTICAL DATE BUT IN NO CASE GREATER THAN 48 HOURS.
23. FINAL STABILIZATION IS DEFINED AS A UNIFORM PERENNIAL VEGETATIVE COVER AT A MINIMUM OF 70% RESTORATION OF THE NATIVE OR NATURAL PREEXISTING BACKGROUND COVER FOR THE AREA.
24. SEDIMENTATION PONDS/TRAPS MUST BE CLEANED OUT WHEN SEDIMENTATION ACCUMULATES TO A POINT OF 50% FULL (BY VOLUME).
25. CONTRACTOR SHALL SEED ALL DISTURBED AREAS IMMEDIATELY UPON COMPLETION OF FINAL GRADING.
26. NO PUBLIC ACCEPTANCE UNTIL (FINAL STABILIZATION) VEGETATION IS ESTABLISHED ON ALL DISTURBED AREAS.

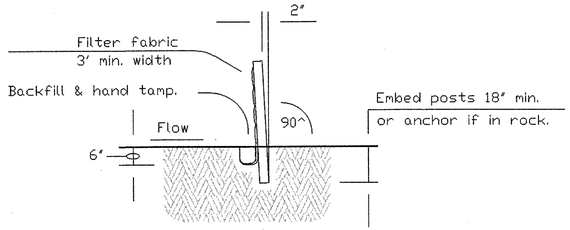
SEQUENCE OF EROSION CONTROL BEST MANAGEMENT PRACTICES:

1. INSTALL DOWN SLOPE AND SIDE SLOPE PERIMETER CONTROLS PRIOR TO THE LAND DISTURBING ACTIVITIES.
2. DO NOT DISTURB AN AREA UNTIL IT IS NECESSARY FOR CONSTRUCTION TO PROCEED.
3. COVER AND STABILIZE DISTURBED AREAS AS SOON AS POSSIBLE (WITHIN A MAXIMUM OF 14 DAYS).
4. TIME ACTIVITIES TO LIMIT IMPACT FROM SEASONAL CLIMATE CHANGES OR WEATHER EVENTS.
5. DELAY CONSTRUCTION OF INFILTRATION MEASURES UNTIL THE END OF THE CONSTRUCTION PROJECT, WHEN UPSTREAM DRAINAGE AREAS HAVE BEEN STABILIZED.
6. DO NOT REMOVE TEMPORARY PERIMETER CONTROLS UNTIL AFTER ALL UPSTREAM AREAS ARE FINAL STABILIZED.

ALLOWABLE NON-STORM WATER DISCHARGES

- DISCHARGES FROM FIRE FIGHTING ACTIVITIES.
- FIRE HYDRANT FLUSHINGS. *
- WATER USED TO WASH VEHICLES OR CONTROL DUST.
- POTABLE WATER SOURCES (INCLUDING WATERLINE FLUSHINGS CONTAINING LESS THAN 1000 GALLONS).
- UNCONTAMINATED GROUND WATER (INCLUDING DEWATERING GROUNDWATER INFILTRATION).
- FOUNDATION OR FOOTING DRAINS WHERE FLOWS ARE NOT CONTAMINATED WITH PROCESS MATERIALS SUCH AS SOLVENTS.
- SPRINGS, RIPARIAN HABITATS, WETLANDS AND UNCONTAMINATED GROUNDWATER.
- IRRIGATION WATER.
- EXTERIOR BUILDING WASH DOWN WITHOUT DETERGENTS.
- PAVEMENT WASH WATERS WHERE SPILLS OR LEAKS OF TOXIC OR HAZARDOUS MATERIALS HAVE NOT OCCURRED (UNLESS ALL SPILL MATERIAL HAS BEEN REMOVED) AND WHERE DETERGENTS ARE NOT USED.
- AIR CONDITIONING CONDENSATE.

* HEAVILY CHLORINATED WATER (3.5 MG/L OR GREATER FREE CHLORINE) RESULTING FROM WATER LINE STERILIZATION SHALL BE DIRECTED UNDER PERMIT TO THE SAN



SECTION A-A

SEDIMENT CONTROL FENCE USAGE GUIDELINES

A sediment control fence may be constructed near the downstream perimeter of a disturbed area along a contour to intercept sediment from overland runoff. A 2 year storm frequency may be used to calculate the flow rate to be filtered.

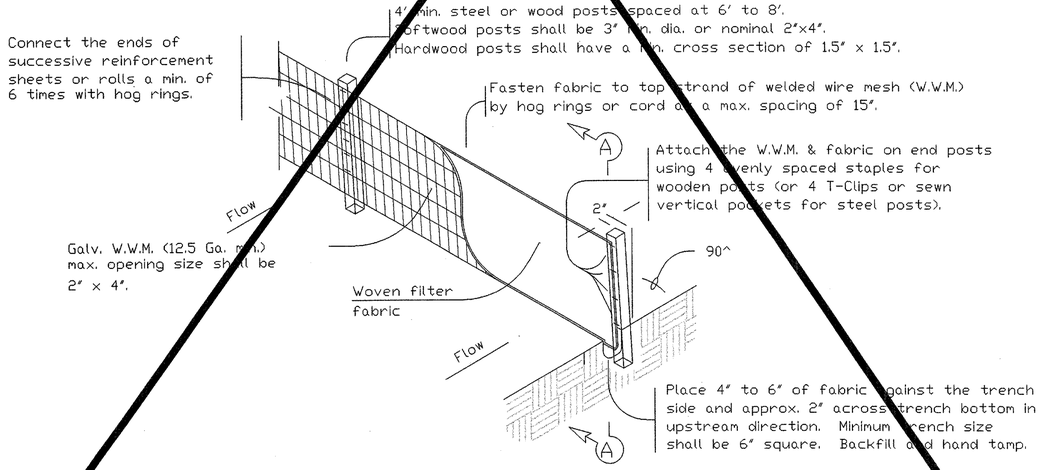
Sediment control fence should be sized to filter a max. flow through rate of 100 GPM/FT 2 Sediment control fence is not recommended to control erosion from a drainage area larger than 2 acres.

PLAN SHEET LEGEND

Sediment Control Fence —— SCF ——

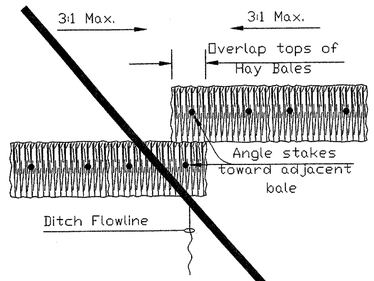
GENERAL NOTES

1. The guidelines shown hereon are suggestions only and may be modified by the Engineer.

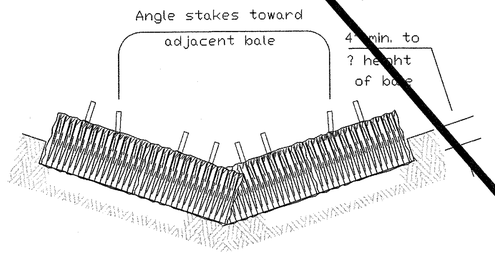


TEMPORARY SEDIMENT CONTROL FENCE

SCF



PLAN VIEW



PROFILE VIEW

PLANS SHEET LEGEND

Baled Hay —— BH ——

BALED HAY USAGE GUIDELINES

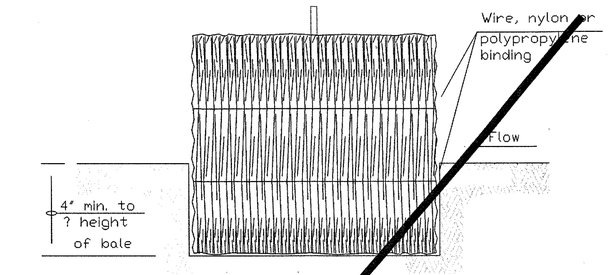
A Baled Hay installation may be constructed near the downstream perimeter of a disturbed area along a contour to intercept sediment from overland runoff. A two year storm frequency may be used to calculate the flow rate to be filtered. The installation should be sized to filter a maximum flow thru rate of 5 GPM/FT2 of cross sectional area. Baled hay may be used at the following locations:

1. Where the runoff approaching the baled hay flows over disturbed soil for less than 100'. If the slope of the disturbed soil exceeds 10%, the length of slope upstream the baled hay should be less than 50'.
2. Where the installation will be required for less than 3 months.
3. Where the contributing drainage area is less than ? acre.

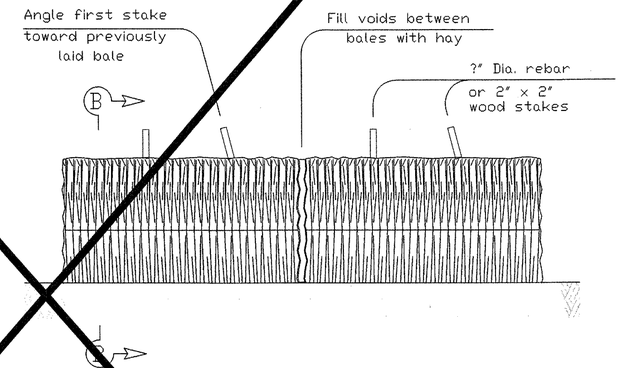
For Baled Hay installations in small ditches, the additional following considerations apply:

1. The ditch sideslopes should be graded as flat as possible to maximize the drainage flowrate thru the hay.
2. The ditch should be graded large enough to contain the overtopping drainage when sediment has filled to the top of the baled hay.

Bales should be replaced usually every 2 months or more often during wet weather when loss of structural integrity is accelerated.



SECTION B-B



BALED HAY FOR EROSION CONTROL

BH

GENERAL NOTES

1. Hay bales shall be a minimum of 30" in length and weigh a minimum of 50 Lbs.
2. Hay bales shall be bound by either wire or nylon or polypropylene string. The bales shall be composed entirely of vegetative matter.
3. Hay bales shall be embedded in the soil a minimum of 4" and where possible ? the height of the bale.
4. Hay bales shall be placed in a row with ends tightly abutting the adjacent bales. The bales shall be placed with bindings parallel to the ground.
5. Hay bales shall be securely anchored in place with ?" Dia. rebar or 2" x 2" wood stakes, driven through the bales. The first stake shall be angled towards the previously laid bale to force the bales together.
6. The guidelines shown hereon are suggestions only and may be modified by the Engineer.

REVISION HISTORY

Texas Department of Transportation
Design Division (Roadway)

TEMPORARY EROSION, SEDIMENT AND WATER POLLUTION CONTROL MEASURES

FENCED & BALED HAY

EC(1)-93

FILE: EC193.DGN	DN: HEJ	CK: HEJ	DW: BGD	CK:
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PI NO: 1393-08-087

DWG NO: 1393-08-087-07A.DWG

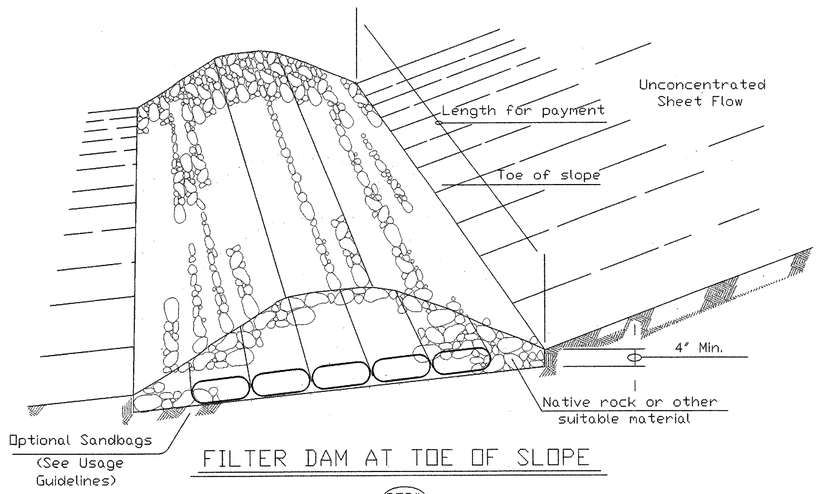
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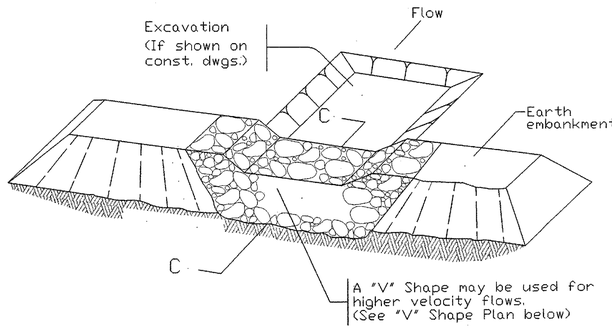
TEXAS BOARD OF PROFESSIONAL ENGINEERS, CERTIFICATE OF REGISTRATION #F-000481; TEXAS BOARD OF PROFESSIONAL LAND SURVEYING, CERTIFICATE OF REGISTRATION 100421-00



FILTER DAM AT TOE OF SLOPE

RFD1

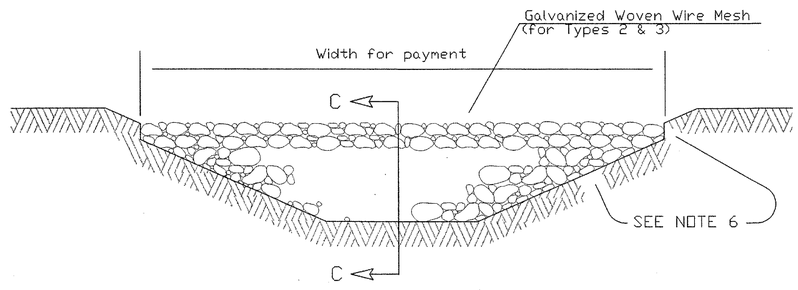
TYPE 1



FILTER DAM AT SEDIMENT TRAP

RFD1 OR RFD2

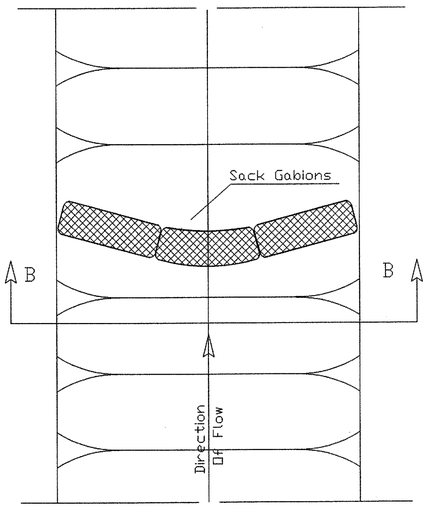
TYPE 1 OR TYPE 2



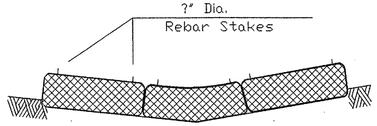
FILTER DAM AT CHANNEL SECTIONS

RFD1 OR RFD2 OR RFD3

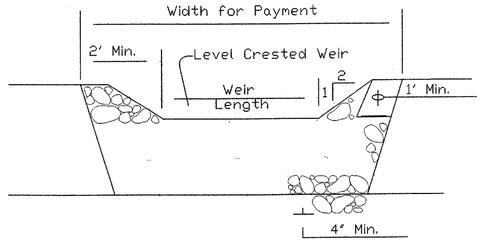
TYPE 1 OR TYPE 2



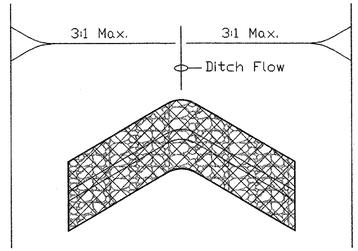
PLAN VIEW



SECTION B-B

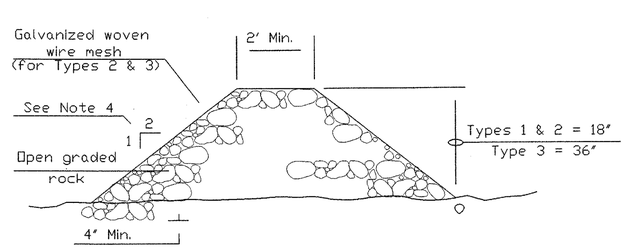


PROFILE



"V" SHAPE

(Plan View)



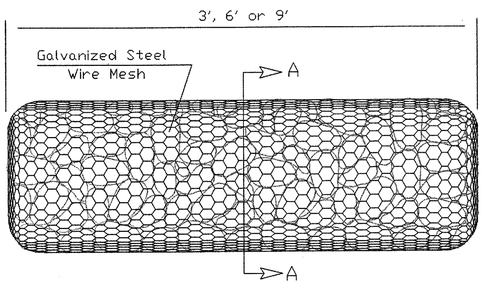
SECTION C-C

PLANS SHEET LEGEND

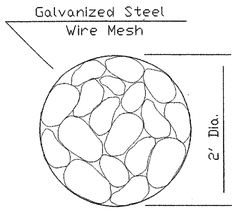
Type 1 Rock Filter Dam — RFD1

Type 2 Rock Filter Dam — RFD2

Type 3 Rock Filter Dam — RFD3



TYPE 4 (SACK GABIONS)



SECTION A-A

ROCK FILTER DAM USAGE GUIDELINES

Rock Filter Dams should be constructed downstream from disturbed areas to intercept sediment from overland runoff and/or concentrated flow. The dams should be sized to filter a maximum flow through rate of 60 GPM/FT^2 of cross sectional area. A 2 year storm frequency may be used to calculate the flow rate.

Type 1 (18" high with no wire mesh): Type 1 may be used at the toe of slopes, around inlets, in small ditches, and at dike or swale outlets. This type of dam is recommended to control erosion from a drainage area of 5 acres or less. Type 1 may not be used in concentrated high velocity flows (approx. 8 Ft/Sec or more) in which aggregate wash out may occur. Sandbags may be used at the embedded foundation (4" deep min.) for better filtering efficiency of low flows if called for on the plans or directed by the Engineer.

Type 2 (18" high with wire mesh): Type 2 may be used in ditches and at dike or swale outlets.

Type 3 (36" high with wire mesh): Type 3 may be used in stream flow and should be secured to the stream bed.

Type 4 (Sack gabions): Type 4 May be used in ditches and smaller channels to form an erosion control dam.

GENERAL NOTES

1. If shown on the plans or directed by the Engineer, filter dams should be placed near the toe of slopes where erosion is anticipated, upstream and/or downstream at drainage structures, and in roadway ditches and channels to collect sediment.
2. Materials (aggregate, wire mesh, sandbags, etc.) shall be as indicated by the specification for "Rock Filter Dams for Erosion and Sedimentation Control".
3. The rock filter dam dimensions shall be as indicated on the SW3P plans.
4. Side slopes should be 2:1 or flatter. Dams within the safety zone shall have sideslopes of 6:1 or flatter.
5. Maintain a minimum of 1' between top of rock filter dam weir and top of embankment for filter dams at sediment traps.
6. Filter dams should be embedded a minimum of 4" into existing ground.
7. The sediment trap for ponding of sediment laden runoff shall be of the dimensions shown on the plans.
8. Rock filter dam types 2 & 3 shall be secured with 20 gauge galvanized woven wire mesh with 1" diameter hexagonal openings. The aggregate shall be placed on the mesh to the height & slopes specified. The mesh shall be folded at the upstream side over the aggregate and tightly secured to itself on the downstream side using wire ties or hog rings. In stream use the mesh should be secured or staked to the stream bed prior to aggregate placement.
9. Sack Gabions should be staked down with ?" dia. rebar stakes.
10. Flow outlet should be onto a stabilized area (vegetation, rock, etc.).
11. The guidelines shown hereon are suggestions only and may be modified by the Engineer.

REVISION HISTORY

Texas Department of Transportation
Design Division (Roadway)

TEMPORARY EROSION, SEDIMENT AND WATER POLLUTION CONTROL MEASURES

ROCK FILTER DAMS

EC(2)-93

FILE: EC293.DGN	DN: HEJ	CK: HEJ	DW: BGD	CK:
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PI NO: 1393-08-087

DWG NO: 1393-08-087-07A.DWG

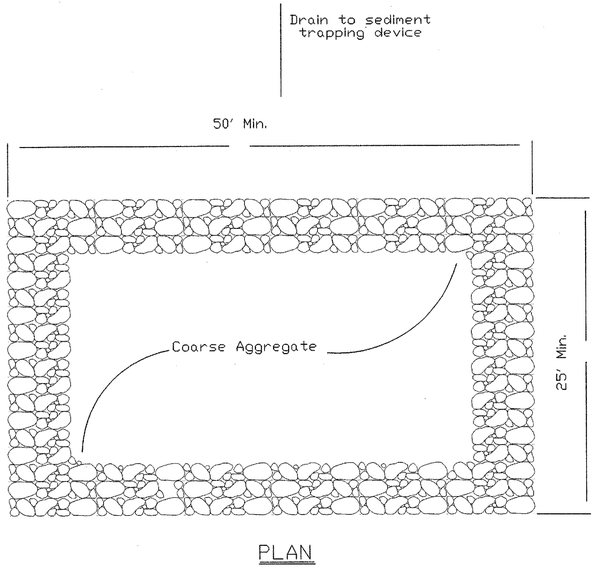
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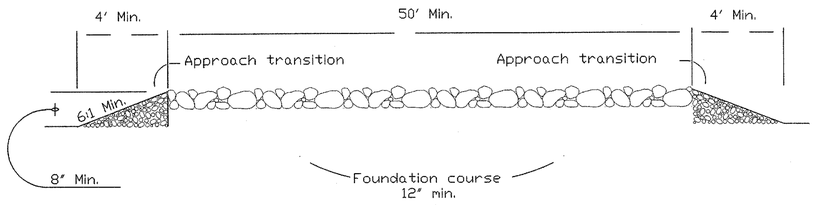
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PLAN

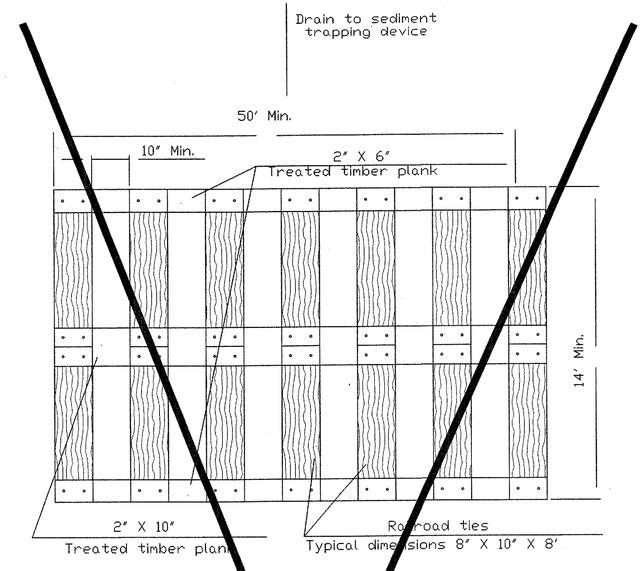


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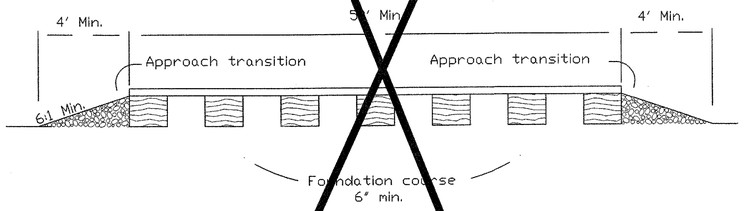
CONSTRUCTION EXIT (TYPE 1)

GENERAL NOTES

1. The length of the type 1 construction exit shall be as indicated on the plans, but not less than 50'.
2. The coarse aggregate should be open graded with a size of 4" to 8".
3. The approach transitions should be no steeper than 6:1 and constructed as directed by the Engineer.
4. The construction exit foundation course shall be flexible base, bituminous concrete, portland cement concrete or other material as approved by the Engineer.
5. The construction exit shall be graded to allow drainage to a sediment trapping device.
6. The guidelines shown hereon are suggestions only and may be modified by the Engineer.



PLAN

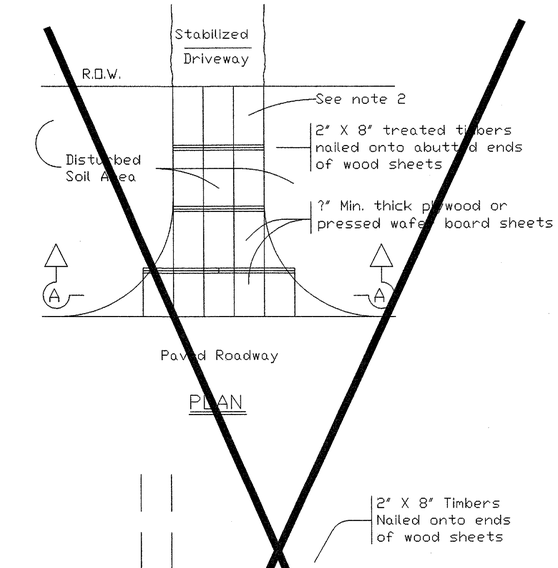


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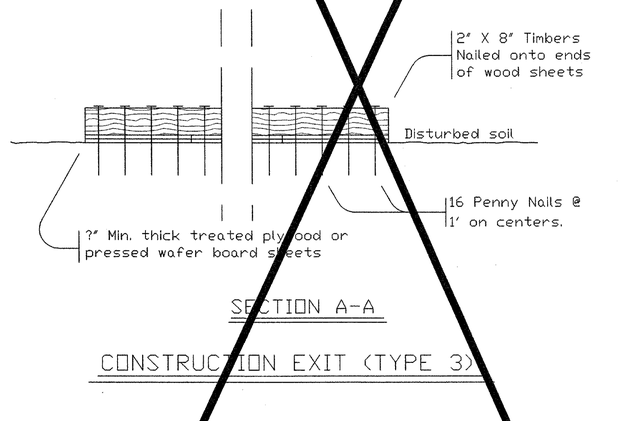
CONSTRUCTION EXIT (TYPE 2)

GENERAL NOTES

1. The length of the type 2 construction exit shall be as indicated on the plans, but not less than 50'.
2. The treated timber planks shall be attached to the railroad ties with ?"x 6" min. lag bolts. Other fasteners may be used as approved by the Engineer.
3. The treated timber planks shall be #2 grade min., and should be free from large and loose knots.
4. The approach transitions shall be no steeper than 6:1 and constructed as directed by the Engineer.
5. The construction exit foundation course shall be flexible base, bituminous concrete, portland cement concrete or other material as approved by the Engineer.
6. The construction exit should be graded to allow drainage to a sediment trapping device.
7. The guidelines shown hereon are suggestions only and may be modified by the Engineer.



PLAN



SECTION A-A

CONSTRUCTION EXIT (TYPE 3)

GENERAL NOTES

1. The length of the type 3 construction exit shall be as shown on the plans, or as directed by the Engineer.
2. The type 3 construction exit may be constructed from open graded crushed stone with a size of two to four inches spread a min. of 4" thick to the limits shown on the plans.
3. The treated timber planks shall be #2 grade min., and should be free from large and loose knots.
4. The guidelines shown hereon are suggestions only and may be modified by the Engineer.

REVISION HISTORY

Texas Department of Transportation
Design Division (Roadway)

TEMPORARY EROSION, SEDIMENT AND WATER POLLUTION CONTROL MEASURES

CONSTRUCTION EXITS

EC(3)-93

FILE: EC393.DGN	DN: HEJ	CK: HEJ	DW: BGD	CK:
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	COUNTY	CONTROL	SECT	JOB	HIGHWAY

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PI NO: 1393-08-087

DWG NO: 1393-08-087-07A.DWG

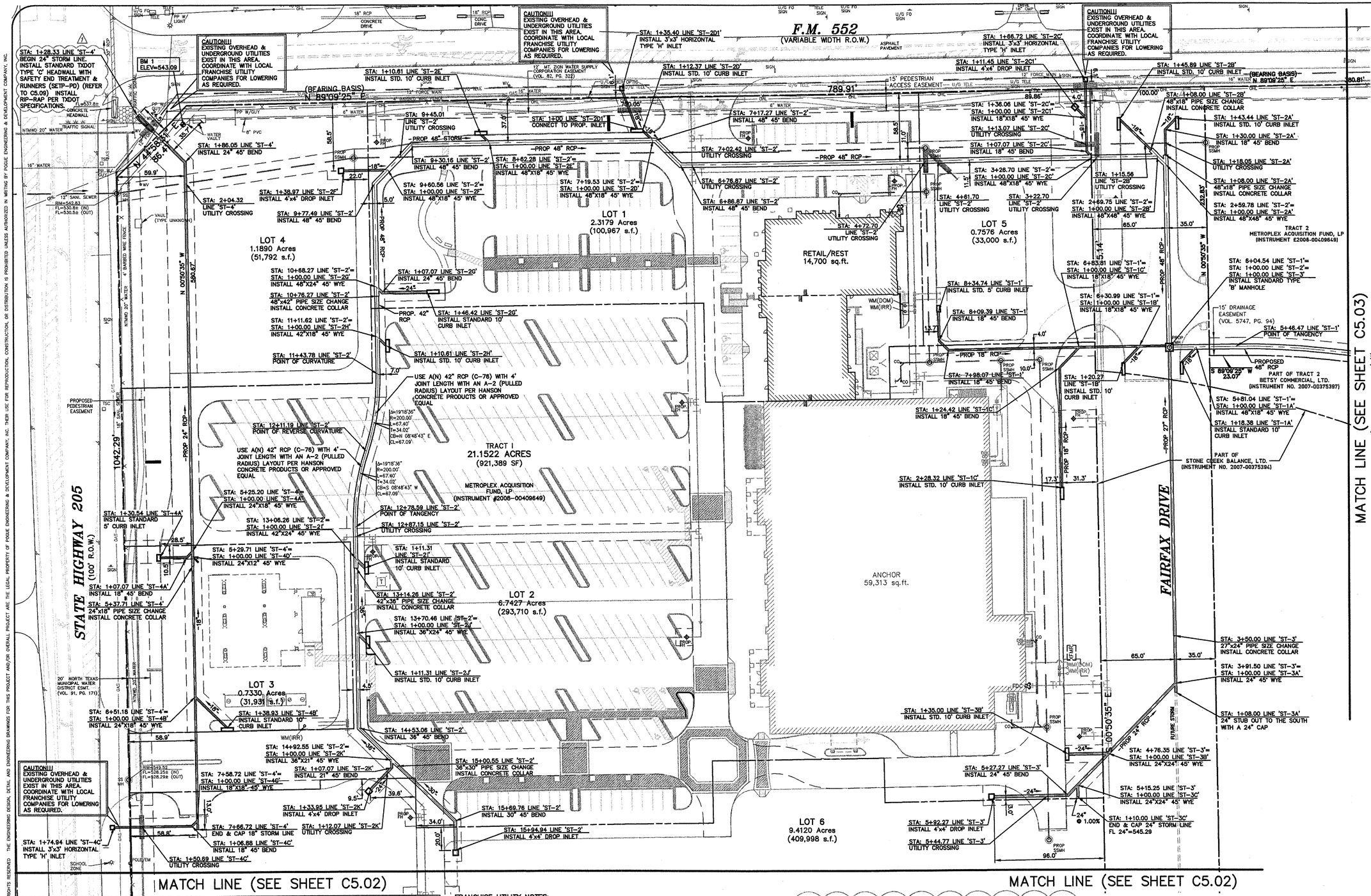
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TEXAS BOARD OF PROFESSIONAL ENGINEERS, CERTIFICATE OF REGISTRATION #F-000401; TEXAS BOARD OF PROFESSIONAL LAND SURVEYING, CERTIFICATE OF REGISTRATION 100421-00



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...

BENCH MARK LIST:

BENCHMARK #1
SQUARE CUT SET AT SOUTHWESTCORNER OF WATER VAULT LOCATEDED AT THE SOUTHEAST CORNER OF THE INTERSECTION OF THE EAST RIGHT-OF-WAY LINE OF SH 205 AND THE SOUTH RIGHT-OF-WAY LINE OF FM 552.
ELEVATION = 543.09

BENCHMARK #2
CITY OF ROCKWALL MONUMENT (R010) FOUND.
ELEVATION = 524.788

FRANCHISE UTILITY NOTES:
1. TXU ENERGY CONSTRUCTION SERVICES – (800) 711-9112
2. ATMOS ENERGY (GAS) – 903-457-2092 – DINAH WOOD
3. AT&T (PHONE) – 903-457-2092 – DWAYNE WELLS

RECORD DRAWINGS:
IT WAS THE INTENT THAT THE IMPROVEMENTS SHOWN BE CONSTRUCTED ACCORDING TO THESE PLANS AS APPROVED BY THE CITY. THE LINES AND GRADES WERE SET ON THE GROUND FOR CONSTRUCTION ACCORDING TO SAID PLANS. THE CITY INSPECTED THE CONSTRUCTION. THE ENGINEER DID NOT VERIFY LINES OR GRADES AFTER CONSTRUCTION. WE ARE NOT AWARE OF ANY CHANGES OR REVISIONS TO THESE PLANS DURING CONSTRUCTION OTHER THAN THOSE SHOWN.

RANDALL P. POGUE, P.E. TX LIC. NO. 84780 — DATE: APRIL 15, 2010 (4)

NO.	DATE	REVISION / DESCRIPTION
4	04-15-10	RECORD DRAWINGS
3	02-24-10	ADDED RIGHT TURN LANE ON S.H. 205
2	07-17-09	SANITARY SEWER & ADA ROUTE REVISIONS
1	06-19-09	TXDOT COMMENTS

DESIGN	DRAWN	DATE	SCALE	NOTES
BEC	WTW	05-21-09	AS SHOWN	–

OWNER
METROPLEX ACQUISITION FUND, LP
8214 WESTCHESTER, SUITE 850
DALLAS, TEXAS 75225
MR. GREY STOGNER
(214) 343-4477 PHONE
(214) 340-2029 FAX

DEVELOPER
CRESTVIEW REAL ESTATE, L.L.C.
8214 WESTCHESTER, SUITE 850
DALLAS, TEXAS 75225
MR. GREY STOGNER
(214) 343-4477 PHONE
(214) 340-2029 FAX

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY BRANDON E. COX, P.E. 101037 ON 05-21-09. ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT.
05-21-09

STATE OF TEXAS · BRANDON E. COX · 101037 · LICENSED PROFESSIONAL ENGINEER

POGUE ENGINEERING & DEVELOPMENT COMPANY, INC.
1512 BRAY CENTRAL DRIVE
SUITE 100
McKINNEY, TEXAS 75069
(214) 544-8880 PHONE
(214) 544-8882 FAX
www.PogueEngineering.com

STORM SEWER PLAN (1 of 3)

STONE CREEK RETAIL
BLOCK A, LOTS 1-6, STONE CREEK RETAIL ADDITION
W.T. DEWEESE SURVEY, ABSTRACT NO. 71
CITY OF ROCKWALL, TEXAS

SHEET NO. C5.01

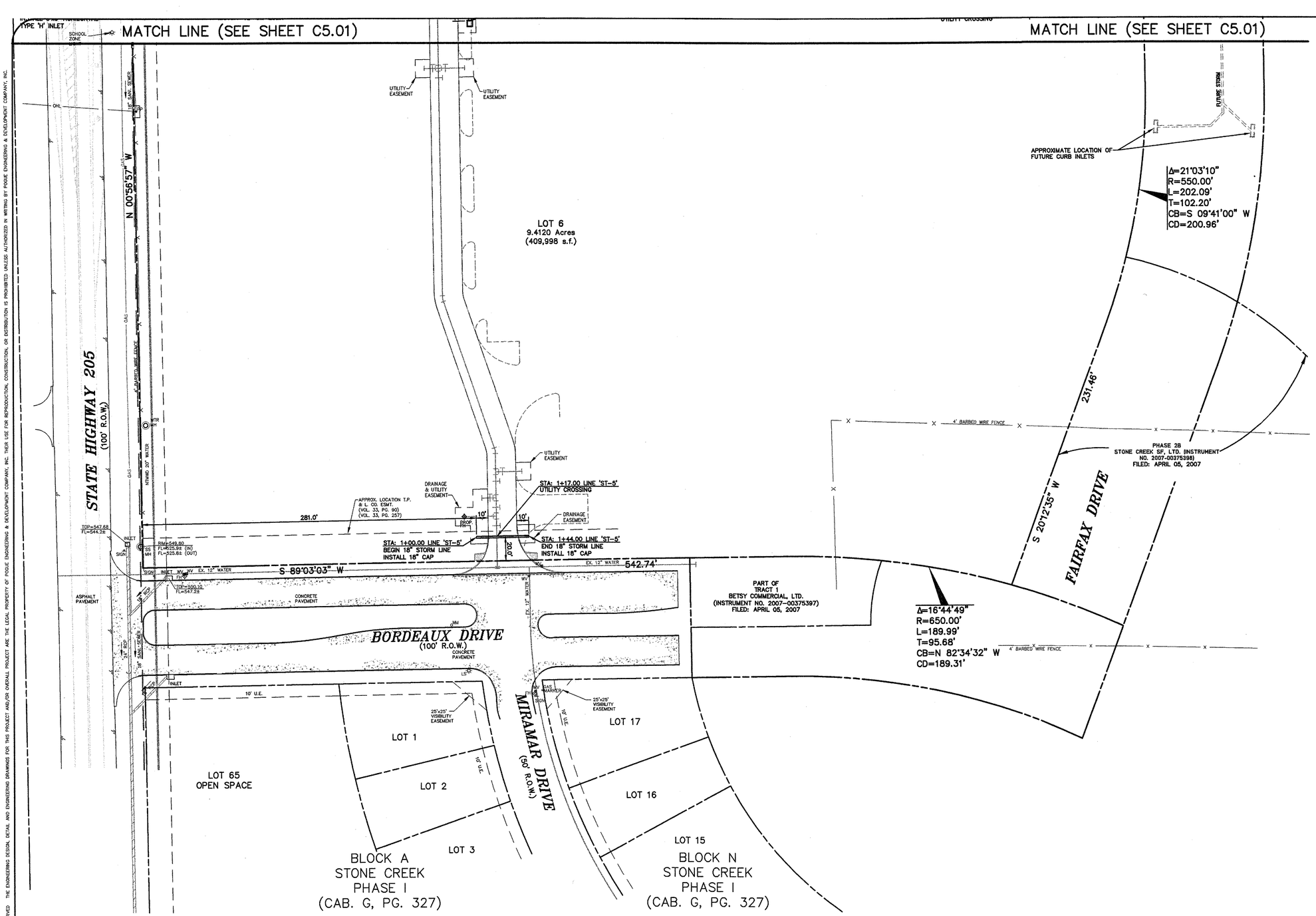
PI NO: 1393-08-087
DWG NO: 1393-08-087-07A.DWG

STONE CREEK RETAIL – ROCKWALL

TEXAS BOARD OF PROFESSIONAL ENGINEERS, CERTIFICATE OF REGISTRATION #F-000461; TEXAS BOARD OF PROFESSIONAL LAND SURVEYING, CERTIFICATE OF REGISTRATION 100421-00

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0 20 40 80 120

GRAPHIC SCALE IN FEET
SCALE: 1" = 40'

LEGEND

B	BOLLARD
EM	ELECTRIC METER
PP	POWER POLE
LS	LIGHT STANDARD
WM	WATER METER
WV	WATER VALVE
ICV	IRRIGATION CONTROL VALVE
FH	FIRE HYDRANT
FDC	FIRE DEPARTMENT CONNECTION
CO	CLEAN OUT
MH	MANHOLE
GM	GAS METER
TSC	TRAFFIC SIGNAL CONTROL
TSP	TRAFFIC SIGNAL POLE
SIGN	TRAFFIC SIGN
TELE	TELEPHONE BOX
TV	TV BOX
FP	FLAG POLE
L.A.	LANDSCAPE AREA
	PROPERTY LINE
OHL	O.H. POWER LINES
TEL	U/G TELEPHONE LINES
WATER	U/G WATER LINE
GAS	U/G GAS LINE
	FENCE
500	EXISTING CONTOURS
XXX.XX	EXISTING SPOT GRADES
(C.M.)	CONTROLLING MONUMENT
SIR	5/8-INCH IRON ROD WITH "POGUE ENG & DEV" CAP SET
XXX	PROPOSED CONTOURS
TC XXX.XX G XXX.XX	PROPOSED SPOT GRADES
	PROPOSED EROSION CONTROL
	PROPOSED DRAINAGE DIVIDES

CAUTION!!!
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SQUARE CUT SET AT SOUTHWESTCORNER OF WATER VAULT LOCATEDED AT THE SOUTHEAST CORNER OF THE INTERSECTION OF THE EAST RIGHT-OF-WAY LINE OF SH 205 AND THE SOUTH RIGHT-OF-WAY LINE OF FM 552.
ELEVATION = 543.09

BENCHMARK #2
CITY OF ROCKWALL MONUMENT (R010) FOUND.
ELEVATION = 524.788

FRANCHISE UTILITY NOTES:
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RANDALL P. POGUE, P.E.
TX LIC. NO. 84760
DATE: APRIL 15, 2010
4

NO.	DATE	REVISION / DESCRIPTION
4	04-15-10	RECORD DRAWINGS
3	02-24-10	ADDED RIGHT TURN LANE ON S.H. 205
2	07-17-09	SANITARY SEWER & ADA ROUTE REVISIONS
1	06-19-09	TXDOT COMMENTS

DESIGN	DRAWN	DATE	SCALE	NOTES
BEC	WTW	05-21-09	AS SHOWN	–

OWNER
METROPLEX ACQUISITION FUND, LP
8214 WESTCHESTER, SUITE 850
DALLAS, TEXAS 75225
MR. GREY STOGNER
(214) 343-4477 PHONE
(214) 340-2029 FAX

DEVELOPER
CRESTVIEW REAL ESTATE, L.L.C.
8214 WESTCHESTER, SUITE 850
DALLAS, TEXAS 75225
MR. GREY STOGNER
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Brandon E. Cox 05-21-09

STATE OF TEXAS
BRANDON E. COX
101037
LICENSED
PROFESSIONAL ENGINEER

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1512 BRAY CENTRAL DRIVE
SUITE 100
McKINNEY, TEXAS 75069
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www.PogueEngineering.com

STORM SEWER PLAN (2 of 3)

STONE CREEK RETAIL
BLOCK A, LOTS 1-6, STONE CREEK RETAIL ADDITION
W.T. DEWEESE SURVEY, ABSTRACT NO. 71
CITY OF ROCKWALL, TEXAS

SHEET NO. C5.02

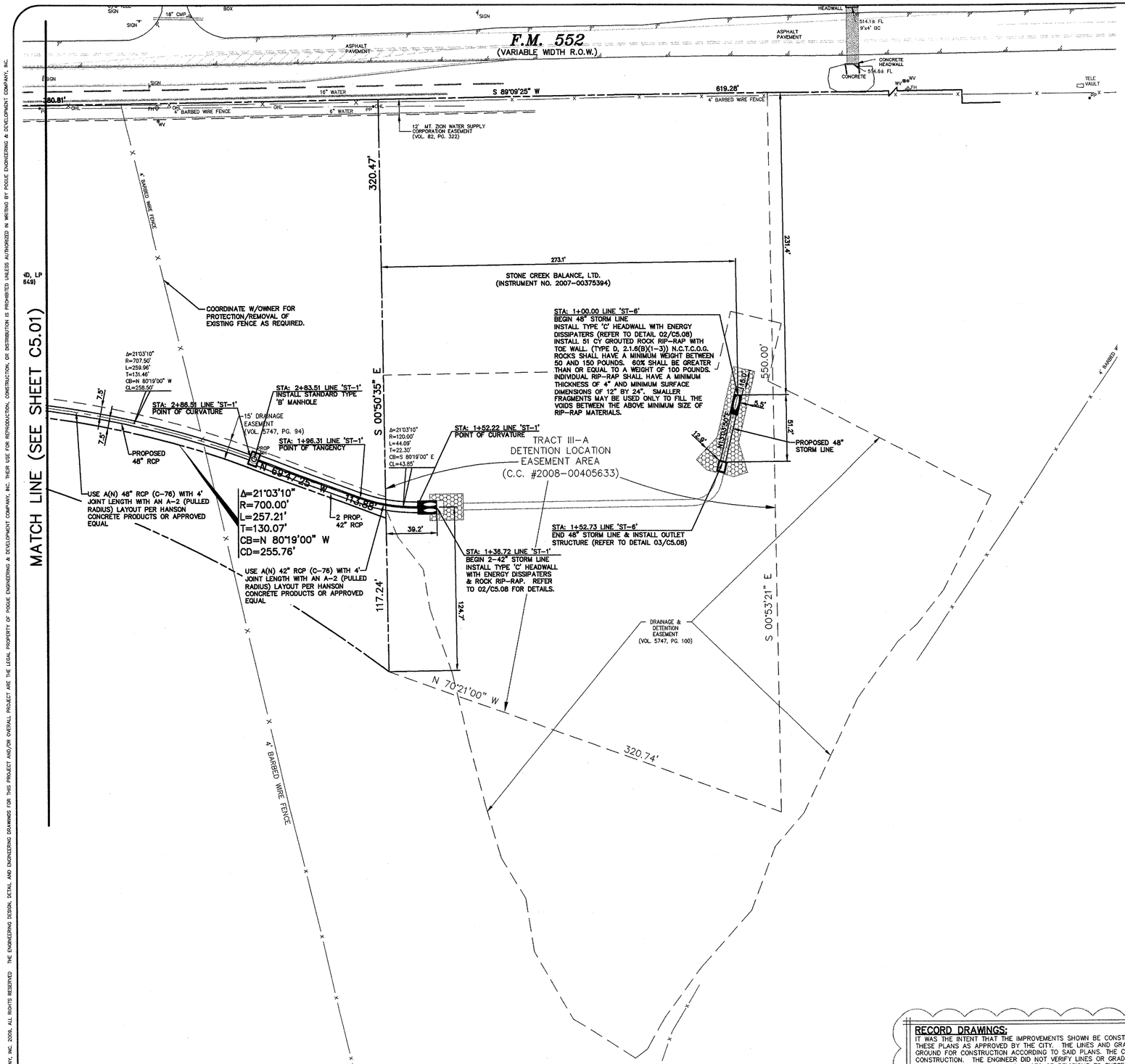
PI NO: 1393-08-087
DWG NO: 1393-08-087-07A.DWG

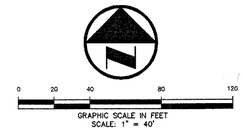
STONE CREEK RETAIL – ROCKWALL

TEXAS BOARD OF PROFESSIONAL ENGINEERS, CERTIFICATE OF REGISTRATION #F-000488; TEXAS BOARD OF PROFESSIONAL LAND SURVEYING, CERTIFICATE OF REGISTRATION 100421-00

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LEGEND

B.	BOLLARD
EM	ELECTRIC METER
PP	POWER POLE
LS	LIGHT STANDARD
WM	WATER METER
WV	WATER VALVE
ICV	IRRIGATION CONTROL VALVE
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L.A.	LANDSCAPE AREA
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500	EXISTING CONTOURS
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(C.M.) SIR	CONTROLLING MONUMENT 5/8-INCH IRON ROD WITH "POGUE ENG & DEV" CAP SET
XXX	PROPOSED CONTOURS
TC XXX.XX G XXX.XX	PROPOSED SPOT GRADES
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ELEVATION = 543.09

BENCHMARK #2
CITY OF ROCKWALL MONUMENT (R010) FOUND.
ELEVATION = 524.788

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RANDALL P. POGUE, P.E.
TX LIC. NO. 84780
DATE: APRIL 15, 2010
4

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3	02-24-10	ADDED RIGHT TURN LANE ON S.H. 205
2	07-17-09	SANITARY SEWER & ADA ROUTE REVISIONS
1	06-19-09	TXDOT COMMENTS

DESIGN	DRAWN	DATE	SCALE	NOTES
BEC	WTW	05-21-09	AS SHOWN	-

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05-21-09

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BRANDON E. COX
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STORM SEWER PLAN (3 of 3)

STONE CREEK RETAIL
BLOCK A, LOTS 1-6, STONE CREEK RETAIL ADDITION
W.T. DEWEESE SURVEY, ABSTRACT NO. 71
CITY OF ROCKWALL, TEXAS

SHEET NO. C5.03

PI NO: 1393-08-087
DWG NO: 1393-08-087-07A.DWG

STONE CREEK RETAIL - ROCKWALL

TEXAS BOARD OF PROFESSIONAL ENGINEERS, CERTIFICATE OF REGISTRATION #F-000461; TEXAS BOARD OF PROFESSIONAL LAND SURVEYING, CERTIFICATE OF REGISTRATION 100421-00

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TWILLIAMS 04/29/2010 – 4:05PM
N:\JOBS\1300-1399\1393-08-087\DWG\1393-08-087-07A.DWG

BENCH MARK LIST:

BENCHMARK #1
SQUARE CUT SET AT SOUTHWESTCORNER OF WATER VAULT LOCATEDED AT THE SOUTHEAST CORNER OF THE INTERSECTION OF THE EAST RIGHT-OF-WAY LINE OF SH 205 AND THE SOUTH RIGHT-OF-WAY LINE OF FM 552.
ELEVATION = 543.09

BENCHMARK #2
CITY OF ROCKWALL MONUMENT (R010) FOUND.
ELEVATION = 524.788

SCALE
1"=40' H
1"=5' V

NOTE:
ALL STORM PIPE TO BE RCP

RECORD DRAWINGS:
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RANDALL P. POGUE, P.E. DATE: APRIL 15, 2010
TX LIC. NO. 84780

NOTE #1
EX. U.G. UTILITY TO BE RELOCATED. COORDINATE WITH CITY OF ROCKWALL AND LOCAL FRANCHISE UTILITY COMPANIES AS REQUIRED.

LINE 'ST-1B'
(18" @ 41.19%)
Q100=7.32 cfs
V=4.14 fps
v²/2g=0.27 ft
Sf=0.0049ft/ft
n=0.013
C=67.22 cfs
Vd=23.77 fps
d=0.35 ft

20.27 L.F. OF 18" CLASS III RCP

LINE 'ST-1C'
(18" @ 5.31%)
Q100=9.97 cfs
V=5.64 fps
v²/2g=0.49 ft
Sf=0.0090ft/ft
n=0.013
C=24.21 cfs

128.32 L.F. OF 18" CLASS III RCP

LINE 'ST-2A'
(48" @ 6.69%)
Q100=2.29 cfs
V=0.18 fps
v²/2g=0.01 ft
Sf=0.0001 ft/ft
n=0.013
C=371.53 cfs

8.00 L.F. OF 48" CLASS III RCP

LINE 'ST-2A'
(18" @ 6.09%)
Q100=2.29 cfs
V=1.30 fps
v²/2g=0.03 ft
Sf=0.0005 ft/ft
n=0.013
C=25.92 cfs
Vd=9.05 fps
d=0.30 ft

35.44 L.F. OF 18" CLASS III RCP

LINE 'ST-2B'
(18" @ 6.60%)
Q100=5.20 cfs
V=2.94 fps
v²/2g=0.13 ft
Sf=0.0025 ft/ft
n=0.013
C=26.99 cfs
Vd=11.80 fps
d=0.45 ft

37.89 L.F. OF 18" CLASS III RCP

LINE 'ST-2B'
(48" @ 6.65%)
Q100=5.20 cfs
V=0.41 fps
v²/2g=0.003 ft
Sf=0.0000 ft/ft
n=0.013
C=358.53 cfs

8.00 L.F. OF 48" CLASS III RCP

LINE 'ST-2C'
(18" @ 4.62%)
Q100=3.09 cfs
V=1.75 fps
v²/2g=0.05 ft
Sf=0.0009 ft/ft
n=0.013
C=22.58 cfs

66.72 L.F. OF 18" CLASS III RCP

LINE 'ST-2C'
(18" @ 4.62%)
Q100=8.29 cfs
V=4.69 fps
v²/2g=0.34 ft
Sf=0.0082 ft/ft
n=0.013
C=22.58 cfs

LINE 'ST-2C1'
(18" @ 4.02%)
Q100=5.20 cfs
V=2.94 fps
v²/2g=0.13 ft
Sf=0.0025 ft/ft
n=0.013
C=21.06 cfs

11.45 L.F. OF 18" CLASS III RCP

LINE 'ST-2D'
(18" @ 19.40%)
Q100=8.73 cfs
V=4.94 fps
v²/2g=0.38 ft
Sf=0.0089 ft/ft
n=0.013
C=26.18 cfs

12.37 L.F. OF 18" CLASS III RCP

LINE 'ST-1'
(18" @ 4.18%)
Q100=3.79 cfs
V=2.15 fps
v²/2g=0.071 ft
Sf=0.0013 ft/ft
n=0.013
C=21.48 cfs
Vd=9.16 fps
d=0.43 ft

LINE 'ST-1'
(18" @ 4.18%)
Q100=13.76 cfs
V=7.79 fps
v²/2g=0.94 ft
Sf=0.0172 ft/ft
n=0.013
C=21.48 cfs

226.42 L.F. OF 18" CLASS III RCP

LINE 'ST-1'
(18" @ 4.18%)
Q100=21.08 cfs
V=11.93 fps
v²/2g=2.21 ft
Sf=0.0403 ft/ft
n=0.013
C=21.48 cfs

LINE 'ST-1'
(48" @ 1.87%)
Q100=161.14 cfs
V=12.82 fps
v²/2g=2.55 ft
Sf=0.0126 ft/ft
n=0.013
C=196.43 cfs

315.03 L.F. OF 48" CLASS III RCP

LINE 'ST-1'
(48" @ 1.87%)
Q100=166.08 cfs
V=13.22 fps
v²/2g=2.71 ft
Sf=0.0134 ft/ft
n=0.013
C=196.43 cfs

143.79 L.F. OF 2-42" CLASS III RCP

LINE 'ST-1'
(2-42" @ 0.50%)
Q100=186.3 cfs
V=5.68 fps
v²/2g=1.46 ft
Sf=0.0086 ft/ft
n=0.013
C=142.28 cfs

18.38 L.F. OF 18" CLASS III RCP

LINE 'ST-1A'
(18" @ 46.82%)
Q100=4.94 cfs
V=2.80 fps
v²/2g=25.68 ft
Sf=0.0022 ft/ft
n=0.013
C=71.86 cfs
Vd=23.29 fps
d=0.27 ft

PROPOSED GROUND LINE @ C.L. PIPE
EXISTING GROUND LINE @ C.L. PIPE
COMPACTED FILL
PROPOSED INLET
PROPOSED MANHOLE
PROPOSED HEADWALL
PROPOSED ENERGY DISSIPATERS
PROPOSED RIP-RAP
PROPOSED LINE 'W-1'
PROPOSED LINE 'SS-1'
HGL
SAME POINT
EXISTING GROUND LINE @ C.L. PIPE. RESTORE TO NATURAL CONDITIONS.
PROP. 18" STORM @ 4.18%
PROP. 48" STORM @ 1.87%
-2-PROP. 42" STORM @ 0.50%
PROP. 18" STORM @ 46.82%
PROP. 18" STORM @ 41.19%
PROP. 18" STORM @ 5.31%
PROP. 18" STORM @ 6.09%
PROP. 48" STORM @ 6.69%
PROP. 18" STORM @ 6.60%
PROP. 48" STORM @ 6.65%
PROP. 18" STORM @ 4.62%
PROP. 18" STORM @ 4.02%
PROP. 18" STORM @ 19.40%
EX. U.G. TELEPHONE (SEE NOTE #1)
EX. U.G. GAS LINE (SEE NOTE #1)
CONCRETE ENCASEMENT WITH 3,000 PSI CONCRETE 10 LINEAR FEET EACH SIDE OF CROSSING
EX. 12 SS FORCE MAIN
LOWER EXISTING 6" WATER AS REQUIRED. COORDINATE WITH WATER COMPANY.

LINE 'ST-1B' — 1+50 1+00
LINE 'ST-1C' — 2+50 2+00 1+50 1+00
LINE 'ST-2A' — 1+00 1+50
LINE 'ST-2B' — 1+50 1+00
LINE 'ST-2C' — 2+00 1+50 1+00
LINE 'ST-2C1' — 1+50 1+00
LINE 'ST-2D' — 1+50 1+00
LINE 'ST-1' — 9+00 8+00 7+00 6+00 5+00 4+00
LINE 'ST-1' — 4+00 3+00 2+00 1+00
LINE 'ST-1A' — 1+50 1+00

NO.	DATE	REVISION / DESCRIPTION
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2	07-17-09	SANITARY SEWER & ADA ROUTE REVISIONS
1	06-19-09	TXDOT COMMENTS

DESIGN	DRAWN	DATE	SCALE	NOTES
BEC	WTW	05-21-09	AS SHOWN	–

OWNER
METROPLEX ACQUISITION FUND, LP
8214 WESTCHESTER, SUITE 850
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MR. GREY STOGNER
(214) 343-4477 PHONE
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STATE OF TEXAS — BRANDON E. COX — 101037 — LICENSED PROFESSIONAL ENGINEER

POGUE ENGINEERING & DEVELOPMENT COMPANY, INC.
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STORM SEWER PROFILES (1 of 4)

STONE CREEK RETAIL
BLOCK A, LOTS 1-6, STONE CREEK RETAIL ADDITION
W.T. DEWEESE SURVEY, ABSTRACT NO. 71
CITY OF ROCKWALL, TEXAS

SHEET NO. C5.04

PI NO: 1393-08-087
DWG NO: 1393-08-087-07A.DWG

STONE CREEK RETAIL – ROCKWALL

TEXAS BOARD OF PROFESSIONAL ENGINEERS, CERTIFICATE OF REGISTRATION #F-000481; TEXAS BOARD OF PROFESSIONAL LAND SURVEYING, CERTIFICATE OF REGISTRATION 100421-00

STONE CREEK RETAIL – ROCKWALL

SCALE
1"=40' H
1"=5' V

NOTE:
ALL STORM PIPE TO BE RCP

BENCH MARK LIST:

BENCHMARK #1
SQUARE CUT SET AT SOUTHWESTCORNER OF WATER VAULT LOCATEDED AT THE SOUTHEAST CORNER OF THE INTERSECTION OF THE EAST RIGHT-OF-WAY LINE OF SH 205 AND THE SOUTH RIGHT-OF-WAY LINE OF FM 552.
ELEVATION = 543.09

BENCHMARK #2
CITY OF ROCKWALL MONUMENT (R010) FOUND.
ELEVATION = 524.788

RECORD DRAWINGS:
IT WAS THE INTENT THAT THE IMPROVEMENTS SHOWN BE CONSTRUCTED ACCORDING TO THESE PLANS AS APPROVED BY THE CITY. THE LINES AND GRADES WERE SET ON THE GROUND FOR CONSTRUCTION ACCORDING TO SAID PLANS. THE CITY INSPECTED THE CONSTRUCTION. THE ENGINEER DID NOT VERIFY LINES OR GRADES AFTER CONSTRUCTION. WE ARE NOT AWARE OF ANY CHANGES OR REVISIONS TO THESE PLANS DURING CONSTRUCTION OTHER THAN THOSE SHOWN.

RANDALL P. POGUE, P.E. DATE: APRIL 15, 2010
TX LIC. NO. 64780

NOTE #1
EX. U.G. UTILITY TO BE RELOCATED. COORDINATE WITH CITY OF ROCKWALL AND LOCAL FRANCHISE UTILITY COMPANIES AS REQUIRED.

STA: 12+00 – MATCH LINE 'ST-2'

LINE 'ST-2'

LINE 'ST-2D1'

LINE 'ST-2E'

LINE 'ST-2F'

LINE 'ST-2G'

LINE 'ST-2H'

NO.	DATE	REVISION / DESCRIPTION
4	04-15-10	RECORD DRAWINGS
3	02-24-10	ADDED RIGHT TURN LANE ON S.H. 205
2	07-17-09	SANITARY SEWER & ADA ROUTE REVISIONS
1	06-19-09	TXDOT COMMENTS

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Brandon E. Cox 05-21-09

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STORM SEWER PROFILES (2 of 4)

STONE CREEK RETAIL
BLOCK A, LOTS 1-6, STONE CREEK RETAIL ADDITION
W.T. DEWEESE SURVEY, ABSTRACT NO. 71
CITY OF ROCKWALL, TEXAS

SHEET NO. C5.05

PI NO: 1393-08-087
DWG NO: 1393-08-087-07A.DWG

TEXAS BOARD OF PROFESSIONAL ENGINEERS, CERTIFICATE OF REGISTRATION #F-000481; TEXAS BOARD OF PROFESSIONAL LAND SURVEYING, CERTIFICATE OF REGISTRATION 100421-00

TWILLIAMS 04/29/2010 - 4:05PM
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STONE CREEK RETAIL - ROCKWALL

SCALE
1"=40' H
1"=5' V

NOTE:
ALL STORM PIPE TO BE RCP

BENCH MARK LIST:
BENCHMARK #1
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ELEVATION = 543.09

BENCHMARK #2
CITY OF ROCKWALL MONUMENT (R010) FOUND.
ELEVATION = 524.788

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RANDALL P. POGUE, P.E. DATE: APRIL 15, 2010
TX LIC. NO. 84780

LINE 'ST-2I'
LINE 'ST-2J'
LINE 'ST-2K'
LINE 'ST-3'
LINE 'ST-3B'
LINE 'ST-4'
LINE 'ST-4A'
LINE 'ST-4B'

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1	06-19-09	TXDOT COMMENTS

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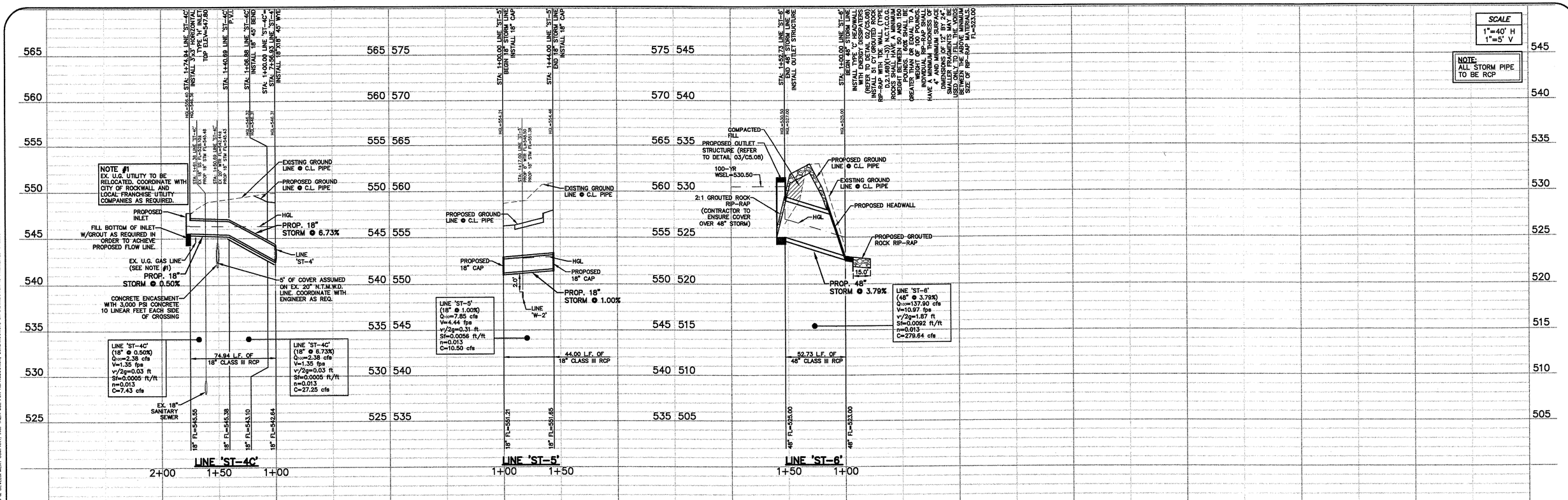
STORM SEWER PROFILES (3 of 4)

STONE CREEK RETAIL
BLOCK A, LOTS 1-6, STONE CREEK RETAIL ADDITION
W.T. DEWEESE SURVEY, ABSTRACT NO. 71
CITY OF ROCKWALL, TEXAS

SHEET NO. C5.06

PI NO: 1393-08-087
DWG NO: 1393-08-087-07A.DWG

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RANDALL P. POGUE, P.E.
TX LIC. NO. 84780

DATE: APRIL 15, 2010 (4)

BENCH MARK LIST:
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SQUARE CUT SET AT SOUTHWESTCORNER OF WATER VAULT LOCATEDED AT THE SOUTHEAST CORNER OF THE INTERSECTION OF THE EAST RIGHT-OF-WAY LINE OF SH 205 AND THE SOUTH RIGHT-OF-WAY LINE OF FM 552.
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STORM SEWER PROFILES (4 of 4)

STONE CREEK RETAIL
BLOCK A, LOTS 1-6, STONE CREEK RETAIL ADDITION
W.T. DEWEESE SURVEY, ABSTRACT NO. 71
CITY OF ROCKWALL, TEXAS

SHEET NO. C5.07

PI NO: 1393-08-087
DWG NO: 1393-08-087-07A.DWG

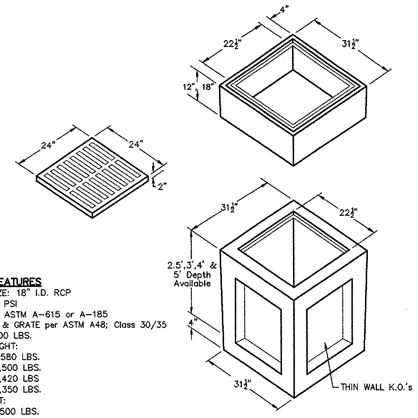
STONE CREEK RETAIL - ROCKWALL

TEXAS BOARD OF PROFESSIONAL ENGINEERS, CERTIFICATE OF REGISTRATION #F-000481; TEXAS BOARD OF PROFESSIONAL LAND SURVEYING, CERTIFICATE OF REGISTRATION 100421-00

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MATERIALS & FEATURES
MAXIMUM PIPE SIZE: 18" I.D. RCP
CONCRETE: 5,000 PSI
REINFORCING: per ASTM A-615 or A-185
CAST IRON FRAME & GRATE per ASTM A48; Class 30/35
GRATE WEIGHT: 100 LBS.
CATCH BASIN WEIGHT:
2.5'.....1,580 LBS.
3'.....2,500 LBS.
4'.....3,420 LBS.
5'.....4,350 LBS.
EXTENSION WEIGHT:
12".....500 LBS.
18".....750 LBS.

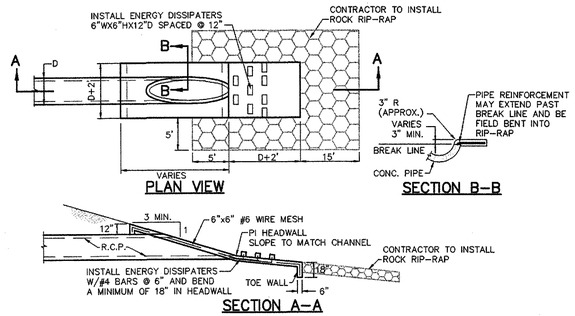
HANSON PIPE & PRECAST #24 CATCH BASIN

01 C5.08

NOT TO SCALE

OUTLET FROM PIPE HEADWALLS NEED TO HAVE ADEQUATE EROSION PROTECTION
USE FORMULA L=0.37 VD
L=LENGTH OF APRON (ft), V=OUTLET VELOCITY FLOW (fps), D=DIAMETER OF PIPE (ft)
~~A) 2 – 6 fps SOD PROTECTION AT THE OUTLET.~~
~~B) 5 – 8 fps DRY RIP RAP (TYPE C, 2.1.6 (B)(1–3)) NCTCOG (TOEWALL)~~
C) 8 – 11 fps GROUTED RIP-RAP (TYPE D, 2.1.6 (B)(1–3)) NCTCOG (TOEWALL)
D) 11 – 18 fps GROUTED RIP-RAP (TYPE B, 2.1.6 (B)(1–3)) NCTCOG (TOEWALL)
E) >18 fps ADEQUATE ENERGY DISSIPATERS

OUTLET FROM PIPE HEADWALLS NEED TO HAVE ADEQUATE EROSION PROTECTION
USE FORMULA L=0.37 VD
L=LENGTH OF APRON (ft), V=OUTLET VELOCITY FLOW (fps), D=DIAMETER OF PIPE (ft)
~~A) 2 – 6 fps SOD PROTECTION AT THE OUTLET.~~
~~B) 5 – 8 fps DRY RIP RAP (TYPE A, 2.1.6 (B)(1–3)) NCTCOG (NO TOEWALL FOR TYPE "A")~~
C) 8 – 11 fps GROUTED RIP-RAP (TYPE D, 2.1.6 (B)(1–3)) NCTCOG (TOEWALL FOR TYPE "D")
D) 11 – 18 fps GROUTED RIP-RAP (TYPE A, 2.1.6 (B)(1–3)) NCTCOG (NO TOEWALL FOR TYPE "A")
E) >18 fps ADEQUATE ENERGY DISSIPATERS



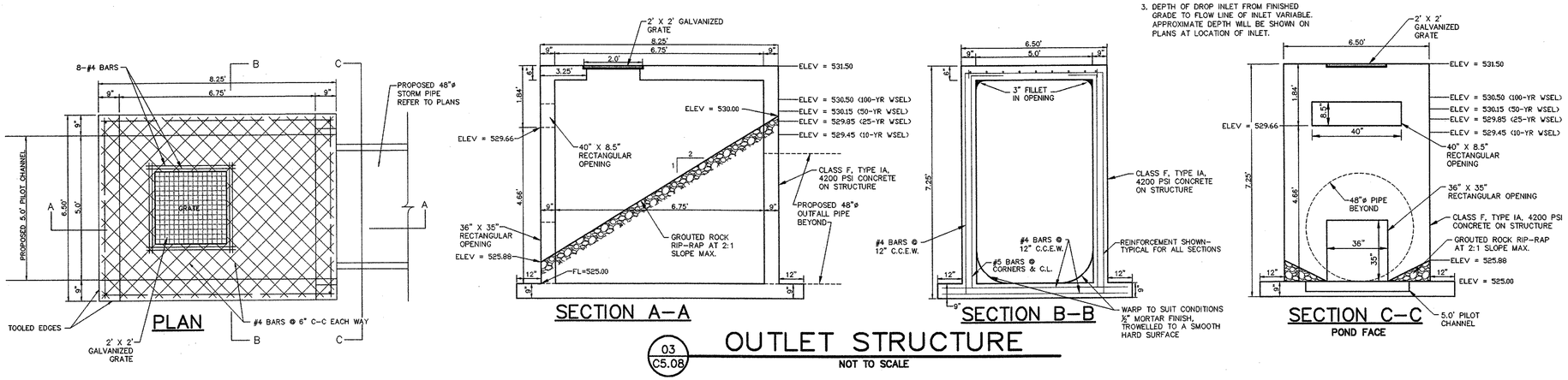
TYPE 'C' HEADWALL

02 C5.08

NOT TO SCALE

GENERAL NOTES:

1. LAYERS OF REINFORCED STEEL NEAREST THE INTERIOR AND EXTERIOR SURFACES SHALL HAVE A COVER OF 3" TO THE CENTER OF BARS, UNLESS OTHERWISE NOTED.
2. EXCAVATION FOR MANHOLE TO BE INCLUDED IN THE UNIT PRICE BID FOR MANHOLE.
3. DEPTH OF DROP INLET FROM FINISHED GRADE TO FLOW LINE OF INLET VARIABLE. APPROXIMATE DEPTH WILL BE SHOWN ON PLANS AT LOCATION OF INLET.



OUTLET STRUCTURE

03 C5.08

NOT TO SCALE

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RANDALL P. POGUE, P.E.
TX LIC. NO. 84780

DATE: APRIL 15, 2010

NOTE:
FOR ALL OTHER STORM DETAILS SEE CITY OF ROCKWALL/STANDARDS & NCTCOG 3rd ADDITION

NO.	DATE	REVISION / DESCRIPTION
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3	02-24-10	ADDED RIGHT TURN LANE ON S.H. 205
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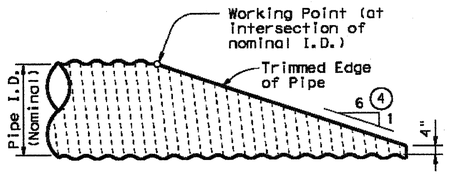
STORM SEWER DETAILS

STONE CREEK RETAIL
BLOCK A, LOTS 1-6, STONE CREEK RETAIL ADDITION
W.T. DEWEESE SURVEY, ABSTRACT NO. 71
CITY OF ROCKWALL, TEXAS

SHEET NO. C5.08

PI NO: 1393-08-087
DWG NO: 1393-08-087-07A.DWG

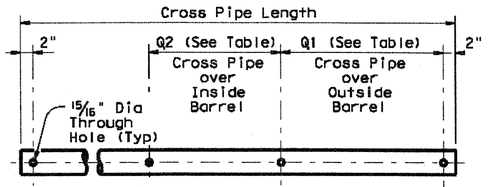
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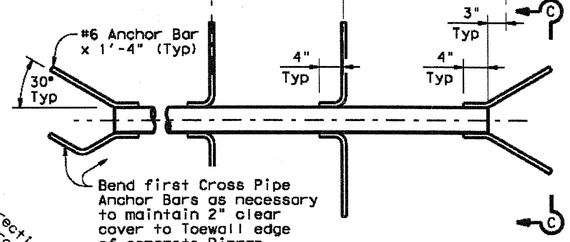
NOTE: All Cross Pipes, calculations, and dimensions are based on the pipe culverts mitered as shown in this detail. Alternate styles of mitered ends will require that appropriate adjustments be made to the values presented on this standard.

SIDE ELEVATION OF TYPICAL PIPE CULVERT MITER

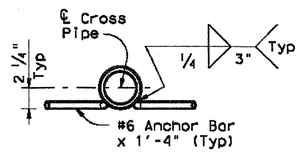
(Showing Corrugated Metal Pipe Culvert.)
(Details at Concrete Pipe Culvert are similar.)



PIPE W/ BOLTED ANCHOR

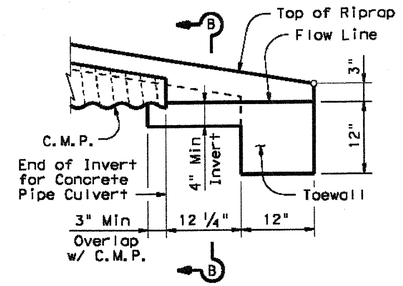


PIPE W/ ANCHOR BARS



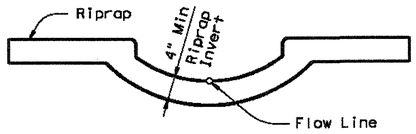
SECTION C-C

CROSS PIPE DETAILS



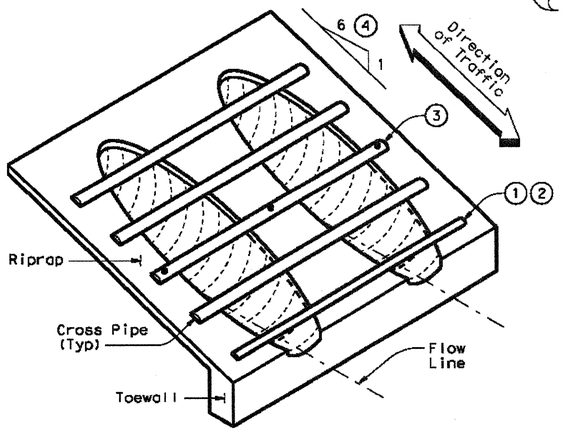
DETAIL "A"

(Showing Invert with Corrugated Metal Pipe Culvert. Concrete Pipe Culvert details are similar. Cross Pipes not shown for clarity.)



SECTION B-B

(Cross Pipes not shown for clarity.)



ISOMETRIC VIEW OF TYPICAL INSTALLATION

CROSS PIPE LENGTHS, REQUIRED PIPE SIZES, & RIPRAP QUANTITIES (2)

Nominal Culvert I.D.	Conc Riprap (CY) (6)	Pipe Culvert Spa ~ G	Single Barrel ~ Q1	Multi-Barrel ~ Q1	Q2	Conditions for use of Cross Pipes	Cross Pipe Size
12"	0.6	9"	N/A	2'- 1"	1'- 9"	3 or more Pipe Culverts	3" Std (3.500" O.D.)
15"	0.7	11"	N/A	2'- 5"	2'- 2"		
18"	0.8	1'- 2"	N/A	2'-10"	2'- 8"		
21"	0.9	1'- 4"	N/A	3'- 2"	3'- 1"		
24"	0.9	1'- 7"	N/A	3'- 6"	3'- 7"		
27"	1.0	1'- 8"	N/A	3'-10"	3'-11"	3 or more Pipe Culverts	3 1/2" Std (4.000" O.D.)
30"	1.1	1'-10"	N/A	4'- 2"	4'- 4"	2 or more Pipe Culverts	
33"	1.2	1'-11"	4'- 2"	4'- 5"	4'- 8"	All Pipe Culverts	
36"	1.3	2'- 1"	4'- 5"	4'- 9"	5'- 1"	All Pipe Culverts	4" Std (4.500" O.D.)
42"	1.5	2'- 4"	4'-11"	5'- 5"	5'-10"		
48"	1.7	2'- 7"	5'- 5"	6'- 0"	6'- 7"	All Pipe Culverts	5" Std (5.563" O.D.)
54"	2.0	3'- 0"	5'-11"	6'- 9"	7'- 6"		
60"	2.2	3'- 3"	6'- 5"	7'- 4"	8'- 3"		
66"	2.4	3'- 3"	6'-11"	7'-10"	8'- 9"		
72"	2.7	3'- 4"	7'- 5"	8'- 5"	9'- 4"		

(1) The proper installation of the first Cross Pipe is critical for vehicle safety. The top of the first Cross Pipe must be placed at no more than 6" above the flow line.

(2) Size of Cross Pipes, except the first bottom pipe, shall be as shown in the PIPE SIZE table. The first bottom pipe shall be 3 1/2" Standard Pipe (4" O.D.).

(3) The third Cross Pipe from the bottom of the Culvert shall always be installed using a bolted connection. Care shall be taken to ensure that Riprap concrete does not flow into the Cross Pipe so as to permit disassembly of the bolted connection to allow cleanout access. At the Contractor's option, all other Cross Pipes may also be installed using the bolted connection details.

(4) Match Cross Slope as shown elsewhere in the plans. Cross Slope of 6:1 or flatter is required for vehicle safety.

(5) Riprap placed beyond the limits shown will be paid as Concrete Riprap in accordance with Item 432, "Riprap".

(6) Quantities shown are for one end of one reinforced Concrete Pipe Culvert. For multiple pipe culverts or for Corrugated Metal Pipe Culverts, quantities will need to be adjusted. Riprap quantities are for Contractor's information only.

GENERAL NOTES:

Cross Pipes are designed for a traversing load of 10,000 pounds at yield as recommended by Research Report 280-2F, "Safety Treatment of of Roadside Parallel-Drainage Structures", Texas Transportation Institute, March 1981.

Safety End Treatments shown herein are intended for use in those installations where out of control vehicles are likely to traverse the openings approximately perpendicular to the Cross Pipes.

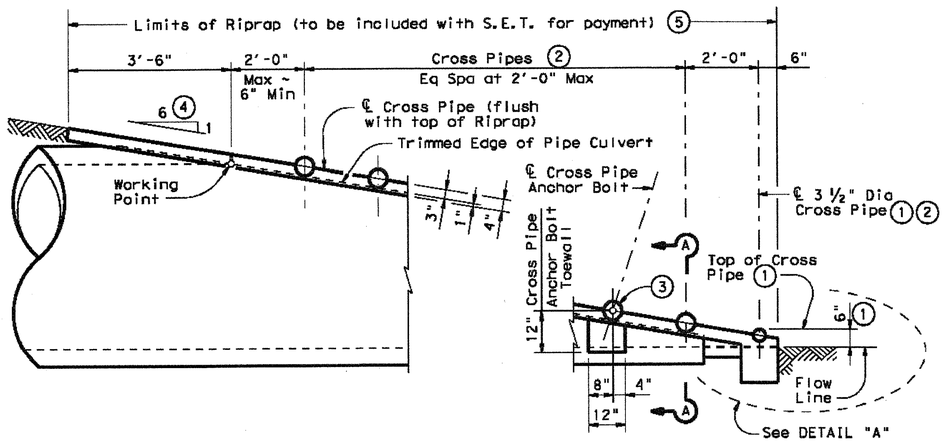
Riprap and all necessary inverts shall be Concrete Riprap conforming to the requirements of Item 432, "Riprap".

Payment for riprap and toewall is included in the Price Bid for each Safety End Treatment.

Cross Pipes shall conform to the requirements of ASTM A53 (Type E or S, Grade B), ASTM A500 (Grade B), or API 5LX52.

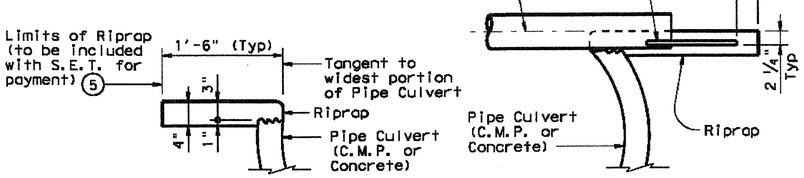
Bolts and nuts shall conform to ASTM A307.

All steel components, except concrete reinforcing, shall be galvanized after fabrication. Galvanizing damaged during transport or construction shall be repaired in accordance with the specifications.

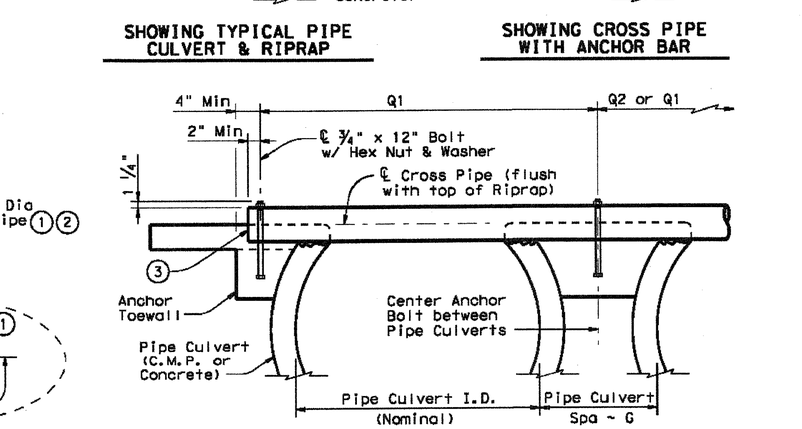


SIDE ELEVATION OF CAST-IN-PLACE CONCRETE

(Showing Concrete Pipe Culvert.)
(Details at Corrugated Metal Pipe Culvert are similar.)



SHOWING CROSS PIPE WITH ANCHOR BAR



SHOWING CROSS PIPE WITH BOLTED ANCHOR

SHOWING TYPICAL PIPE CULVERT & RIPRAP

SECTION A-A

DISCLAIMER:
The use of this standard is governed by the "Texas Engineering Practice Act". No warranty of any kind is made by TxDOT for any purpose whatsoever. TxDOT assumes no responsibility for the conversion of this standard to other formats or for incorrect results or damages resulting from its use.

LEVELS DISPLAYED | ACC:

Texas Department of Transportation
Bridge Division

SAFETY END TREATMENT
FOR 12" DIA TO 72" DIA PIPE CULVERTS TYPE II ~ PARALLEL DRAINAGE

SETP-PD

FILE: setppdse.dgn	DN: GAF	CK: CAT	DW: JRP	CK: GAF
©TxDOT May 2005	DISTRICT	FEDERAL AID PROJECT		SHEET
REVISIONS				
	COUNTY	CONTROL	SECT	JOB	HIGHWAY

TEXAS BOARD OF PROFESSIONAL ENGINEERS, CERTIFICATE OF REGISTRATION #F-000481; TEXAS BOARD OF PROFESSIONAL LAND SURVEYING, CERTIFICATE OF REGISTRATION 100421-00

TWILLIAMS 04/29/2010 - 4:05PM
N:\JOBS\1300-1399\1393-08-087\DWG\1393-08-087-07A.DWG

C5.09

PI NO: 1393-08-087

DWG NO: 1393-08-087-07A.DWG

STONE CREEK RETAIL – ROCKWALL

N.T.M.W.D. NOTE:
REFER TO SHEET C6.03 FOR N.T.M.W.D. CROSSING NOTES.

NOTE #2
NEW WATER CROSSING UNDER A NEW WASTEWATER LINE
ALL SECTIONS OF WATERLINE WITHIN TEN FEET HORIZONTALLY OF THE WASTEWATER MAIN SHALL BE ENCASED IN A MINIMUM OF 20-FOOT SECTION OF PIPE. FLEXIBLE ENCASING PIPE SHALL HAVE A MINIMUM PIPE STIFFNESS OF 115 P.S.I. AT 5% DEFLECTION OR THE WATERLINE SHALL BE CONSTRUCTED OF DUCTILE IRON OR STEEL PIPE WITH MECHANICAL OR WELDED JOINTS AS APPROPRIATE. THE ENCASING PIPE SHALL BE CENTERED ON THE WASTEWATER MAIN AND BE A MINIMUM OF TWO NOMINAL PIPE DIAMETERS LARGER THAN THE WATER MAIN. THE SPACE AROUND THE CARRIER PIPE SHALL BE SUPPORTED AT A MINIMUM OF 5 FEET INTERVALS WITH SPACES OR BE FILLED TO THE SPRING LINE WITH WASHED SAND. EACH END OF THE CASING SHALL BE SEALED WITH WATER TIGHT NON-SHRINKING CEMENT GROUT OR A MANUFACTURED WATERTIGHT SEAL. AN ABSOLUTE MINIMUM SEPARATION DISTANCE OF ONE FOOT BETWEEN THE WATERLINE AND THE WASTEWATER MAIN SHALL BE PROVIDED. BOTH THE WATERLINE AND WASTEWATER MAIN OR LATERAL MUST PASS A PRESSURE AND LEAKAGE TEST AS SPECIFIED IN AWWA C600 STANDARDS.

F.M. 552
(VARIABLE WIDTH R.O.W.)

STATE HIGHWAY 205
(100' R.O.W.)

FAIRFAX DRIVE

BM 1
ELEV=543.09

(BEARING BASIS)
N 89°09'25" E
789.91'

LOT 1
2.3179 Acres
(100,967 s.f.)

LOT 2
6.7427 Acres
(293,710 s.f.)

LOT 3
0.7330 Acres
(31,931 s.f.)

LOT 4
1.1890 Acres
(51,792 s.f.)

LOT 5
0.7576 Acres
(33,000 s.f.)

LOT 6
9.4120 Acres
(409,998 s.f.)

TRACT 1
21.1522 ACRES
(921,389 SF)
METROPLEX ACQUISITION FUND, LP
(INSTRUMENT #2008-00409649)

TRACT 2
METROPLEX ACQUISITION FUND, LP
(INSTRUMENT #2008-00409649)

PART OF TRACT 2
BETSY CONNERCIAL, LTD.
(INSTRUMENT NO. 2007-00375397)

PART OF
STONE CREEK BALANCE, LTD.
(INSTRUMENT NO. 2007-00375394)

ANCHOR
59,313 sq.ft.

RETAIL/REST
14,700 sq.ft.

15' DRAINAGE EASEMENT
(VOL. 5747, PG. 94)

PROPOSED PEDESTRIAN EASEMENT

20' NORTH TEXAS MUNICIPAL WATER DISTRICT ESMT. (VOL. 91, PG. 171)

STA: 1+00.00 LINE 'W-3' INSTALL: 1-16"X6" FULL BODY TAPPING SLEEVE WITH VALVE CONNECT TO EXISTING WATER AS REQUIRED

STA: 1+00.00 LINE 'W-2' INSTALL: 1-16"X6" FULL BODY TAPPING SLEEVE WITH VALVE CONNECT TO EXISTING WATER AS REQUIRED

STA: 0+97.52 LINE 'W-1' INSTALL: 1-16"X12" FULL BODY TAPPING SLEEVE WITH VALVE CONNECT TO EXISTING WATER AS REQUIRED

CAUTION!!! EXISTING OVERHEAD AND UNDERGROUND UTILITIES EXIST IN THIS AREA. COORDINATE WITH LOCAL FRANCHISE UTILITY COMPANIES AS REQUIRED.

EXISTING FIRE HYDRANT

18" ROCKWALL WATER SUPPLY CORPORATION EASEMENT (VOL. 82, PG. 323)

RELOCATE EXISTING POWER POLE AS REQUIRED

15' PEDESTRIAN ACCESS EASEMENT

CONCRETE ENCASE WITH 3000 PSI CONCRETE 10 L.F. EACH SIDE OF CROSSING

STA: 3+50.46 LINE 'SS-1' UTILITY CROSSING

PROPOSED LINE 'SS-1' SANITARY SEWER

STA: 3+09.51 LINE 'SS-1' INSTALL STANDARD 5'ø MANHOLE

STA: 1+61.26 LINE 'SS-1' UTILITY CROSSING

STA: 1+00.22 LINE 'SS-1' CONNECT TO EXISTING SANITARY SEWER MANHOLE AS REQUIRED.

NOTE: REFER TO C6.03 FOR NOTES PERTAINING TO THE CROSSING OF THE EX. NTMWD 20" WATER.

STA: 1+37.50 LINE 'W-2' INSTALL: 1-6" VALVE 1 FIRE HYDRANT W/ASSEMBLY

STA: 1+38.93 LINE 'W-2' INSTALL: 1-8"X6" TEE 1-8" VALVE 1-6" VALVE 1 FIRE HYDRANT W/ASSEMBLY

STA: 5+84.34 LINE 'SS-1' UTILITY CROSSING

STA: 1+38.93 LINE 'W-2'= STA: 1+00.00 LINE 'W-4' INSTALL: 1-8"X8" TEE 2-8" VALVES

STA: 3+68.00 LINE 'W-2' INSTALL: 1-8"X6" TEE 1-8" VALVE 1-6" VALVE 1 FIRE HYDRANT W/ASSEMBLY

STA: 7+90.96 LINE 'W-2' INSTALL: 1-8" 90° BEND

STA: 7+66.01 LINE 'W-2' INSTALL: 1-8"X6" TEE 1-8" VALVE 1-6" VALVE 1 FIRE HYDRANT W/ASSEMBLY

STA: 4+80.60 LINE 'W-2' INSTALL: 1-8"X6" TEE 2-8" VALVES 1-8"X6" REDUCER

INSTALL 30° BEND IN CONDUIT

3-2" SCH. 40 PVC CONDUIT W/PULL STRING

BEGIN CONDUIT

END CONDUIT

STA: 9+50.86 LINE 'W-2' INSTALL: 2-8"X2" TAPPING SLEEVES WITH SADDLES 1-2" METER W/CAN (IRRIGATION) IRRIGATION TAP AND METER TO BE INCLUDED IN BASE BID. NO SEPARATE REIMBURSEMENT TO BE MADE FOR THESE ITEMS.

8"X6" REDUCER

INSTALL: 1 FIRE HYDRANT W/ASSEMBLY

STA: 9+61.00 LINE 'W-2' INSTALL: 1-8" 45° BEND

STA: 10+53.66 LINE 'W-2' INSTALL: 1-8" 45° BEND

STA: 10+62.75 LINE 'W-2' INSTALL: 1-8"X6" TEE 1-8" VALVE 1-6" VALVE 1 FIRE HYDRANT W/ASSEMBLY

CONCRETE ENCASE WITH 3000 PSI CONCRETE 10 L.F. EACH SIDE OF CROSSING

ADJUST RIM ELEVATION AS REQUIRED. RIM EL=548.60±

CAUTION!!! EXISTING OVERHEAD AND UNDERGROUND UTILITIES EXIST IN THIS AREA. COORDINATE WITH LOCAL FRANCHISE UTILITY COMPANIES AS REQUIRED.

STA: 1+76.42 LINE 'SS-2A' INSTALL 6"X6" 90° WYE INSTALL 6" CLEANOUT 6" FL=539.70

SEE NOTE #5

SEE NOTE #4

STA: 2+92.17 LINE 'W-4' INSTALL: 1-8" 90° BEND

INSTALL: 38.89 L.F. OF 6" SANITARY SEWER LINE 1-6" PLUG FL 6"=533.89

STA: 2+76.50 LINE 'W-4' INSTALL: 1-8"X6" TEE 1-8" VALVE 1-6" VALVE 1 FIRE HYDRANT W/ASSEMBLY

CONCRETE ENCASE WITH 3000 PSI CONCRETE 10 L.F. EACH SIDE OF CROSSING

STA: 8+09.51 LINE 'SS-1'= STA: 1+00.00 LINE 'SS-2' INSTALL STD. 5'ø MANHOLE

STA: 1+22.00 LINE 'W-1' INSTALL: 1-12" 45° BEND

STA: 10+54.51 LINE 'SS-1' END 8" SANITARY SEWER. INSTALL STANDARD 4'ø MANHOLE

SEE NOTE #2

STA: 1+97.50 LINE 'W-1' INSTALL: 1-12"X6" TEE 1-12" VALVE 1-6" VALVE 1 FIRE HYDRANT W/ASSEMBLY

PROP. LINE 'SS-2' SANITARY SEWER

STA: 2+86.50 LINE 'SS-2' =STA: 1+00 LINE 'SS-2B' INSTALL STD. 5'ø INTERNAL DROP MANHOLE 6" FL=537.71 (IN) ('SS-2B')

2-2" PLUGS

STA: 3+83.00 LINE 'SS-2' INSTALL STD. 4'ø MANHOLE

STA: 3+48.91 LINE 'SS-2' INSTALL STD. 4'ø MANHOLE

INSTALL WATER SERVICE TO A POINT 5 FOOT FROM BUILDING FACE. STUB OUT FOR BLDG. END & PLUG. REFER TO MEP FOR CONTINUATION.

STA: 1+25.16 LINE 'SS-2B' INSTALL 6"X6" 90° WYE INSTALL 6" CLEANOUT 6" FL=538.64

STA: 1+41 LINE 'SS-2B' INSTALL 6"X6" 90° WYE INSTALL 6" CLEANOUT 6" FL=539.99 REFER TO MEP FOR CONTINUATION OF SANITARY SEWER LINE.

STA: 3+88.38 LINE 'W-1' INSTALL: 1-12"X6" TEE 1-12" VALVE 1-8" VALVE 1 FIRE HYDRANT W/ASSEMBLY

STA: 5+48.94 LINE 'W-4' INSTALL: 1-8" 45° BEND

STA: 6+12.19 LINE 'W-4' INSTALL: 1-8" 45° BEND

INSTALL FIRE SERVICE TO A POINT 1 FOOT ABOVE FINISHED FLOOR WITH A BLIND FLANGE. STUB OUT TO BE WITHIN RISER ROOM. REFER TO MEP FOR CONTINUATION.

INSTALL: 25.00 L.F. OF 6" SANITARY SEWER LINE 1-6" PLUG 6" FL=540.50

PROPOSED ANCHOR SANITARY SEWER LINES & GREASE TRAPS BY OTHERS.

PROPOSED LINE 'SS-2' SANITARY SEWER

STA: 4+73.17 LINE 'W-4' INSTALL: 1-8"X8"X6" TEE 1-8" VALVE 1-6" VALVE

STA: 1+75.73 LINE 'SS-2C1' INSTALL: 1-6"X6" 90° WYE 1-6" CLEANOUT 1-6" PLUG END & PLUG 6" LINE 2 FEET BEYOND EDGE OF PAVING. 6" FL=544.95

STA: 8+23.30 LINE 'W-4' INSTALL: 2-8"X2" TAPPING SLEEVES WITH SADDLES 1-2" METER W/CAN (DOMESTIC-BY OTHERS) 1-2" METER W/CAN (IRRIGATION-BY OTHERS) TAPS AND METERS TO BE PAID FOR BY OTHERS. THESE TWO METERS ARE NOT TO BE INCLUDED IN BASE BID.

DOMESTIC & FIRE CONNECTIONS TO THE ANCHOR BUILDING BY OTHERS

FIRE DEPARTMENT CONNECTION (BY OTHERS)

STA: 1+30.63 LINE 'SS-2C' INSTALL: 1-6"X6" 90° WYE 1-6" CLEANOUT 1-6" PLUG END & PLUG 6" LINE 2 FEET BEYOND EDGE OF PAVING. 6" FL=545.35

STA: 1+07.50 LINE 'SS-2C'= STA: 1+00 LINE 'SS-2C1' INSTALL 6"X6" 90° WYE 6" FL=544.18

STA: 7+01.89 LINE 'SS-2'= STA: 1+00 LINE 'SS-2C' INSTALL STD. 4'ø MANHOLE W/INTERNAL DROP CONNECTION. 6" FL=543.90 (IN)

STA: 8+00.17 LINE 'SS-2' END 8" SANITARY SEWER. INSTALL STD. 4'ø MANHOLE

STA: 6+19.84 LINE 'W-1'= STA: 8+79.80 LINE 'W-4' INSTALL: 1-12"X6" TEE 1-12" VALVE 1-8" VALVE

STA: 8+38.30 LINE 'W-4' INSTALL: 1-8"X8" TEE 1-8" VALVE

STA: 6+64.83 LINE 'W-1' INSTALL: 1-12"X6" TEE 1-12" VALVE 1-6" VALVE 1 FIRE HYDRANT W/ASSEMBLY

STA: 7+18.83 LINE 'W-1' END 12" WATER & INSTALL: 1-12" PLUG

NOTE #4:
STA: 1+38.00 LINE 'SS-2' =STA: 1+00 LINE 'SS-2A' INSTALL STD. 5'ø INTERNAL DROP MANHOLE 6" FL=536.79 (IN) ('SS-2A')

NOTE #5:
STA: 1+92.88 LINE 'SS-2A' INSTALL SANITARY SEWER SERVICE TO A POINT 5 FOOT FROM BUILDING FACE. INSTALL DOUBLE CLEAN OUT. STUB OUT FOR BLDG. END & CAP. REFER TO MEP FOR CONTINUATION. FL=540.35

NOTE:
ALL FIRE HYDRANTS TO 5' CLEARANCE AROUND INCLUDING PARKING SPACES.

NOTE:
FOR WATER & SANITARY SEWER DETAILS, USE CITY OF ROCKWALL DETAILS.

NOTE:
ALL WATER LINES SHALL BE CLASS 200.

NOTE #1:
NEW WATER CROSSING OVER A NEW WASTEWATER LINE
ONE SEGMENT OF WATERLINE PIPE SHALL BE CENTERED OVER THE WASTEWATER LINE SUCH THAT THE JOINTS OF THE WATERLINE PIPE ARE EQUIDISTANT AND AT LEAST NINE FEET HORIZONTALLY FROM THE CENTERLINE OF THE WASTEWATER LINE. THE WATERLINE SHALL BE AT LEAST TWO FEET ABOVE THE WASTEWATER LINE. THE WASTEWATER PIPE SHALL HAVE A MINIMUM PIPE STIFFNESS OF 115 PSI @ 5.0% DEFLECTION. ALSO, THE WASTEWATER PIPE SHALL HAVE A PRESSURE RATING FOR BOTH PIPE AND JOINTS OF 150 PSI. IF THE PRESSURE RATING IS NOT MET, THE WASTEWATER LINE SHALL BE EMBEDDED IN CEMENT STABILIZED SAND (MINIMUM OF 10% CEMENT PER CUBIC YARD OF CEMENT STABILIZED SAND MIXTURE, BASED ON LOOSE DRY WEIGHT VOLUME – A MINIMUM OF 2.5 BAGS OF CEMENT/CY OF MIXTURE; THE CEMENT STABILIZED BEDDING SHALL BE A MINIMUM OF 6 INCHES ABOVE AND ONE QUARTER OF THE PIPE DIAMETER ON EITHER SIDE AND BELOW THE WASTEWATER PIPE. MINIMUM 4 INCHES) FOR THE TOTAL LENGTH OF ONE PIPE SEGMENT PLUS 12 INCHES BEYOND THE JOINT ON EACH END.

PROVIDE CONDUIT AND POWER TO SITE LIGHTING AS REQUIRED. COORDINATE WITH MEP/ARCH AND LOCAL FRANCHISE UTILITY COMPANY AS REQUIRED.

PROVIDE CONDUIT AND POWER TO SIGN AS REQUIRED. COORDINATE WITH MEP/ARCH AND LOCAL FRANCHISE UTILITY COMPANY AS REQUIRED.

PROPOSED TELEPHONE SERVICE LINE. COORDINATE WITH LOCAL FRANCHISE UTILITY COMPANY FOR SERVICE AS REQUIRED.

PROPOSED GAS SERVICE LINE. COORDINATE WITH LOCAL FRANCHISE UTILITY COMPANY FOR SERVICE AS REQUIRED.

PROPOSED ELECTRIC SERVICE LINE. COORDINATE WITH LOCAL FRANCHISE UTILITY COMPANY FOR SERVICE AS REQUIRED.

PROVIDE CONDUIT AS REQUIRED FOR PHONE, ELECTRICAL, GAS, IRRIGATION & LIGHTING. COORDINATE WITH LANDSCAPE, MEP & FRANCHISE UTILITY COMPANIES FOR LOCATIONS NUMBER & SIZES OF CONDUITS AND SERVICES.

THE SERVICE WOULD REQUIRE THAT THE DEVELOPER PROVIDE THE STANDARD 2-4" PVC CONDUITS WITH PULL STRINGS FROM THE TELEPHONE EQUIPMENT TO THE RIGHT-OF-WAY OR UTILITY EASEMENT UNDER AREAS OF THE PAVEMENT. PVC CONDUITS NEED TO BE EXPOSED OR TURNED UP AT THE RIGHT-OF-WAY OR UTILITY EASEMENT. ALL 90° BENDS IN THE CONDUITS SHOULD BE LONG RADIUS. A BACKBOARD IN THE BUILDING SHALL CONSIST OF STANDARD 4'x8'x3/4" SHEET OF PLYWOOD MOUNTED AT THE TERMINATION POINT. ALSO, AN ELECTRICAL OUTLET AND #8 SOLID INSULATED GROUND WIRE FROM THE GROUND BAR OF THE POWER PANEL TO PLYWOOD BACKBOARD WITH A 6' COIL OF WIRE LEFT AT THE BACKBOARD WILL BE REQUIRED AT THE BUILDING.

NOTE #3:
STA: 4+02.17 LINE 'W-4' INSTALL: 4-8"X2" TAPPING SLEEVES WITH SADDLES 1-2" METER W/CAN (DOMESTIC) 1-2" METER W/CAN (IRRIGATION) TAPS & METERS TO BE INCLUDED IN BASE BID. NO SEPARATE REIMBURSEMENT TO BE MADE FOR THESE ITEMS.

FIRE SPRINKLER LINE TO BE DESIGNED AND INSTALLED BY A CONTRACTOR LICENSED BY THE TEXAS COMMISSION OF FIRE PROTECTION. CONTRACTOR TO SUBMIT DESIGN FOR PERMIT TO CITY OF ROCKWALL FIRE DEPT. FOR APPROVAL. CONTRACTOR TO DETERMINE ACTUAL PIPE SIZE REQUIRED (USE 8" & 6" PIPE FOR BIDDING PURPOSES).

INSTALL BACK FLOW PREVENTION DEVICE W/ DOUBLE CHECK BEYOND DOMESTIC & IRRIGATION METERS IN ACCORDANCE WITH CITY REQUIREMENTS.

MATCH LINE (SEE SHEET C6.02)

MATCH LINE (SEE SHEET C6.02)

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...

BENCH MARK LIST:
BENCHMARK #1
SQUARE CUT SET AT SOUTHWESTCORNER OF WATER VAULT LOCATEDED AT THE SOUTHEAST CORNER OF THE INTERSECTION OF THE EAST RIGHT-OF-WAY LINE OF SH 205 AND THE SOUTH RIGHT-OF-WAY LINE OF FM 552.
ELEVATION = 543.09

BENCHMARK #2
CITY OF ROCKWALL MONUMENT (R010) FOUND.
ELEVATION = 524.765

FRANCHISE UTILITY NOTES:
1. TXU ENERGY CONSTRUCTION SERVICES – (800) 711-9112
2. ATMOS ENERGY (GAS) – 903-457-2092 – DINAH WOOD
3. AT&T (PHONE) – 903-457-2092 – DWAYNE WELLS

RECORD DRAWINGS:
IT WAS THE INTENT THAT THE IMPROVEMENTS SHOWN BE CONSTRUCTED ACCORDING TO THESE PLANS AS APPROVED BY THE CITY. THE LINES AND GRADES WERE SET ON THE GROUND FOR CONSTRUCTION ACCORDING TO SAID PLANS. THE CITY INSPECTED THE CONSTRUCTION. THE ENGINEER DID NOT VERIFY LINES OR GRADES AFTER CONSTRUCTION. WE ARE NOT AWARE OF ANY CHANGES OR REVISIONS TO THESE PLANS DURING CONSTRUCTION OTHER THAN THOSE SHOWN.

RANDALL P. POGUE, P.E.
TX LIC. NO. 84780
DATE: APRIL 15, 2010

NO.	DATE	REVISION / DESCRIPTION
4	04-15-10	RECORD DRAWINGS
3	02-24-10	ADDED RIGHT TURN LANE ON S.H. 205
2	07-17-09	SANITARY SEWER & ADA ROUTE REVISIONS
1	06-19-09	TXDOT COMMENTS

DESIGN	DRAWN	DATE	SCALE	NOTES
BEC	WTW	05-21-09	AS SHOWN	–

OWNER
METROPLEX ACQUISITION FUND, LP
8214 WESTCHESTER, SUITE 850
DALLAS, TEXAS 75225
MR. GREY STOGNER
(214) 343-4477 PHONE
(214) 340-2029 FAX

DEVELOPER
CRESTVIEW REAL ESTATE, L.L.C.
8214 WESTCHESTER, SUITE 850
DALLAS, TEXAS 75225
MR. GREY STOGNER
(214) 343-4477 PHONE
(214) 340-2029 FAX

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY BRANDON E. COX, P.E. 05-21-09. ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT.
Brandon E. Cox 05-21-09

STATE OF TEXAS · BRANDON E. COX · 101037 · LICENSED · PROFESSIONAL ENGINEER

POGUE
ENGINEERING & DEVELOPMENT COMPANY, INC.
1512 BRAY CENTRAL DRIVE
SUITE 100
McKINNEY, TEXAS 75069
(214) 544-8880 PHONE
(214) 544-8882 FAX
www.PogueEngineering.com

WATER & SANITARY SEWER PLAN (1 of 2)

STONE CREEK RETAIL
BLOCK A, LOTS 1-6, STONE CREEK RETAIL ADDITION
W.T. DEWEESE SURVEY, ABSTRACT NO. 71
CITY OF ROCKWALL, TEXAS

SHEET NO. C6.01

PI NO: 1393-08-087
DWG NO: 1393-08-087-07A.DWG

GRAPHIC SCALE IN FEET
SCALE: 1" = 40'

LEGEND

- BOLLARD
- ELECTRIC METER
- POWER POLE
- LIGHT STANDARD
- WATER METER
- WATER VALVE
- IRRIGATION CONTROL VALVE
- FIRE HYDRANT
- FIRE DEPARTMENT CONNECTION
- CLEAN OUT
- MANHOLE
- GAS METER
- TRAFFIC SIGNAL CONTROL
- TRAFFIC SIGNAL POLE
- TRAFFIC SIGN
- TELEPHONE BOX
- TV BOX
- FLAG POLE
- LANDSCAPE AREA
- PROPERTY LINE
- O.H. POWER LINES
- U/G TELEPHONE LINES
- U/G WATER LINE
- U/G GAS LINE
- FENCE
- EXISTING CONTOURS
- EXISTING SPOT GRADES
- CONTROLLING MONUMENT 5/8-INCH IRON ROD WITH "POGUE ENG & DEV" CAP SET
- PROPOSED CONTOURS
- PROPOSED SPOT GRADES
- PROPOSED EROSION CONTROL
- PROPOSED DRAINAGE DIVIDES

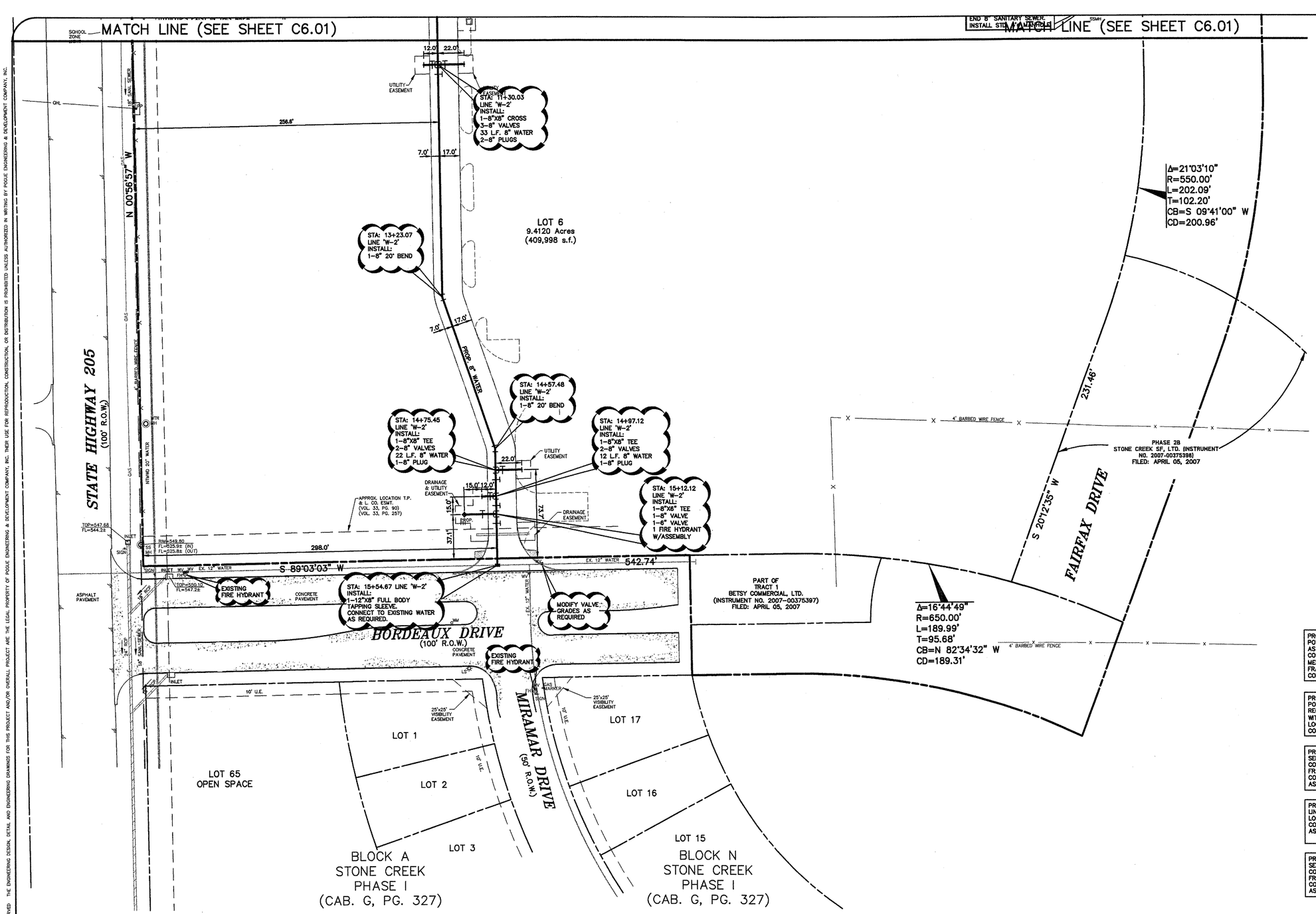
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N.T.M.W.D. NOTE:
REFER TO SHEET C6.03 FOR N.T.M.W.D. CROSSING NOTES.

GRAPHIC SCALE IN FEET
SCALE: 1" = 40'

LEGEND

B.	BOLLARD
EM	ELECTRIC METER
PP	POWER POLE
LS	LIGHT STANDARD
WM	WATER METER
WV	WATER VALVE
ICV	IRRIGATION CONTROL VALVE
FH	FIRE HYDRANT
FDC	FIRE DEPARTMENT CONNECTION
CO	CLEAN OUT
MH	MANHOLE
GM	GAS METER
TSC	TRAFFIC SIGNAL CONTROL
TSP	TRAFFIC SIGNAL POLE
SIGN	TRAFFIC SIGN
TELE	TELEPHONE BOX
TV	TV BOX
FP	FLAG POLE
L.A.	LANDSCAPE AREA
	PROPERTY LINE
OHL	O.H. POWER LINES
TEL	U/G TELEPHONE LINES
WATER	U/G WATER LINE
GAS	U/G GAS LINE
	FENCE
500	EXISTING CONTOURS
XXX.XX	EXISTING SPOT GRADES
(C.M.)	CONTROLLING MONUMENT
SIR	5/8-INCH IRON ROD WITH "POGUE ENG & DEV" CAP SET
XXX	PROPOSED CONTOURS
TC XXX.XX / G XXX.XX	PROPOSED SPOT GRADES
	PROPOSED EROSION CONTROL
	PROPOSED DRAINAGE DIVIDES

PROVIDE CONDUIT AND POWER TO SITE LIGHTING AS REQUIRED. COORDINATE WITH MEP/ARCH AND LOCAL FRANCHISE UTILITY COMPANY AS REQUIRED.

PROVIDE CONDUIT AND POWER TO SIGN AS REQUIRED. COORDINATE WITH MEP/ARCH AND LOCAL FRANCHISE UTILITY COMPANY AS REQUIRED.

PROPOSED TELEPHONE SERVICE LINE. COORDINATE WITH LOCAL FRANCHISE UTILITY COMPANY FOR SERVICE AS REQUIRED.

PROPOSED GAS SERVICE LINE. COORDINATE WITH LOCAL FRANCHISE UTILITY COMPANY FOR SERVICE AS REQUIRED.

PROPOSED ELECTRIC SERVICE LINE. COORDINATE WITH LOCAL FRANCHISE UTILITY COMPANY FOR SERVICE AS REQUIRED.

NEW WATER CROSSING OVER A NEW WASTEWATER LINE
ONE SEGMENT OF WATERLINE PIPE SHALL BE CENTERED OVER THE WASTEWATER LINE SUCH THAT THE JOINTS OF THE WATERLINE PIPE ARE EQUIDISTANT AND AT LEAST NINE FEET HORIZONTALLY FROM THE CENTERLINE OF THE WASTEWATER LINE. THE WATERLINE SHALL BE AT LEAST TWO FEET ABOVE THE WASTEWATER LINE. THE WASTEWATER PIPE SHALL HAVE A MINIMUM PIPE STIFFNESS OF 115 PSI @ 5.0% DEFLECTION. ALSO, THE WASTEWATER PIPE SHALL HAVE A PRESSURE RATING FOR BOTH PIPE AND JOINTS OF 150 PSI. IF THE PRESSURE RATING IS NOT MET, THE WASTEWATER LINE SHALL BE EMBEDDED IN CEMENT STABILIZED SAND (MINIMUM OF 10% CEMENT PER CUBIC YARD OF CEMENT STABILIZED SAND MIXTURE, BASED ON LOOSE DRY WEIGHT VOLUME – A MINIMUM OF 2.5 BAGS OF CEMENT/CY OF MIXTURE; THE CEMENT STABILIZED BEDDING SHALL BE A MINIMUM OF 6 INCHES ABOVE AND ONE QUARTER OF THE PIPE DIAMETER ON EITHER SIDE AND BELOW THE WASTEWATER PIPE, MINIMUM 4 INCHES) FOR THE TOTAL LENGTH OF ONE PIPE SEGMENT PLUS 12 INCHES BEYOND THE JOINT ON EACH END.

PROVIDE CONDUIT AS REQUIRED FOR PHONE, ELECTRICAL, GAS, IRRIGATION & LIGHTING. COORDINATE WITH LANDSCAPE, MEP & FRANCHISE UTILITY COMPANIES FOR LOCATIONS NUMBER & SIZES OF CONDUITS AND SERVICES.

THE SERVICE WOULD REQUIRE THAT THE DEVELOPER PROVIDE THE STANDARD 2-4" PVC CONDUITS WITH PULL STRINGS FROM THE TELEPHONE EQUIPMENT TO THE RIGHT-OF-WAY OR UTILITY EASEMENT UNDER AREAS OF THE PAVEMENT. PVC CONDUITS NEED TO BE EXPOSED OR TURNED UP AT THE RIGHT-OF-WAY OR UTILITY EASEMENT. ALL 90° BENDS IN THE CONDUITS SHOULD BE LONG RADIUS. A BACKBOARD IN THE BUILDING SHALL CONSIST OF STANDARD 4'x8'x3/4" SHEET OF PLYWOOD MOUNTED AT THE TERMINATION POINT. ALSO, AN ELECTRICAL OUTLET AND #6 SOLID INSULATED GROUND WIRE FROM THE GROUND BAR OF THE POWER PANEL TO PLYWOOD BACKBOARD WITH A 6' COIL OF WIRE LEFT AT THE BACKBOARD WILL BE REQUIRED AT THE BUILDING.

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...

BENCH MARK LIST:
BENCHMARK #1
SQUARE CUT SET AT SOUTHWESTCORNER OF WATER VAULT LOCATEDED AT THE SOUTHEAST CORNER OF THE INTERSECTION OF THE EAST RIGHT-OF-WAY LINE OF SH 205 AND THE SOUTH RIGHT-OF-WAY LINE OF FM 552.
ELEVATION = 543.09

BENCHMARK #2
CITY OF ROCKWALL MONUMENT (R010) FOUND.
ELEVATION = 524.788

FRANCHISE UTILITY NOTES:
1. TXU ENERGY CONSTRUCTION SERVICES – (800) 711-9112
2. ATMOS ENERGY (GAS) – 903-457-2092 – DINAH WOOD
3. AT&T (PHONE) – 903-457-2092 – DWAYNE WELLS

RECORD DRAWINGS:
IT WAS THE INTENT THAT THE IMPROVEMENTS SHOWN BE CONSTRUCTED ACCORDING TO THESE PLANS AS APPROVED BY THE CITY. THE LINES AND GRADES WERE SET ON THE GROUND FOR CONSTRUCTION ACCORDING TO SAID PLANS. THE CITY INSPECTED THE CONSTRUCTION. THE ENGINEER DID NOT VERIFY LINES OR GRADES AFTER CONSTRUCTION. WE ARE NOT AWARE OF ANY CHANGES OR REVISIONS TO THESE PLANS DURING CONSTRUCTION OTHER THAN THOSE SHOWN.

RANDALL P. POGUE, P.E.
TX LIC. NO. 84780
DATE: APRIL 15, 2010
4

FIRE SPRINKLER LINE TO BE DESIGNED AND INSTALLED BY A CONTRACTOR LICENSED BY THE TEXAS COMMISSION OF FIRE PROTECTION. CONTRACTOR TO SUBMIT DESIGN FOR PERMIT TO CITY OF ROCKWALL FIRE DEPT. FOR APPROVAL. CONTRACTOR TO DETERMINE ACTUAL PIPE SIZE REQUIRED (USE 8" PIPE FOR BIDDING PURPOSES).

INSTALL BACK FLOW PREVENTION DEVICE W/ DOUBLE CHECK BEYOND DOMESTIC & IRRIGATION METERS IN ACCORDANCE WITH CITY REQUIREMENTS.

NO.	DATE	REVISION / DESCRIPTION
4	04-15-10	RECORD DRAWINGS
3	02-24-10	ADDED RIGHT TURN LANE ON S.H. 205
2	07-17-09	SANITARY SEWER & ADA ROUTE REVISIONS
1	06-19-09	TXDOT COMMENTS

DESIGN	DRAWN	DATE	SCALE	NOTES
BEC	WTW	05-21-09	AS SHOWN	–

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MR. GREY STOGNER
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(214) 340-2029 FAX

DEVELOPER
CRESTVIEW REAL ESTATE, L.L.C.
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Brandon E. Cox 05-21-09

STATE OF TEXAS
BRANDON E. COX
101037
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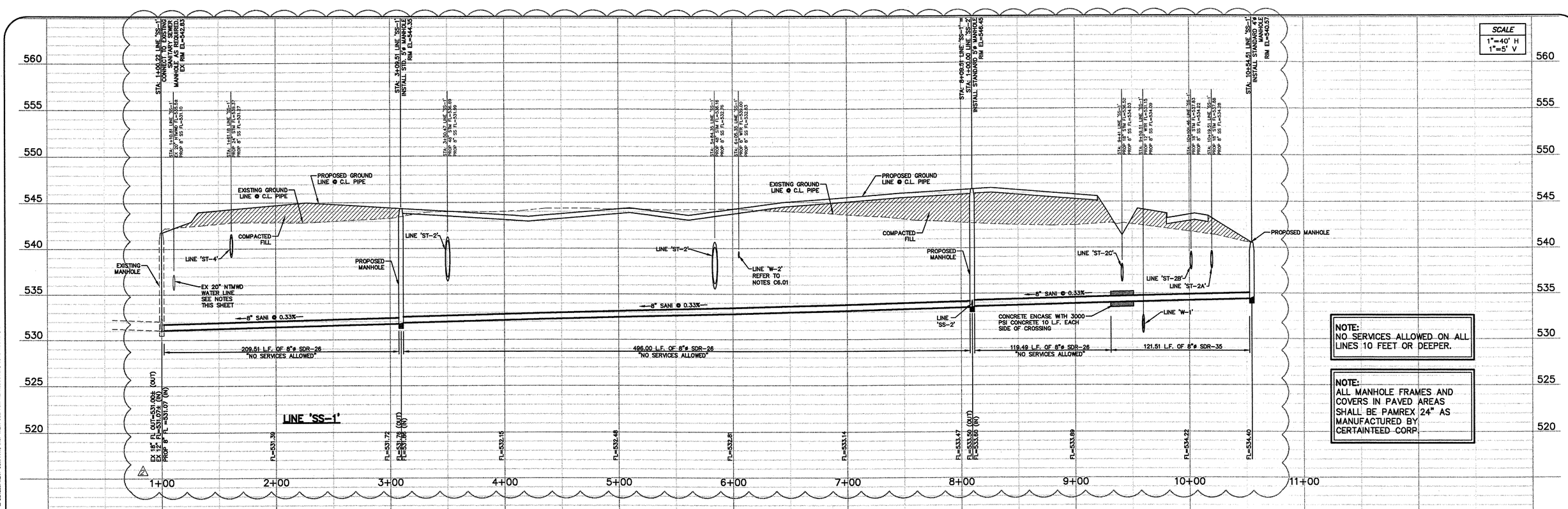
WATER & SANITARY SEWER PLAN (2 of 2)

STONE CREEK RETAIL
BLOCK A, LOTS 1-6, STONE CREEK RETAIL ADDITION
W.T. DEWEESE SURVEY, ABSTRACT NO. 71
CITY OF ROCKWALL, TEXAS

SHEET NO. C6.02

PI NO: 1393-08-087
DWG NO: 1393-08-087-07A.DWG

STONE CREEK RETAIL – ROCKWALL
TEXAS BOARD OF PROFESSIONAL ENGINEERS, CERTIFICATE OF REGISTRATION #-000481; TEXAS BOARD OF PROFESSIONAL LAND SURVEYING, CERTIFICATE OF REGISTRATION 10042I-00



NTMWD NOTES:

1. NORTH TEXAS MUNICIPAL WATER DISTRICT (NTMWD'S) 20" WATER TRANSMISSION PIPELINE IS LOCATED WITHIN LIMITS OF CONSTRUCTION.
2. OPERATION OF HEAVY EARTHMOVING EQUIPMENT, COMPACTION EQUIPMENT OR HEAVY CONSTRUCTION EQUIPMENT, SUCH AS CONCRETE TRUCKS, SHALL BE RESTRICTED TO SPECIFIC CROSSING POINTS ACROSS NTMWD EASEMENTS, AS APPROVED BY THE NTMWD. THE CROSSINGS SHALL BE DESIGNATED AND VERIFIED TO PROVIDE A MINIMUM OF FIVE FEET OF COVER.
3. TO ASSURE THAT PLACING OF SIGNIFICANT LOADS OVER THE NTMWD PIPELINES DOES NOT DAMAGE THE EXISTING PIPELINE, NO MATERIALS SHALL BE STOCKPILED ON THE NTMWD EASEMENT, WITHOUT AUTHORIZATION FROM THE NTMWD. IF THE CONTRACTOR DESIRES TO USE NTMWD'S EASEMENT FOR STOCKPILE OF MATERIALS, CONTACT NTMWD'S ENGINEERING DEPARTMENT AT (972) 442-5405 SO YOUR PLANS FOR USE OF NTMWD'S EASEMENT CAN BE REVIEWED.
4. A MINIMUM OF THREE FEET SEPARATION BETWEEN THE BOTTOM OF THE PAVEMENT AND TOP OF NTMWD PIPELINE IS REQUIRED. IN ADDITION, IF SEPARATION BETWEEN THE BOTTOM OF THE PAVEMENT AND THE TOP OF THE PIPELINE IS LESS THAN 3.5 FEET, A THICKENED PAVEMENT SECTION IS REQUIRED.
5. CROSSING OF THE NTMWD EASEMENT WITH OTHER UTILITIES, SUCH AS TV CABLE, PHONE, GAS AND ELECTRIC, SHALL BE COORDINATED WITH THE NTMWD TO AVOID DAMAGE TO THE NTMWD FACILITIES.
6. OUTDOOR LIGHTING, LANDSCAPING, SCREENING WALLS OR OTHER FACILITIES SHALL NOT BE INSTALLED IN NTMWD EASEMENTS WITHOUT WRITTEN APPROVAL OF THE NTMWD.
7. UNLESS OTHERWISE SHOWN OR REQUIRED A MINIMUM OF ONE FOOT CLEARANCE SHALL BE PROVIDED FOR ALL UTILITIES CROSSING THE NTMWD PIPELINES.
8. THE CONTRACTOR SHALL CONTACT NTMWD ENGINEERING AT (972) 442-5405 AT LEAST 48 HOURS PRIOR TO PERFORMING ANY WORK IN THE VICINITY OF THE NTMWD FACILITIES.
9. FOR OPEN CUT WHERE CROSSING UNDER THE NTMWD PIPELINE, WITHIN TEN FEET EITHER SIDE OF CENTERLINE OF PIPELINE, THE TRENCH WIDTH TO BE CUT SHALL BE LIMITED TO FOUR-FOOT VERTICAL WALLS, NO SLOPING BANK WITH THE APPROPRIATE TRENCH SAFETY. THE ENTIRE EXCAVATION WITHIN THE LIMITS NOTED ABOVE SHALL BE BACKFILLED WITH GRAVEL TO ONE-FOOT ABOVE TOP OF NTMWD PIPELINE. ONE-FOOT MINIMUM VERTICAL CLEARANCE IS REQUIRED BETWEEN NTMWD PIPELINE AND PROPOSED UTILITIES.
10. LIMITS OF BORE SHALL BE A MINIMUM OF THE NTMWD EASEMENT WIDTH CENTERED ON NTMWD'S PIPELINE.
11. THE CASING PIPE SHALL TERMINATE OUTSIDE OF NTMWD'S EASEMENT.
12. ALL PROPOSED SANITARY SEWER CROSSINGS WHERE INSTALLED ABOVE NTMWD'S PIPELINE SHALL BE COMPRISED OF A MINIMUM 150-PSI PRESSURE RATED CARRIER PIPE AND CASING PIPE. INSTALLATION OF THIS CARRIER PIPE AND CASING PIPE SHALL BE INSTALLED ACROSS THE ENTIRE NTMWD EASEMENT.

RECORD DRAWINGS:
IT WAS THE INTENT THAT THE IMPROVEMENTS SHOWN BE CONSTRUCTED ACCORDING TO THESE PLANS AS APPROVED BY THE CITY. THE LINES AND GRADES WERE SET ON THE GROUND FOR CONSTRUCTION ACCORDING TO SAID PLANS. THE CITY INSPECTED THE CONSTRUCTION. THE ENGINEER DID NOT VERIFY LINES OR GRADES AFTER CONSTRUCTION. WE ARE NOT AWARE OF ANY CHANGES OR REVISIONS TO THESE PLANS DURING CONSTRUCTION OTHER THAN THOSE SHOWN.

RANDALL P. POGUE, P.E.
TX LIC. NO. 84780
DATE: APRIL 15, 2010

BENCH MARK LIST:
BENCHMARK #1
SQUARE CUT SET AT SOUTHWESTCORNER OF WATER VAULT LOCATEDED AT THE SOUTHEAST CORNER OF THE INTERSECTION OF THE EAST RIGHT-OF-WAY LINE OF SH 205 AND THE SOUTH RIGHT-OF-WAY LINE OF FM 552.
ELEVATION = 543.09

BENCHMARK #2
CITY OF ROCKWALL MONUMENT (R010) FOUND.
ELEVATION = 524.788

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2	07-17-09	SANITARY SEWER & ADA ROUTE REVISIONS
1	06-19-09	TXDOT COMMENTS

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BEC	WTW	05-21-09	AS SHOWN	-

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www.PogueEngineering.com

SANITARY SEWER PROFILES

STONE CREEK RETAIL
BLOCK A, LOTS 1-6, STONE CREEK RETAIL ADDITION
W.T. DEWEESE SURVEY, ABSTRACT NO. 71
CITY OF ROCKWALL, TEXAS

SHEET NO. C6.03

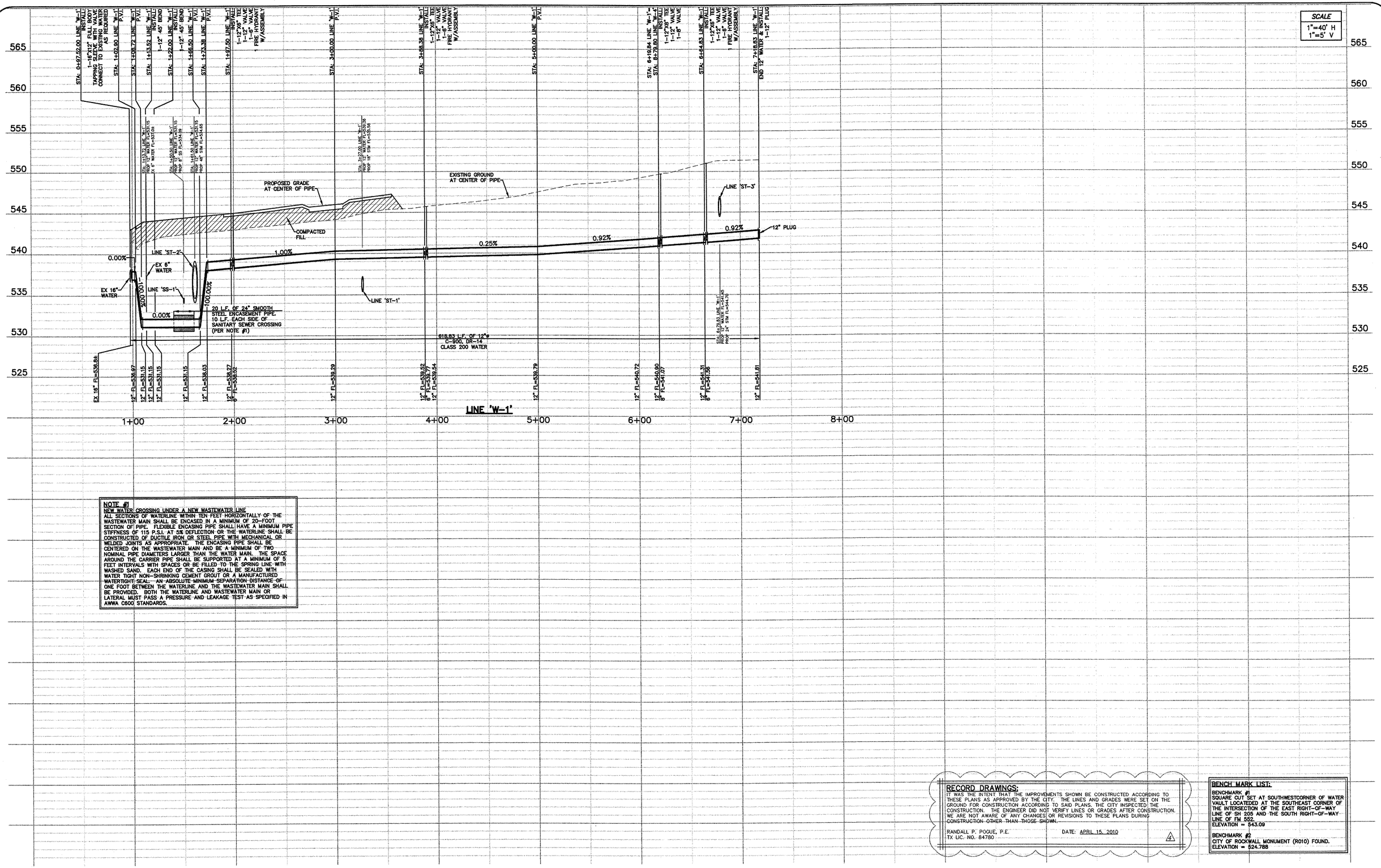
PI NO: 1393-08-087
DWG NO: 1393-08-087-07A.DWG

STONE CREEK RETAIL - ROCKWALL

TEXAS BOARD OF PROFESSIONAL ENGINEERS, CERTIFICATE OF REGISTRATION #F-000481; TEXAS BOARD OF PROFESSIONAL LAND SURVEYING, CERTIFICATE OF REGISTRATION 100421-00

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NOTE #1
NEW WATER CROSSING UNDER A NEW WASTEWATER LINE
ALL SECTIONS OF WATERLINE WITHIN TEN FEET HORIZONTALLY OF THE WASTEWATER MAIN SHALL BE ENCASED IN A MINIMUM OF 20-FOOT SECTION OF PIPE. FLEXIBLE ENCASING PIPE SHALL HAVE A MINIMUM PIPE STIFFNESS OF 115 P.S.I. AT 5% DEFLECTION OR THE WATERLINE SHALL BE CONSTRUCTED OF DUCTILE IRON OR STEEL PIPE WITH MECHANICAL OR WELDED JOINTS AS APPROPRIATE. THE ENCASING PIPE SHALL BE CENTERED ON THE WASTEWATER MAIN AND BE A MINIMUM OF TWO NOMINAL PIPE DIAMETERS LARGER THAN THE WATER MAIN. THE SPACE AROUND THE CARRIER PIPE SHALL BE SUPPORTED AT A MINIMUM OF 5 FEET INTERVALS WITH SPACES OR BE FILLED TO THE SPRING LINE WITH WASHED SAND. EACH END OF THE CASING SHALL BE SEALED WITH WATER TIGHT NON-SHRINKING CEMENT GROUT OR A MANUFACTURED WATERTIGHT SEAL. AN ABSOLUTE MINIMUM SEPARATION DISTANCE OF ONE FOOT BETWEEN THE WATERLINE AND THE WASTEWATER MAIN SHALL BE PROVIDED. BOTH THE WATERLINE AND WASTEWATER MAIN OR LATERAL MUST PASS A PRESSURE AND LEAKAGE TEST AS SPECIFIED IN AWWA C600 STANDARDS.

RECORD DRAWINGS:
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RANDALL P. POQUE, P.E. DATE: APRIL 15, 2010
TX LIC. NO. 84780 4

BENCH MARK LIST:
BENCHMARK #1
SQUARE CUT SET AT SOUTHWESTCORNER OF WATER VAULT LOCATEDED AT THE SOUTHEAST CORNER OF THE INTERSECTION OF THE EAST RIGHT-OF-WAY LINE OF SH 205 AND THE SOUTH RIGHT-OF-WAY LINE OF FM 552.
ELEVATION = 543.09

BENCHMARK #2
CITY OF ROCKWALL MONUMENT (R010) FOUND.
ELEVATION = 524.788

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Brandon E. Cox 05-21-09

STATE OF TEXAS
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WATER PROFILES

STONE CREEK RETAIL
BLOCK A, LOTS 1-6, STONE CREEK RETAIL ADDITION
W.T. DEWEESE SURVEY, ABSTRACT NO. 71
CITY OF ROCKWALL, TEXAS

SHEET NO. C6.04

PI NO: 1393-08-087
DWG NO: 1393-08-087-07A.DWG

STONE CREEK RETAIL - ROCKWALL

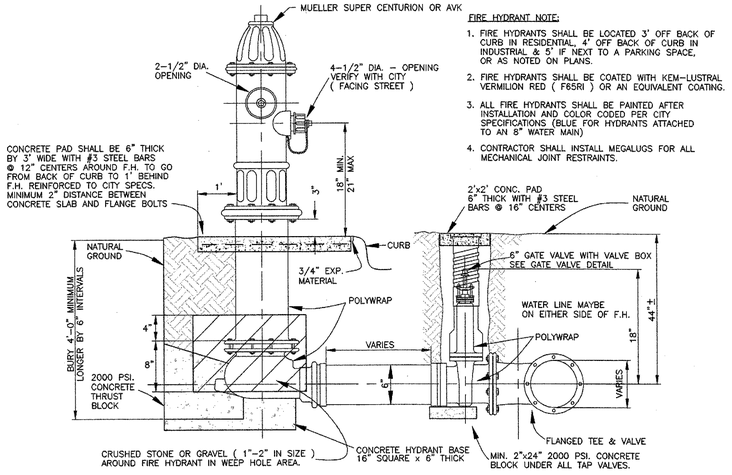
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FIRE HYDRANT NOTE:

1. FIRE HYDRANTS SHALL BE LOCATED 3' OFF BACK OF CURB IN RESIDENTIAL, 4' OFF BACK OF CURB IN INDUSTRIAL & 5' IF NEXT TO A PARKING SPACE, OR AS NOTED ON PLANS.
2. FIRE HYDRANTS SHALL BE COATED WITH KEM-LUSTRAL VERMILION RED (F65RI) OR AN EQUIVALENT COATING.
3. ALL FIRE HYDRANTS SHALL BE PAINTED AFTER INSTALLATION AND COLOR CODED PER CITY SPECIFICATIONS (BLUE FOR HYDRANTS ATTACHED TO AN 8" WATER MAIN)
4. CONTRACTOR SHALL INSTALL MEGALUGS FOR ALL MECHANICAL JOINT RESTRAINTS.

01 C6.03 **STANDARD FIRE HYDRANT DETAIL**
NOT TO SCALE

NOTE:
FOR ALL OTHER WATER & SANITARY SEWER DETAILS, USE CITY OF ROCKWALL AND NCTCOG 3RD EDITION DETAILS.

RECORD DRAWINGS:
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RANDALL P. POGUE, P.E.
TX LIC. NO. 84780
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www.PogueEngineering.com

WATER & SANITARY SEWER DETAILS

STONE CREEK RETAIL
BLOCK A, LOTS 1-6, STONE CREEK RETAIL ADDITION
W.T. DEWEESE SURVEY, ABSTRACT NO. 71
CITY OF ROCKWALL, TEXAS

SHEET NO. C6.05

PI NO: 1393-08-087
DWG NO: 1393-08-087-07A.DWG

STONE CREEK RETAIL - ROCKWALL

TEXAS BOARD OF PROFESSIONAL ENGINEERS, CERTIFICATE OF REGISTRATION #F-000401; TEXAS BOARD OF PROFESSIONAL LAND SURVEYING, CERTIFICATE OF REGISTRATION 100421-00

PAVING AND DRAINAGE GENERAL NOTES:

1. ALL WORK UNLESS OTHERWISE NOTED, SHALL CONFORM TO THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, AS ISSUED BY THE NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS, AND THE CITY OF ROCKWALL STANDARD CONSTRUCTION SPECIFICATIONS. COPIES OF NCTCOG SPECIFICATIONS 3rd VERSION CAN BE OBTAINED BY CONTACTING NCTCOG @ (817) 640-3300

2. UNLESS OTHERWISE NOTED, ALL CONCRETE SHALL BE TYPE IA, CLASS 'A', 3000 PSI STRENGTH AT 28 DAYS. CONCRETE FOR INLET AND DRAINAGE STRUCTURES SHALL BE TYPE I, CLASS 'F', 4200 PSI STRENGTH AT 28 DAYS. FIRE LANES AND APPROACHES SHALL BE TYPE 1A, CLASS 'C', 3600 PSI STRENGTH AT 28 DAYS. 6 SACK MINIMUM FOR MACHINE PLACED AND 6-1/2 SACK MINIMUM FOR HAND PLACED. NO SAND UNDER PAVEMENT.

3. THE HORIZONTAL AND VERTICAL LOCATIONS OF EXISTING SUBSURFACE UTILITIES HAVE BEEN DETERMINED FROM DATA RECORDED BY OTHERS. THE CONTRACTOR SHALL VERIFY THAT ALL NECESSARY CROSSING CLEARANCES BETWEEN EXISTING AND PROPOSED UTILITIES EXIST PRIOR TO CONSTRUCTION OF ANY SUCH CROSSING. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY SIZE AND LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROTECT ALL PUBLIC UTILITIES IN THE CONSTRUCTION OF THIS PROJECT.

4. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROTECT ALL MANHOLES, CLEAN OUTS, VALVE BOXES, FIRE HYDRANTS, ETC. THEY MUST BE ADJUSTED TO THE PROPER LINE AND GRADE BY THE CONTRACTOR PRIOR TO AND AFTER THE PLACING OF PERMANENT PAVING AND GRADING. UTILITIES MUST BE MAINTAINED TO PROPER LINE AND GRADE THROUGHOUT THE CONSTRUCTION OF THIS PROJECT.

5. CONTRACTOR SHALL MAINTAIN ONE SET OF "RECORD DRAWINGS" ON SITE WHICH WILL BE SUBMITTED TO THE OWNER OR ENGINEER UPON COMPLETION OF THE PROJECT. RECORD DRAWINGS SHALL INDICATE THE LOCATION OF ALL SUBTERRANEAN UTILITY IMPROVEMENTS AND/OR RELOCATIONS. THEY SHALL ALSO INCLUDE DIMENSIONAL TIES TO ALL MANHOLES, CULVERTS, INLETS, JUNCTION BOXES, FIRE HYDRANTS, ETC.

6. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING AND BEING IN COMPLIANCE WITH ALL FEDERAL (O.S.H.A. STANDARDS AND REGULATIONS), STATE AND LOCAL REGULATIONS REGARDING TRENCH SAFETY.

7. BARRICADING AND PROJECT SIGNS SHALL CONFORM TO "STATE DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION BARRICADING AND CONSTRUCTION STANDARDS" ON TxDOT ROADWAYS AND "TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, PART VI" FOR PRIVATE WORK. BARRICADES AND PROJECT SIGNS SHALL ALSO MEET CITY CODE.

8. UNLESS OTHERWISE NOTED, THE STORM DRAIN LINES MAY BE OF THE FOLLOWING MATERIALS:
   A. CLASS III, RCP C-76 (CIRCULAR) INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

9. STORM SEWER JOINT MATERIALS MAY BE OF THE FOLLOWING:
   A. RAM-NECK
   B. CON-SEAL
   C. CEMENT GROUT
   INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

10. STORM SEWER CONNECTIONS FOR NEW INTERCEPTING MAINS SHALL BE FACTORY WYES FOR 48" AND SMALLER PIPE.

11. ALL HEADWALLS SHALL BE POURED IN PLACE.

12. GRADING OF ALL HANDICAPPED SPACES AND ROUTES SHALL CONFORM TO STATE, LOCAL AND FEDERAL REGULATIONS. THE MAXIMUM CROSS FALL SHALL BE 2% (1' IN 50') AND THE MAXIMUM SLOPE FOR INGRESS/EGRESS ALONG THE ROUTE SHALL BE 5% (1' IN 20'), AND A 2% MAXIMUM SLOPE IN ANY DIRECTION MUST BE MAINTAINED WITHIN THE FIRST 5' FROM ANY ENTRY OR EXIT OF A BUILDING OR LANDING AREA.

13. FINAL PAVING, CURB AND SIDEWALK ELEVATIONS SHALL BE PLACED AT THE PROPOSED GRADE ELEVATIONS WITHIN PLUS OR MINUS 0.05 FEET.

14. ANY CONCRETE, ROCK, DEBRIS OR MATERIAL DEEMED UNSUITABLE FOR SUB-GRADE BY THE ENGINEER SHALL BE DISPOSED OF OFF SITE AND OUT OF THE CITY LIMITS AT THE CONTRACTOR'S EXPENSE.

15. TRENCH BACK FILL MATERIAL SHALL CONFORM TO THE REQUIREMENTS OF NCTCOG ITEM 6.2.10 AND SHALL BE MECHANICALLY COMPACTED IN ACCORDANCE WITH NCTCOG ITEM 6.2.9 TO A MINIMUM OF 95 PERCENT STANDARD PROCTOR DENSITY UNLESS OTHERWISE SHOWN ON THESE PLANS OR STATED IN THE CITY STANDARD SPECIFICATIONS OR IN THE GEOTECHNICAL REPORT. SEE CITY OF ROCKWALL STANDARDS OF DESIGN & CONSTRUCTION DATED AUGUST 2003, FOR ADDENDUMS.

16. EMBEDMENT FOR PIPES SHALL CONFORM TO THE REQUIREMENTS OF NCTCOG ITEM 6.2.9 UNLESS OTHERWISE SHOWN ON THESE PLANS OR NOTED IN THE STANDARD CITY SPECIFICATIONS. CRUSHED STONE BEDDING OR APPROVED EQUAL SHALL BE PROVIDED BY THE CONTRACTOR WHEN ROCK IS ENCOUNTERED IN TRENCHES. THERE SHALL BE NO ADDITIONAL PAY ITEM OF THE CRUSHED STONE BEDDING. IF ROCK IS ENCOUNTERED, ROCK SPOIL SHALL NOT BE USED IN THE UPPER 1.5 FEET OF THE TRENCH. THE UPPER 1.5 FEET OF TRENCH SHALL BE BACK FILLED WITH QUALITY TOPSOIL. SEE CITY OF ROCKWALL STANDARDS OF DESIGN & CONSTRUCTION DATED AUGUST 2003, FOR ADDENDUMS.

17. IF REQUIRED BY CONSTRUCTION, POWER POLES TO BE BRACED AND/OR RELOCATED AT THE CONTRACTOR'S EXPENSE.

18. REFER TO THE GEOTECHNICAL REPORT FOR REQUIREMENTS REGARDING FILL COMPACTION AND RELATED MOISTURE CONTENT.

19. DRAINAGE SHALL BE MAINTAINED AWAY FROM ALL FOUNDATIONS, BOTH DURING AND AFTER CONSTRUCTION.

20. TREES SHALL REMAIN AND BE PROTECTED UNLESS SPECIFIED OTHERWISE ON THE LANDSCAPE PLAN OR APPROVED BY THE OWNER AND THE CITY.

21. REFER TO THE ARCHITECTURAL AND M.E.P. PLANS FOR COORDINATION OF ALL UTILITY CONNECTIONS (ROOF DRAIN COLLECTION, WATER, SEWER, ETC.).

22. REFER TO THE PAVING AND DRAINAGE PLANS FOR ADDITIONAL INFORMATION RELATED TO SAID CONSTRUCTION.

23. PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL SUBMIT BOND AND THREE WAY CONTRACTS TO THE CITY AND OWNER AS REQUIRED.

24. ALL FILL SHALL BE COMPACTED WITH A SHEEPS FOOT ROLLER.

WATER AND SANITARY SEWER GENERAL NOTES:

1. ALL WORK UNLESS OTHERWISE NOTED, SHALL CONFORM TO THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, AS ISSUED BY THE NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS, AND THE CITY OF ROCKWALL STANDARD CONSTRUCTION SPECIFICATIONS. COPIES OF NCTCOG SPECIFICATIONS 3rd VERSION CAN BE OBTAINED BY CONTACTING NCTCOG @ (817) 640-3300

2. UNLESS OTHERWISE NOTED, ALL CONCRETE SHALL BE TYPE IA, CLASS 'A', 3000 PSI STRENGTH AT 28 DAYS. CONCRETE FOR INLET AND DRAINAGE STRUCTURES SHALL BE TYPE I, CLASS 'F', 4200 PSI STRENGTH AT 28 DAYS.

3. THE HORIZONTAL AND VERTICAL LOCATIONS OF EXISTING SUBSURFACE UTILITIES HAVE BEEN DETERMINED FROM DATA RECORDED BY OTHERS. THE CONTRACTOR SHALL VERIFY THAT ALL NECESSARY CROSSING CLEARANCES BETWEEN EXISTING AND PROPOSED UTILITIES EXIST PRIOR TO CONSTRUCTION OF ANY SUCH CROSSING. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY SIZE AND LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROTECT ALL PUBLIC UTILITIES IN THE CONSTRUCTION OF THIS PROJECT.

4. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROTECT ALL MANHOLES, CLEAN OUTS, VALVE BOXES, FIRE HYDRANTS, ETC. THEY MUST BE ADJUSTED TO THE PROPER LINE AND GRADE BY THE CONTRACTOR PRIOR TO AND AFTER THE PLACING OF PERMANENT PAVING AND GRADING. UTILITIES MUST BE MAINTAINED TO PROPER LINE AND GRADE THROUGHOUT THE CONSTRUCTION OF THIS PROJECT.

5. CONTRACTOR SHALL MAINTAIN ONE SET OF "RECORD DRAWINGS" ON SITE WHICH WILL BE SUBMITTED TO THE OWNER OR ENGINEER UPON COMPLETION OF THE PROJECT. RECORD DRAWINGS SHALL INDICATE THE LOCATION OF ALL SUBTERRANEAN UTILITY IMPROVEMENTS AND/OR RELOCATIONS. THEY SHALL ALSO INCLUDE DIMENSIONAL TIES TO ALL MANHOLES, CULVERTS, INLETS, JUNCTION BOXES, FIRE HYDRANTS, ETC.

6. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING AND BEING IN COMPLIANCE WITH ALL FEDERAL (O.S.H.A. STANDARDS AND REGULATIONS), STATE AND LOCAL REGULATIONS REGARDING TRENCH SAFETY.

7. BARRICADING AND PROJECT SIGNS SHALL CONFORM TO "STATE DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION BARRICADING AND CONSTRUCTION STANDARDS" ON TxDOT ROADWAYS AND "TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, PART VI" FOR PRIVATE WORK. BARRICADES AND PROJECT SIGNS SHALL ALSO MEET CITY CODE.

8. ALL WATER MAINS 12" IN DIAMETER OR LESS SHALL BE PVC C-900, DR 14, CLASS 200.

9. ALL WATER MAINS UNLESS OTHERWISE NOTED SHALL HAVE A MINIMUM COVER OF 48 INCHES (4" THRU 8"); 60 INCHES (10" THRU 12"); 72 INCHES (14 INCHES AND LARGER) TO THE TOP OF PIPE BELOW FINISHED GRADES.

10. ALL WATER SERVICES TO BE INSTALLED IN ACCORDANCE TO CITY REQUIREMENTS.

11. ALL SANITARY SEWER PIPE TO BE PVC SDR-35, UNLESS OTHERWISE NOTED.

12. CONTRACTOR TO TEST WATER AND SANITARY SEWER LINES IN ACCORDANCE WITH THE STANDARD CITY SPECIFICATIONS.

13. ALL METER BOXES TO BE LOCATED IN NON-TRAFFIC AREAS.

14. FIRE SPRINKLER LINE TO BE SIZED AND INSTALLED BY A STATE LICENSED FIRE SPRINKLER CONTRACTOR.

15. FIRE HYDRANTS SHALL BE PLACED 3 FEET FROM THE BACK OF CURB LOCATED AS SHOWN ON THE PLANS. THE FIRE HYDRANT SHALL BE CITY APPROVED AND PAINTED TO BE COLOR CODED PER CITY REQUIREMENTS. FIRE HYDRANTS TO HAVE 5 FOOT CLEARANCE AROUND. (INCLUDES PARKING SPACES)

16. ALL UTILITIES INSTALLED OUTSIDE OF AN EASEMENT SHALL BE INSTALLED BY A LICENSED PLUMBER AND INSPECTED BY THE CITY CODE ENFORCEMENT.

17. ALL DUCTILE IRON FITTINGS SHALL BE OF THE MECHANICAL JOINT TYPE OR SLIP JOINT AND SHALL BE CLASS D, OR CLASS 250 ON SIZES 12 INCHES AND SMALLER IN ACCORDANCE WITH A.W.W.A. SPECIFICATIONS C-110-64 AND C-111-64.

18. CONCRETE BLOCKING SHALL BE PROVIDED ON WATER MAINS AT ALL TEES, BENDS AND FIRE HYDRANTS PER STANDARD CITY SPECIFICATIONS. PAYMENT FOR CONCRETE BLOCKING SHALL BE SUBSIDIARY TO PIPE INSTALLATION AND SHALL BE INCLUDED IN THE BID PRICE THEREOF.

19. ANY CONCRETE, ROCK, DEBRIS OR MATERIAL DEEMED UNSUITABLE FOR SUB-GRADE BY THE ENGINEER SHALL BE DISPOSED OF OFF SITE AT THE CONTRACTOR'S EXPENSE.

20. TRENCH BACK FILL MATERIAL SHALL CONFORM TO THE REQUIREMENTS OF NCTCOG ITEM 6.2.10 AND SHALL BE MECHANICALLY COMPACTED IN ACCORDANCE WITH NCTCOG ITEM 6.2.9 TO A MINIMUM OF 95 PERCENT STANDARD PROCTOR DENSITY UNLESS OTHERWISE SHOWN ON THESE PLANS OR STATED IN THE CITY STANDARD SPECIFICATIONS OR IN THE GEOTECHNICAL REPORT.

21. EMBEDMENT FOR PIPES SHALL CONFORM TO THE REQUIREMENTS OF VERSION 3 NCTCOG ITEM 6.2.9 UNLESS OTHERWISE SHOWN ON THESE PLANS OR NOTED IN THE STANDARD CITY SPECIFICATIONS. CRUSHED STONE BEDDING OR APPROVED EQUAL SHALL BE PROVIDED BY THE CONTRACTOR WHEN ROCK IS ENCOUNTERED IN TRENCHES. THERE SHALL BE NO ADDITIONAL PAY ITEM OF THE CRUSHED STONE BEDDING. IF ROCK IS ENCOUNTERED, ROCK SPOIL SHALL NOT BE USED IN THE UPPER 1.5 FEET OF THE TRENCH. THE UPPER 1.5 FEET OF TRENCH SHALL BE BACK FILLED WITH QUALITY TOPSOIL.

22. CLASS "B" EMBEDMENT SHALL BE USED FOR RCP PIPE.

23. CLASS "B-3" EMBEDMENT SHALL BE USED FOR PVC PIPE FOR WATER.

24. ROCK EMBEDMENT SHALL BE USED FOR PVC SEWER PIPE.

25. NOT USED

26. NOT USED

27. IF REQUIRED BY CONSTRUCTION, POWER POLES TO BE BRACED AND/OR RELOCATED AT THE CONTRACTOR'S EXPENSE.

WATER AND SANITARY SEWER GENERAL NOTES CONT.:

28. REFER TO THE GEOTECHNICAL REPORT FOR REQUIREMENTS REGARDING FILL COMPACTION AND RELATED MOISTURE CONTENT.

29. TREES SHALL REMAIN AND BE PROTECTED UNLESS SPECIFIED OTHERWISE ON THE LANDSCAPE PLAN OR APPROVED BY THE OWNER AND THE CITY.

30. REFER TO THE ARCHITECTURAL AND M.E.P. PLANS FOR COORDINATION OF ALL UTILITY CONNECTIONS (ROOF DRAIN COLLECTION, WATER, SEWER, ETC.).

31. CONTRACTOR TO VERIFY ALL EXISTING UTILITIES FLOW LINES PRIOR TO BEGINNING CONSTRUCTION.

32. CONTRACTOR SHALL TIE A 1" WIDE PIECE OF RED PLASTIC FLAGGING TO THE END OF SEWER SERVICE AND SHALL LEAVE A MINIMUM OF 36" OF FLAGGING EXPOSED AFTER BACK FILL. AFTER CURB AND PAVING IS COMPLETE, CONTRACTOR SHALL MARK THE LOCATION OF THE SEWER SERVICE ON THE CURB OR PAVING WITH A RED LETTER 'S' IN ACCORDANCE WITH STANDARD CITY SPECIFICATIONS.

33. THE CONTRACTOR TO INSTALL THE WATER SERVICES TO A POINT 2 FEET FROM BACK OF THE CURB LINE AT A DEPTH OF 12 INCHES. THE METER BOX SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR AFTER THE PAVING HAS BEEN COMPLETED AND THE FINE GRADING BEHIND THE CURB AND PAVING AREAS. EACH SERVICE LOCATION SHALL BE MARKED ON THE CURB OR PAVING WITH A BLUE LETTER "W" IN ACCORDANCE WITH STANDARD CITY SPECIFICATIONS AND TIED TO PROPERTY CORNERS ON THE "RECORD DRAWINGS"

34. VALVE BOXES SHALL BE FURNISHED AND SET ON EACH GATE VALVE. AFTER FINAL GRADING AND ALIGNMENT HAS BEEN COMPLETED, THE CONTRACTOR SHALL POUR A CONCRETE PAD BLOCK (24"X24"X6") AROUND ALL VALVES AS TO PROVIDE THE FINISHED GRADE OF THE PAD TO BE EQUAL TO THE FINISHED GRADES ADJACENT TO THE VALVES.

35. WHEN WATER AND SANITARY SEWER MAINS ARE INSTALLED, THEY SHALL BE INSTALLED NO CLOSER THAN NINE (9) FEET TO EACH OTHER IN ALL DIRECTIONS AS MEASURED FROM THE OUTSIDE OF THE PIPES. PARALLEL LINES SHALL BE INSTALLED IN SEPARATE TRENCHES. WHERE THE NINE FOOT SEPARATION DISTANCE CANNOT BE ACHIEVED OR MAINTAINED, THE FOLLOWING GUIDELINES SHALL APPLY:
   A. WHERE A SANITARY SEWER PARALLELS A WATER LINE, THE SEWER SHALL BE CONSTRUCTED OF CAST IRON, DUCTILE IRON OR PVC PIPE MEETING ASTM SPECIFICATIONS WITH A PRESSURE RATING FOR BOTH THE PIPE AND JOINTS OF 150 PSI. THE VERTICAL SEPARATION SHALL BE A MINIMUM OF 2 FEET BETWEEN OUTSIDE DIAMETERS AND THE HORIZONTAL SEPARATION SHALL BE A MINIMUM OF FOUR FEET BETWEEN OUTSIDE DIAMETERS. THE SEWER SHALL BE LOCATED BELOW THE WATER.
   B. WHERE A SANITARY SEWER CROSSES A WATERLINE AND THE SEWER IS CONSTRUCTED OF CAST IRON, DUCTILE IRON OR PVC WITH A MINIMUM PRESSURE RATING OF 150 PSI, AN ABSOLUTE MINIMUM DISTANCE OF SIX INCHES BETWEEN OUTSIDE DIAMETERS SHALL BE MAINTAINED. IN ADDITION, THE SEWER SHALL BE LOCATED BELOW THE WATERLINE WHERE POSSIBLE AND ONE LENGTH OF SEWER PIPE MUST BE CENTERED ON THE WATERLINE.
   C. WHERE A SANITARY SEWER CROSSES UNDER A WATERLINE AND THE SEWER IS CONSTRUCTED OF ABS TRUSS PIPE, SIMILAR SEMI-RIGID PLASTIC COMPOSITE PIPE, CLAY PIPE OR CONCRETE PIPE WITH GASKETED JOINTS, A MINIMUM OF TWO FOOT SEPARATION DISTANCE SHALL BE MAINTAINED. IN ADDITION, THE SEWER SHALL BE LOCATED BELOW THE WATERLINE WHERE POSSIBLE AND ONE LENGTH OF THE SEWER PIPE MUST BE CENTERED ON THE WATERLINE.
   D. WHERE A SEWER CROSSES OVER A WATERLINE ALL PORTIONS OF THE SEWER WITHIN NINE FEET OF THE WATERLINE SHALL BE CONSTRUCTED OF CAST IRON, DUCTILE IRON OR PVC PIPE WITH A PRESSURE RATING OF AT LEAST 150 PSI USING APPROPRIATE ADAPTERS. IN LIEU OF THIS PROCEDURE, THE NEW CONVEYANCE MAY BE ENCASED IN A JOINT OF 150 PSI PRESSURE CLASS PIPE AT LEAST 18 FEET LONG AND TWO NOMINAL SIZES LARGER THAN THE NEW CONVEYANCE. THE SPACE AROUND THE CARRIER PIPE SHALL BE SUPPORTED AT FIVE FEET INTERVALS WITH SPACERS OR BE FILLED TO THE SPRING LINE WITH WASHED SAND. THE ENCASEMENT PIPE SHOULD BE CENTERED ON THE CROSSING AND BOTH ENDS SEALED WITH CEMENT GROUT OR MANUFACTURED SEAL.
   E. THE SEWER NEED NOT BE DISTURBED WHERE A NEW WATERLINE IS TO BE INSTALLED PARALLEL TO AN EXISTING SEWER THAT SHOWS NO EVIDENCE OF LEAKAGE AND THE WATERLINE IS INSTALLED ABOVE THE SEWER A MINIMUM OF TWO FEET VERTICALLY AND FOUR FEET HORIZONTALLY. SHOULD EXCAVATION FOR THE WATERLINE PRODUCE EVIDENCE THAT THE SEWER IS LEAKING, THE SEWER MUST BE REPAIRED OR REPLACED AS DESCRIBED IN SUBPARAGRAPHS (A) OR (D) OF THIS PARAGRAPH.
   F. THE SEWER NEED NOT BE DISTURBED WHERE A NEW WATERLINE IS TO CROSS OVER (BY TWO FEET OR MORE) EXISTING SEWER SHOWING NO EVIDENCE OF LEAKAGE. SHOULD EXCAVATION FOR THE WATERLINE PRODUCE EVIDENCE THAT THE SEWER IS LEAKING, THEN THE SEWER MUST BE REPAIRED OR REPLACED AS DESCRIBED IN SUBSECTIONS (C) OF (D) OF THIS PARAGRAPH.

36. REFER TO THE WATER AND SEWER PLANS FOR ADDITIONAL INFORMATION RELATED TO SAID CONSTRUCTION.

37. PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL SUBMIT BOND AND THREE WAY CONTRACTS TO THE CITY AND OWNER AS REQUIRED.

38. CONTRACTOR SHALL INSTALL BLUE EMS DISKS (WATER LINE) AT EVERY CHANGE IN DIRECTION, VALVES, & SERVICES. CONTRACTOR SHALL INSTALL GREEN EMS DISKS (SEWER) AT EVERY CHANGE IN DIRECTION, MANHOLE, CLEANOUT, AND SERVICES.

39. INSTALL BLUE EMS DISK ON THE WATER LINES AT EVERY CHANGE IN DIRECTION, VALVE, & SERVICE.

40. INSTALL GREEN EMS DISK ON THE SANITARY SERVICE LINES AT EVERY MANHOLE, CLEANOUT, & SERVICE.

NO SAND OR GRANULAR MATERIAL ALLOWED FOR USE IN BACKFILL ABOVE ROCK EMBEDMENT.

ALL FILL SHALL BE COMPACTED WITH SHEEPS FOOT ROLLER.

LANDSCAPING GENERAL NOTES:

1. ALL MATERIALS FOR TURF GRASS PROVIDED SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, LATEST EDITION, AS ISSUED BY THE NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS, AND THE CITY SPECIFICATIONS AND AS NOTED IN THE PLANS AND CONTRACT DOCUMENTS.

2. BERMUDA GRASS SEED. TURF GRASS SEED SHALL BE "CYNODON DACTYLON" (COMMON BERMUDA GRASS). THE SEED SHALL BE HARVESTED WITHIN ONE YEAR PRIOR TO PLANTING, FREE OF JOHNSON GRASS, FIELD BIND WEED, DODDER SEED, AND FREE OF OTHER WEED SEED TO THE LIMITS ALLOWABLE UNDER THE FEDERAL SEED ACT AND APPLICABLE SEED LAWS. THE SEED SHALL NOT BE A MIXTURE. THE SEED SHALL BE HULLED, EXTRA FANCY GRADE, TREATED WITH FUNGICIDE AND HAVE A GERMINATION AND PURITY THAT SHALL PRODUCE, AFTER ALLOWANCE FOR FEDERAL SEED ACT TOLERANCES, A PURE LIVE SEED CONTENT OF NOT LESS THAN 85%, USING THE FORMULA: PURITY PERCENT TIME (GERMINATION PERCENT TIMES PLUS HARD OR SOUND SEED FIVE PERCENT). SEED SHALL BE LABELED IN ACCORDANCE WITH U.S. DEPARTMENT OF AGRICULTURE RULES AND REGULATIONS.
   A. CERTIFICATE SUBMITTAL. PRIOR TO PLANTING, PROVIDE THE OWNER AND ENGINEER WITH THE STATE OF TEXAS CERTIFICATE STATING ANALYSIS OF PURITY AND GERMINATION OF SEED.

3. RYE GRASS SEED. TURF GRASS SEED SHALL BE "LOLIUM MULTIFLORUM" (ITALIAN OR ANNUAL RYE GRASS). THE SEED SHALL BE HARVESTED WITHIN ONE YEAR PRIOR TO PLANTING AND SHALL BE FREE OF PERENNIAL RYE GRASS SEED, OTHER GRASS SEED AND WEED SEED TO THE LIMITS ALLOWABLE UNDER THE FEDERAL SEED ACT AND APPLICABLE SEED LAWS. SEED SHALL BE AT LEASE 95% PURE AND SHALL HAVE A 90% MINIMUM GERMINATION RATE.
   A. CERTIFICATE SUBMITTAL. PRIOR TO PLANTING, PROVIDE THE OWNER AND ENGINEER WITH THE STATE OF TEXAS CERTIFICATE STATING ANALYSIS OF PURITY AND GERMINATION OF SEED.

4. TIMES OF HYDROMULCHING SHALL BE AS FOLLOWS:
   A. SEPTEMBER 1 TO APRIL 1 – RYE GRASS SEED SHALL BE APPLIED.
   B. APRIL 2 TO AUGUST 31 – BERMUDA GRASS SEED SHALL BE APPLIED.

5. 75% – 80% OF ALL DISTURBED AREAS SHALL HAVE MINIMUM 1" (HEIGHT) OF GRASS ESTABLISHED PRIOR TO CITY ACCEPTANCE.

6. WHERE SOIL IS DISTURBED, SIDES AND BOTTOM OF DISTURBED AREAS TO BE EITHER SODDED OR STABILIZED WITH ANCHORED SEEDED CURLEX PRIOR TO PAVEMENT.

RECORD DRAWINGS:
IT WAS THE INTENT THAT THE IMPROVEMENTS SHOWN BE CONSTRUCTED ACCORDING TO THESE PLANS AS APPROVED BY THE CITY. THE LINES AND GRADES WERE SET ON THE GROUND FOR CONSTRUCTION ACCORDING TO SAID PLANS. THE CITY INSPECTED THE CONSTRUCTION. THE ENGINEER DID NOT VERIFY LINES OR GRADES AFTER CONSTRUCTION. WE ARE NOT AWARE OF ANY CHANGES OR REVISIONS TO THESE PLANS DURING CONSTRUCTION OTHER THAN THOSE SHOWN.

RANDALL P. POGUE, P.E. TX LIC. NO. 84780 — DATE: APRIL 15, 2010 (4)

NO.	DATE	REVISION / DESCRIPTION
4	04-15-10	RECORD DRAWINGS
3	02-24-10	ADDED RIGHT TURN LANE ON S.H. 205
2	07-17-09	SANITARY SEWER & ADA ROUTE REVISIONS
1	06-19-09	TXDOT COMMENTS

DESIGN	DRAWN	DATE	SCALE	NOTES
BEC	WTW	05-21-09	AS SHOWN	–

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MR. GREY STOGNER
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(214) 340-2029 FAX

DEVELOPER
CRESTVIEW REAL ESTATE, L.L.C.
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THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY BRANDON E. COX, P.E. 101037 ON 05-21-09. ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT.
Brandon E. Cox 05-21-09

STATE OF TEXAS — BRANDON E. COX — 101037 — LICENSED PROFESSIONAL ENGINEER

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GENERAL NOTES SHEET

STONE CREEK RETAIL
BLOCK A, LOTS 1-6, STONE CREEK RETAIL ADDITION
W.T. DEWEESE SURVEY, ABSTRACT NO. 71
CITY OF ROCKWALL, TEXAS

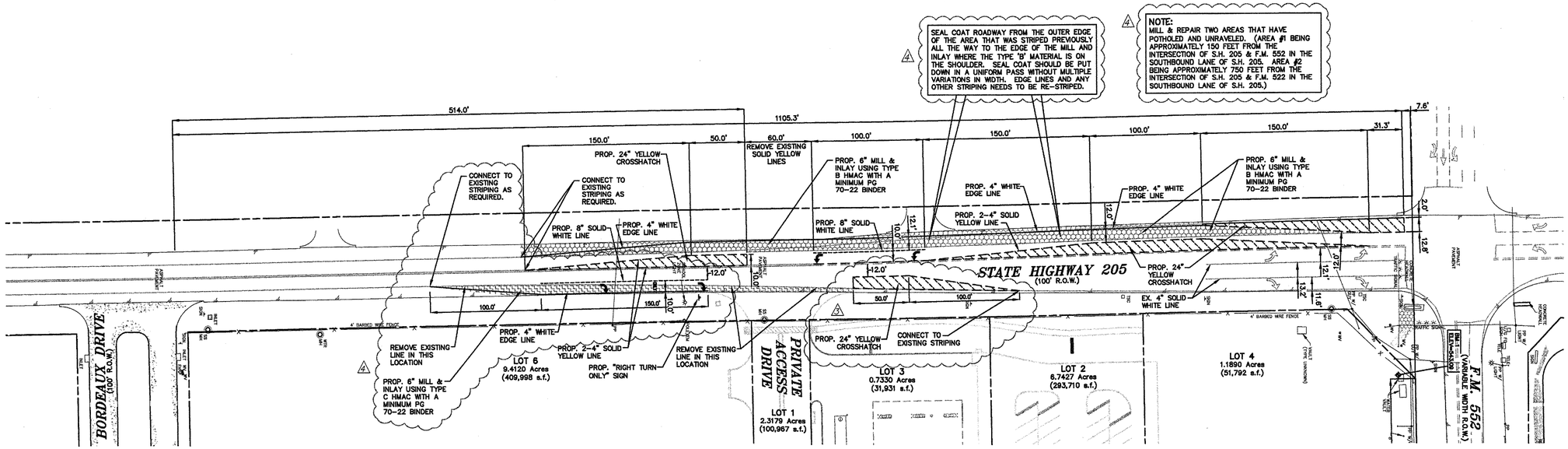
SHEET NO. C7.01

PI NO: 1393-08-087
DWG NO: 1393-08-087-07A.DWG

STONE CREEK RETAIL - ROCKWALL

TEXAS BOARD OF PROFESSIONAL ENGINEERS, CERTIFICATE OF REGISTRATION #F-000461; TEXAS BOARD OF PROFESSIONAL LAND SURVEYING, CERTIFICATE OF REGISTRATION 100421-00

TWILLIAMS 04/29/2010 - 4:12PM
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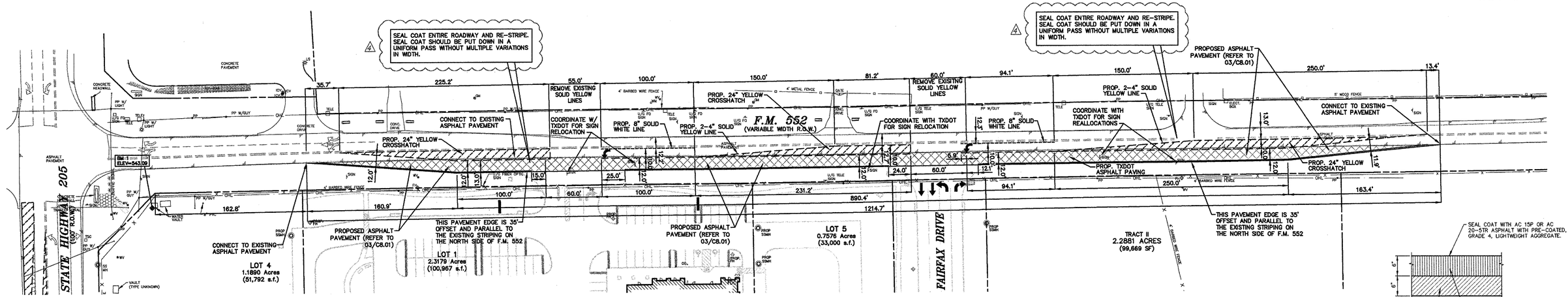
01 C8.01 STATE HIGHWAY 205 RESTRIPING PLAN
NOT TO SCALE

GRAPHIC SCALE IN FEET
SCALE: 1" = 50'

LEGEND

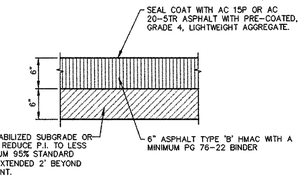
- EXISTING 4" WHITE EDGELINE
- EXISTING 4" SOLID YELLOW LINE
- EXISTING PAVEMENT MARKING ARROW
- PROPOSED 4" WHITE EDGELINE
- PROPOSED 2-4" SOLID YELLOW LINE
- PROPOSED 8" SOLID WHITE TURN LANE
- PROPOSED 24" YELLOW CROSSHATCH
- PROPOSED PAVEMENT MARKING ARROW
- PROPOSED TXDOT ASPHALT PAVING PER 03/C8.01
- PROPOSED 6" MILL & INLAY ON EXISTING S.H. 205 SHOULDER USING TYPE B HMAC WITH A MINIMUM PG 70-22 BINDER
- PROPOSED 6" MILL & INLAY ON EXISTING S.H. 205 SHOULDER USING TYPE C HMAC WITH A MINIMUM PG 70-22 BINDER

NOTES:
1. CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL PER TXDOT SPECIFICATIONS.
2. TEMPORARY STRIPING SHALL BE PROVIDED.
3. ALL PERMANENT STRIPING TO BE PER TXDOT SPECIFICATIONS. ALL AREAS THAT ARE TO BE RESTRIPED SHALL HAVE A SEAL COAT OVERLAY WITH AC 15P OR AC 20-5TR ASPHALT WITH PRE-COATED, GRADE 4, LIGHTWEIGHT AGGREGATE.
4. EDGE DROP OFFS GREATER THAN 2 INCHES WILL NOT BE ALLOWED OVERNIGHT WITHOUT PROPER SIGNING OR THE INSTALLATION OF TEMPORARY 3:1 SAFETY SLOPES.



02 C8.01 FM 552 WIDENING & STRIPING PLAN
NOT TO SCALE

GRAPHIC SCALE IN FEET
SCALE: 1" = 50'



TXDOT ASPHALT PAVEMENT SECTION DETAIL
03 C8.01
NOT TO SCALE

RECORD DRAWINGS:
IT WAS THE INTENT THAT THE IMPROVEMENTS SHOWN BE CONSTRUCTED ACCORDING TO THESE PLANS AS APPROVED BY THE CITY. THE LINES AND GRADES WERE SET ON THE GROUND FOR CONSTRUCTION ACCORDING TO SAID PLANS. THE CITY INSPECTED THE CONSTRUCTION. THE ENGINEER DID NOT VERIFY LINES OR GRADES AFTER CONSTRUCTION. WE ARE NOT AWARE OF ANY CHANGES OR REVISIONS TO THESE PLANS DURING CONSTRUCTION OTHER THAN THOSE SHOWN.

RANDALL P. POGUE, P.E.
TX LIC. NO. 84780
DATE: APRIL 15, 2010

NO.	DATE	REVISION / DESCRIPTION
4	04-15-10	RECORD DRAWINGS
3	02-24-10	ADDED RIGHT TURN LANE ON S.H. 205
2	07-17-09	SANITARY SEWER & ADA ROUTE REVISIONS
1	06-19-09	TXDOT COMMENTS

DESIGN	DRAWN	DATE	SCALE	NOTES
BEC	WTW	05-21-09	AS SHOWN	-

OWNER
METROPLEX ACQUISITION FUND, LP
8214 WESTCHESTER, SUITE 850
DALLAS, TEXAS 75225
MR. GREY STOGNER
(214) 343-4477 PHONE
(214) 340-2029 FAX

DEVELOPER
CRESTVIEW REAL ESTATE, L.L.C.
8214 WESTCHESTER, SUITE 850
DALLAS, TEXAS 75225
MR. GREY STOGNER
(214) 343-4477 PHONE
(214) 340-2029 FAX

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY BRANDON E. COX, P.E. 101037 ON 05-21-09. ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT.
Brandon E. Cox 05-21-09

STATE OF TEXAS · BRANDON E. COX · 101037 · LICENSED PROFESSIONAL ENGINEER

POGUE ENGINEERING & DEVELOPMENT COMPANY, INC.
1512 BRAY CENTRAL DRIVE
SUITE 100
McKINNEY, TEXAS 75069
(214) 544-8880 PHONE
(214) 544-8882 FAX
www.PogueEngineering.com

S.H. 205 & F.M. 552 STRIPING PLAN

STONE CREEK RETAIL
BLOCK A, LOTS 1-6, STONE CREEK RETAIL ADDITION
W.T. DEWEESE SURVEY, ABSTRACT NO. 71
CITY OF ROCKWALL, TEXAS

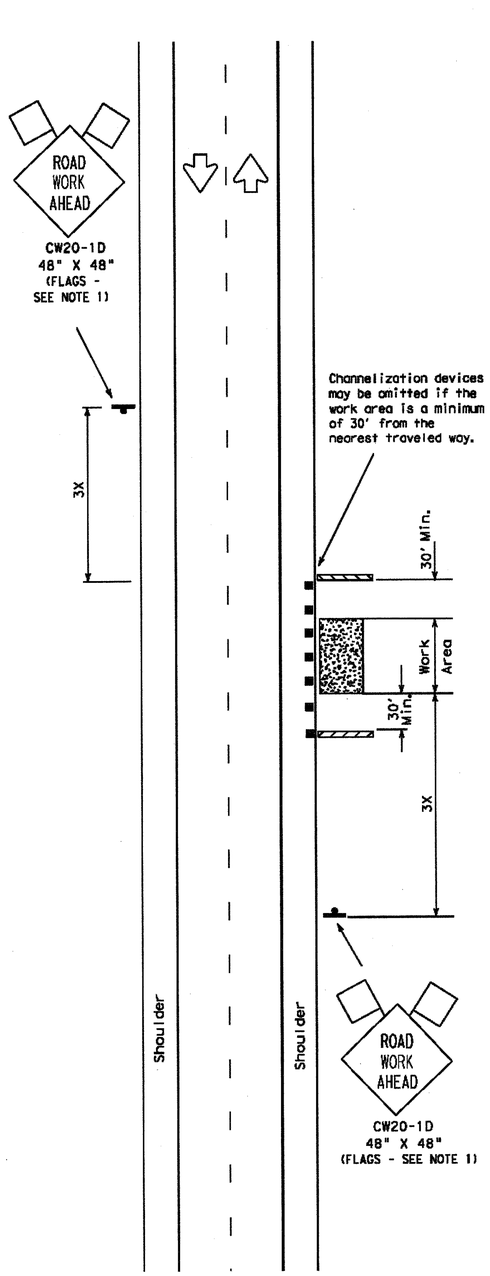
SHEET NO. C8.01

PI NO: 1393-08-087
DWG NO: 1393-08-087-07A.DWG

STONE CREEK RETAIL - ROCKWALL

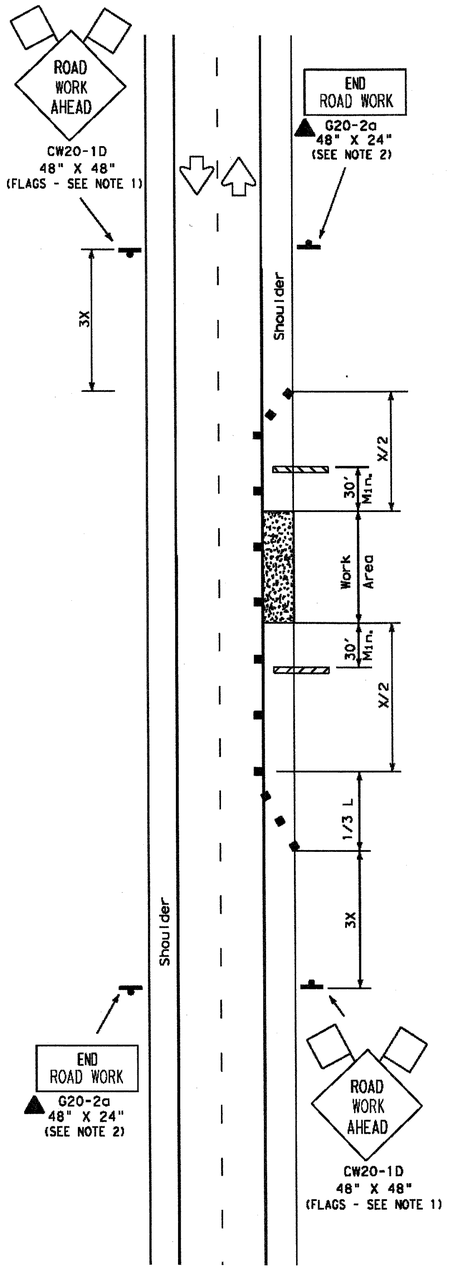
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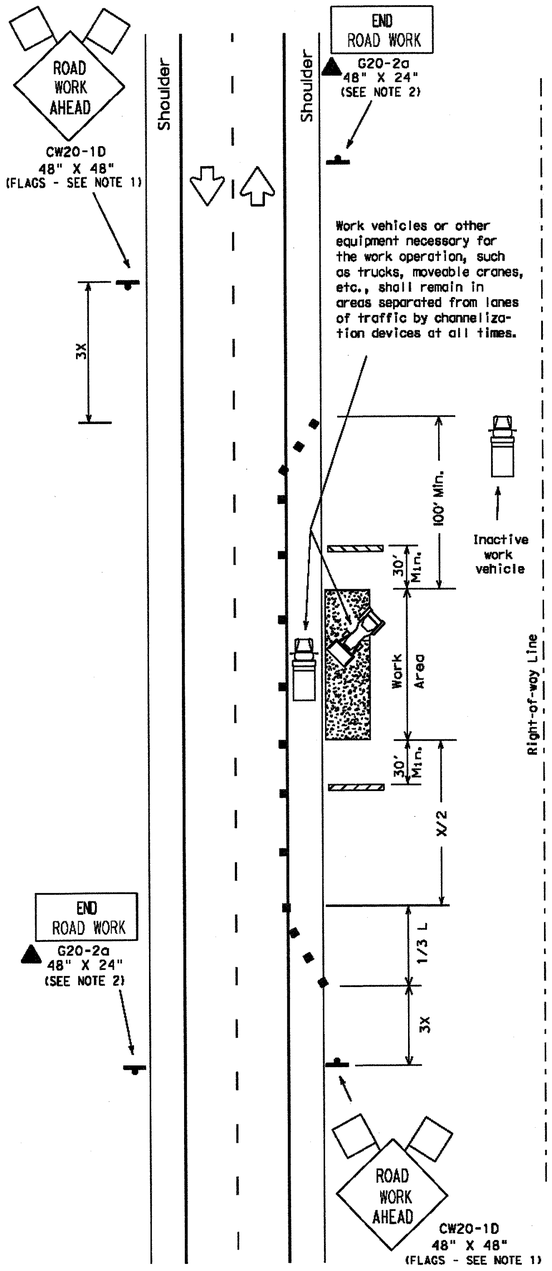
TCP (2-1a)

Work Area Near Shoulder



TCP (2-1b)

Work Area on Shoulder



TCP (2-1c)

Work Vehicles on Shoulder

LEGEND

Type III Barricade ■ ■ Channelizing Devices Flag
Heavy Work Vehicle Truck Mounted Attenuator
Trailer Mounted Flashing Arrow Panel (M) Portable Changeable Message Sign
Flagger Sign Post

Posted Speed*	Formula	Minimum Desirable Taper Lengths ** 10' Offset	11' Offset	12' Offset	Suggested Maximum Spacing of Device On a Taper	On a Tangent	Minimum Sign Spacing X Distance
30	$L=\frac{WS^2}{60}$	150'	165'	180'	30'	60'-75'	120'
35		205'	225'	245'	35'	70'-90'	160'
40		265'	295'	320'	40'	80'-100'	240'
45	L=WS	450'	495'	540'	45'	90'-110'	320'
50		500'	550'	600'	50'	100'-125'	400'
55		550'	605'	660'	55'	110'-140'	500'
60		600'	660'	720'	60'	120'-150'	*600'
65		650'	715'	780'	65'	130'-165'	*700'
70		700'	770'	840'	70'	140'-175'	*800'

* Conventional Roads Only

** Taper lengths have been rounded off.
L=Length of Taper (FT.) W=Width of Offset (FT.) S=Posted Speed (MPH)

TYPICAL USAGE:				
MOBILE	SHORT DURATION	SHORT TERM STATIONARY	INTERMEDIATE TERM STATIONARY	LONG TERM STATIONARY
	✓	✓	✓	✓

GENERAL NOTES:

1. Unless otherwise stated in the plans, flags attached to signs are REQUIRED.
2. All traffic control devices illustrated are REQUIRED, except those denoted with the triangle symbol may be omitted when stated elsewhere in the plans.
3. Type III barricades are required on both sides of work area at all times. (See BC Standards for barricade details.)
4. Stockpiled material should be placed a minimum 30' from nearest traveled way.
5. On high speed facilities advance warning signs should be installed approximately 3X from the work area or from the beginning of a lane or shoulder taper. On low speed facilities the advance warning sign should be placed on the "X" minimum distance.

Only pre-qualified products shall be used. A list of compliant products and their sources may be obtained by writing or faxing:

Standards Engineer
Traffic Operations Division - TE
Texas Department of Transportation
125 East 11th Street
Austin, Texas 78701-2483
Phone (512) 416-3335
Fax (512) 416-3161
E-mail TRF-STANDARD@mailgw.dot.state.tx.us

STANDARD PLANS
TEXAS DEPARTMENT OF TRANSPORTATION
Traffic Operations Division

TRAFFIC CONTROL PLAN

TCP(2-1)-98

©TxDOT December 1985

DN-LR	CK-MT	DW-DN	CK-MT	MSG NO.:

REVISIONS	STATE DISTRICT	FEDERAL REGION	FEDERAL AID PROJECT	SHEET
2-94		6		
8-95				
1-97	COUNTY	CONTROL	SECTION	JOB	HIGHWAY
4-98					

161

C8.02

PI NO: 1393-08-087

DWG NO: 1393-08-087-07A.DWG

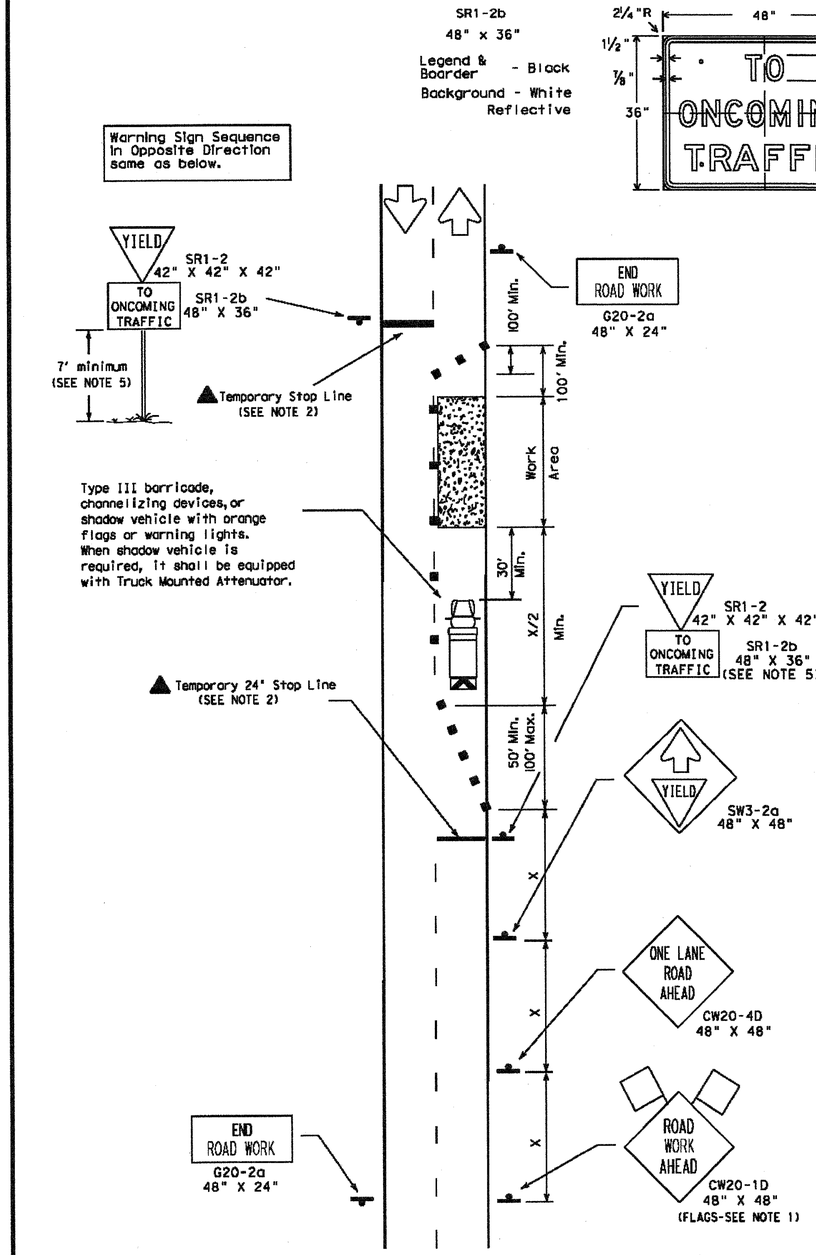
TEXAS BOARD OF PROFESSIONAL ENGINEERS, CERTIFICATE OF REGISTRATION #F-000481; TEXAS BOARD OF PROFESSIONAL LAND SURVEYING, CERTIFICATE OF REGISTRATION 100421-00

LEVELS DISPLAYED
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33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48
49 50 51 52 53 54 55 56 57 58 59 60 61 62 63

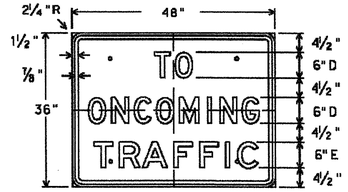
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ACC:
FILE:
DN:
CK:
DW:
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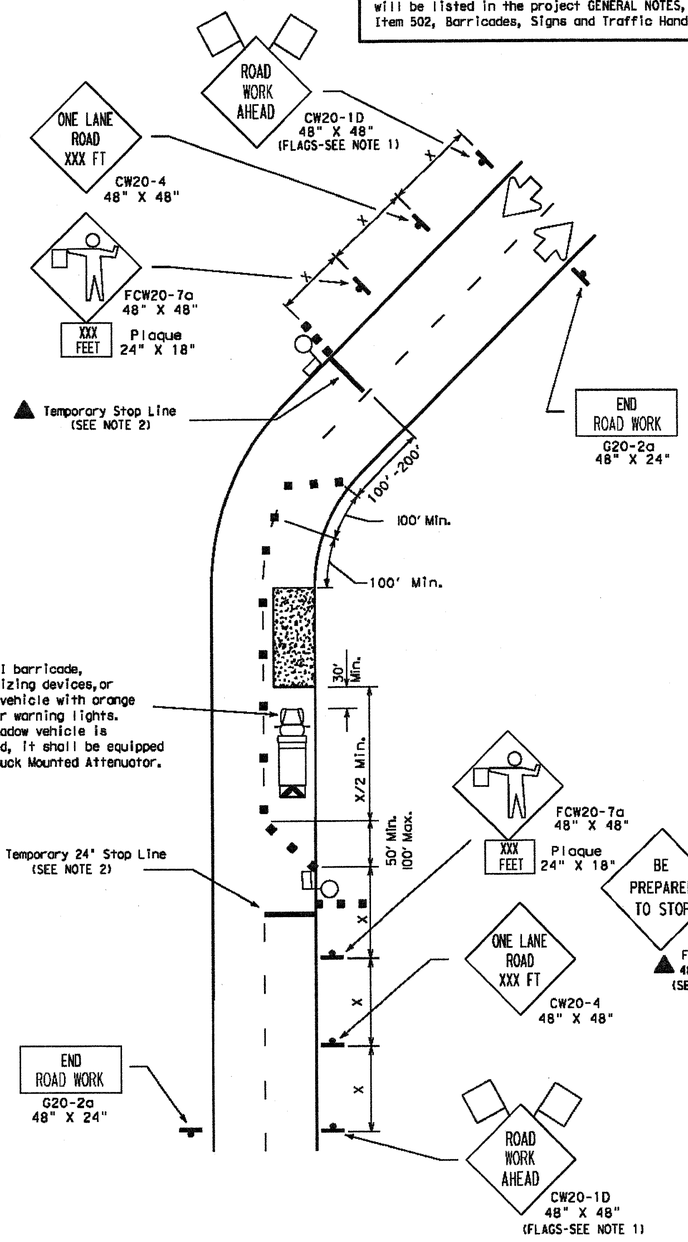
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SR1-2b
48" x 36"
Legend & Boarder - Black
Background - White
Reflective



The requirement for shadow vehicles will be listed in the project GENERAL NOTES, Item 502, Barricades, Signs and Traffic Handling.



LEGEND

Type III Barricade ■■ Channelizing Devices Flag
Heavy Work Vehicle Truck Mounted Attenuator
Trailer Mounted Flashing Arrow Panel (M) Portable Changeable Message Sign
Flagger Sign Post

Posted Speed*	Formula	Minimum Desirable Taper Lengths** 10' Offset	11' Offset	12' Offset	Suggested Maximum Spacing of Device On a Taper	On a Tangent	Minimum Sign Spacing X Distance
30	$L=\frac{WS^2}{60}$	150'	165'	180'	30'	60'-75'	120'
35		205'	225'	245'	35'	70'-90'	160'
40		265'	295'	320'	40'	80'-100'	240'
45	L=WS	450'	495'	540'	45'	90'-110'	320'
50		500'	550'	600'	50'	100'-125'	400'
55		550'	605'	660'	55'	110'-140'	500'
60		600'	660'	720'	60'	120'-150'	*600'
65		650'	715'	780'	65'	130'-165'	*700'
70		700'	770'	840'	70'	140'-175'	*800'

* Conventional Roads Only

** Taper lengths have been rounded off.
L=Length of Taper (FT.) W=Width of Offset (FT.) S=Posted Speed (MPH)

TYPICAL USAGE:				
MOBILE	SHORT DURATION	SHORT TERM STATIONARY	INTERMEDIATE TERM STATIONARY	LONG TERM STATIONARY
	✓	✓	✓	

GENERAL NOTES:

1. Flags attached to signs are REQUIRED.
2. All traffic control devices illustrated are REQUIRED, except those denoted with the triangle symbol may be omitted when stated elsewhere in the plans.
3. The BE PREPARED TO STOP sign may be installed after the ONE LANE ROAD XXX FT sign, but proper sign spacing shall be maintained.
4. YIELD sign traffic control may be used on projects with approaches that have adequate sight distance. For projects in urban areas, work zones should be no longer than one half city block. In rural areas on roadways with less than 4000 ADT and work areas should be no longer than 400'.
5. YIELD TO ONCOMING TRAFFIC sign shall be placed on a support at a 7' minimum mounting height.
6. Flaggers should use two-way radios or other methods of communication to control traffic.
7. Length of work area should be based on the ability of flaggers to communicate.
8. For intermediate term situations, when it is not feasible to remove and restore pavement markings, the channelization must be made dominant by using a very close spacing. This is especially important in locations of conflicting information, such as where traffic is directed over a double yellow centerline. In such locations a maximum channelizing device spacing of 10 feet is recommended. The 10 foot channelizing device spacing recommendation is intended for the area of conflicting information and not the entire work zone.

TCP (2-2a)

2-Lane Roadway Without Paved Shoulders
One Lane Closed
Adequate Field of View

TCP (2-2b)

2-Lane Roadway Without Paved Shoulders
One Lane Closed
Inadequate Field of View

STANDARD PLANS
TEXAS DEPARTMENT OF TRANSPORTATION
Traffic Operations Division

TRAFFIC CONTROL PLAN

TCP(2-2)-03

©TxDOT December 1985	DN-LR	CK-MT	DW-DN	CK-MT	MSG NO.:
REVISIONS 8-95 1-97 4-98 3-03	STATE DISTRICT	FEDERAL REGION	FEDERAL AID PROJECT		SHEET
		6			
	COUNTY		CONTROL	SECTION	JOB	HIGHWAY

162

C8.03

PI NO: 1393-08-087

DWG NO: 1393-08-087-07A.DWG

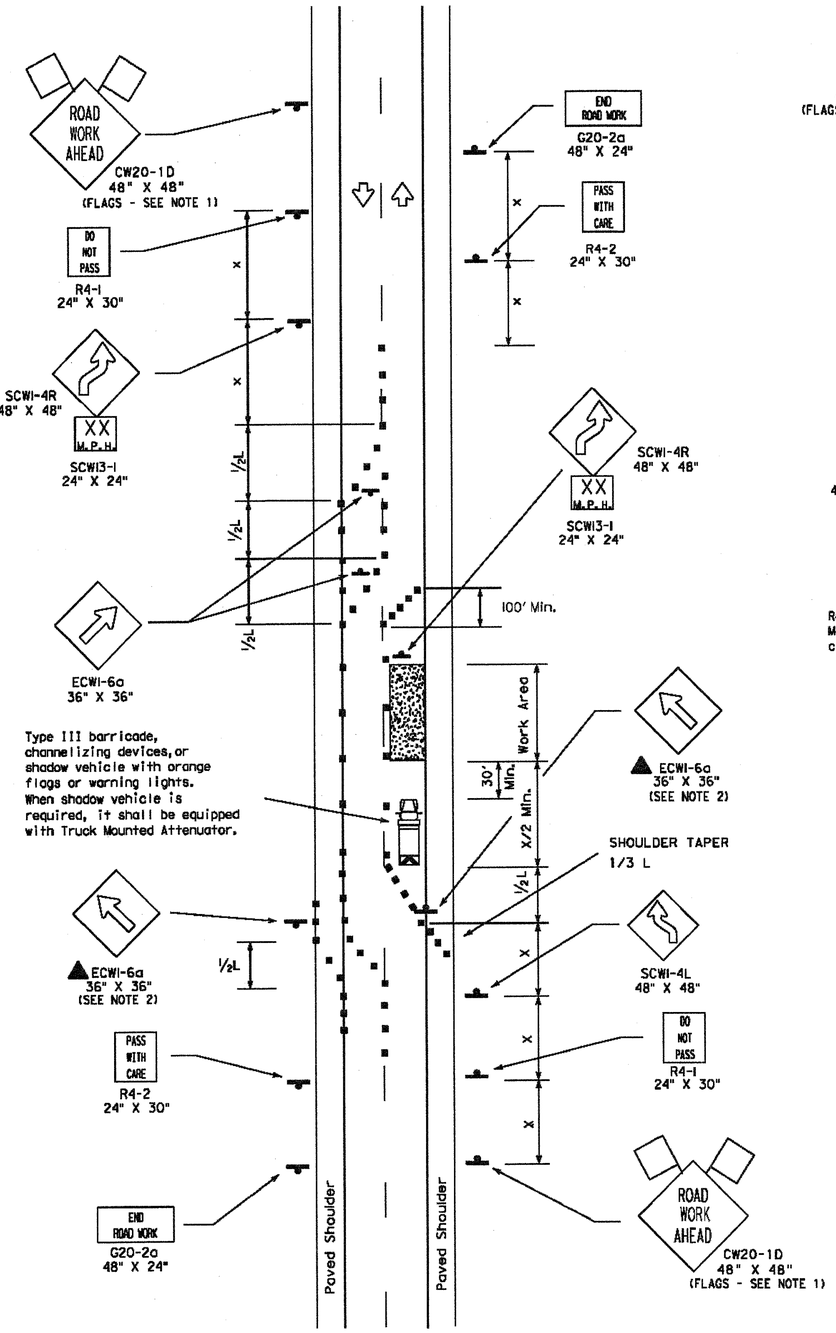
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7 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32
33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48
49 50 51 52 53 54 55 56 57 58 59 60 61 62 63

DN:
CK:
DW:
CK:
DATE:
ACC:
FILE:

TWILLIAMS 04/29/2010 - 4:13PM
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TEXAS BOARD OF PROFESSIONAL ENGINEERS, CERTIFICATE OF REGISTRATION #F-000481; TEXAS BOARD OF PROFESSIONAL LAND SURVEYING, CERTIFICATE OF REGISTRATION 100421-00

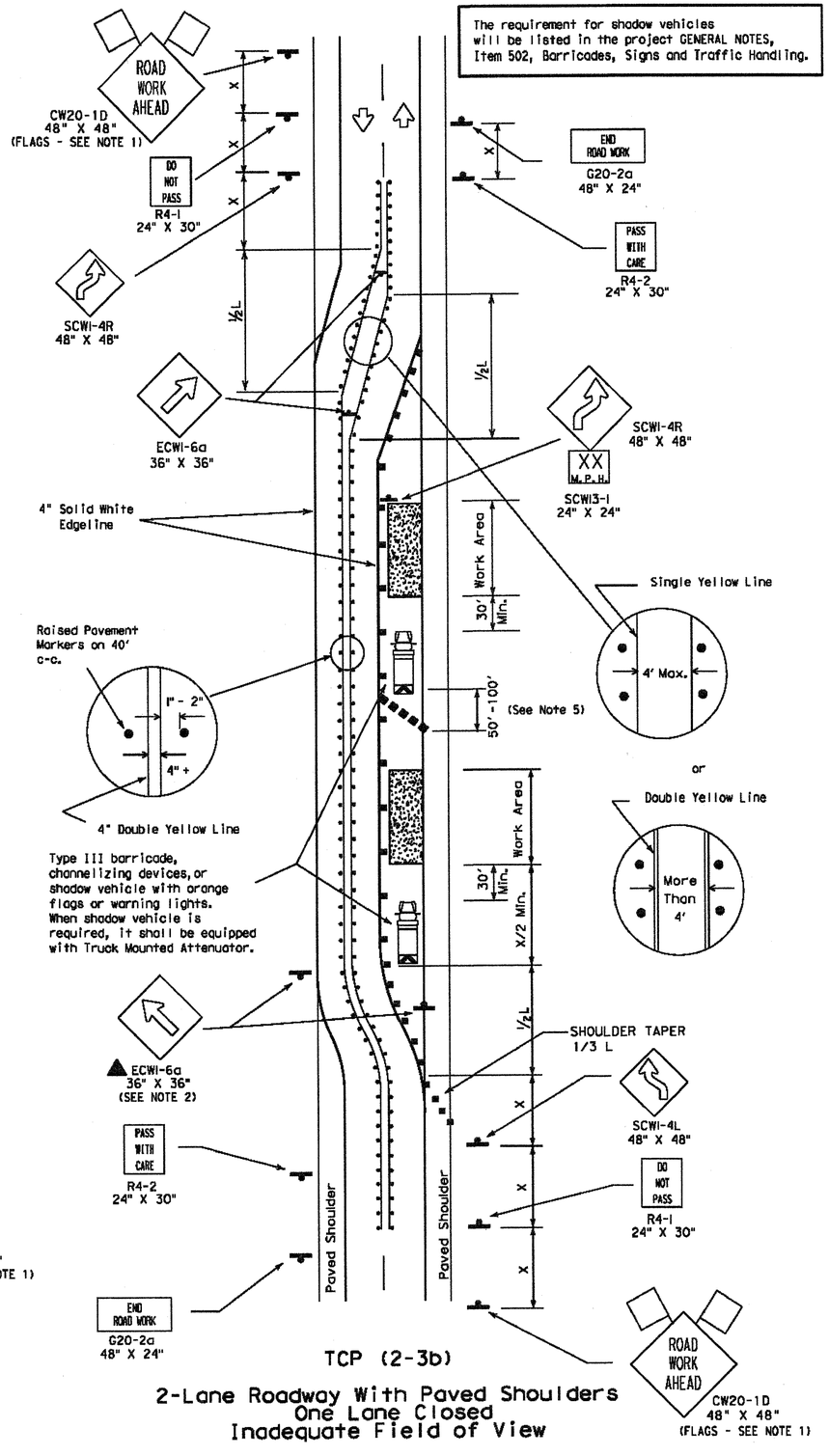
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TCP (2-3a)

2-Lane Roadway With Paved Shoulders
One Lane Closed
Adequate Field of View

The requirement for shadow vehicles will be listed in the project GENERAL NOTES, Item 502, Barricades, Signs and Traffic Handling.



TCP (2-3b)

2-Lane Roadway With Paved Shoulders
One Lane Closed
Inadequate Field of View

LEGEND

Type III Barricade ■ ■ Channelizing Devices Flag
Heavy Work Vehicle Truck Mounted Attenuator
Trailer Mounted Flashing Arrow Panel (M) Portable Changeable Message Sign
Flagger Sign Post
• • • Raised Pavement Markers Type II-A-A (40' spacing)

Posted Speed *	Formula	Minimum Desirable Taper Lengths ** 10' Offset	11' Offset	12' Offset	Suggested Maximum Spacing of Device On a Taper	On a Tangent	Minimum Sign Spacing X Distance
30	$L = \frac{WS^2}{60}$	150'	165'	180'	30'	60'-75'	120'
35		205'	225'	245'	35'	70'-90'	160'
40		265'	295'	320'	40'	80'-100'	240'
45	L=WS	450'	495'	540'	45'	90'-110'	320'
50		500'	550'	600'	50'	100'-125'	400'
55		550'	605'	660'	55'	110'-140'	500'
60		600'	660'	720'	60'	120'-150'	*600'
65		650'	715'	780'	65'	130'-165'	*700'
70		700'	770'	840'	70'	140'-175'	*800'

* Conventional Roads Only

** Taper lengths have been rounded off.
L=Length of Taper (FT.) W=Width of Offset (FT.) S=Posted Speed (MPH)

TYPICAL USAGE:				
MOBILE	SHORT DURATION	SHORT TERM STATIONARY	INTERMEDIATE TERM STATIONARY	LONG TERM STATIONARY
		✓	✓	✓ (2-3b only)

GENERAL NOTES:

1. Unless otherwise stated in the plans, flags attached to signs are REQUIRED.
2. All traffic control devices illustrated are REQUIRED, except those denoted with the triangle symbol may be omitted when stated elsewhere in the plans.
3. When work area will be in place more than one day but less than 2 weeks existing pavement markings may remain in place. Channelizing devices shall be used to separate traffic.
4. Flagger control should NOT be used unless roadway conditions or heavy traffic volume require additional emphasis to safely control traffic. Flagger should be positioned at end of traffic queue.
5. DO NOT PASS, PASS WITH CARE, and construction regulatory speed zone signs may be installed within ROAD WORK AHEAD signs. Proper spacing of signs shall be maintained.
6. When the work zone will be in place more than two weeks, conflicting pavement markings shall be removed, unless approved by the Engineer. New markings shall be placed and maintained to the satisfaction of the Engineer.
7. For intermediate term situations, when it is not feasible to remove and restore pavement markings, the channelization must be made dominant by using a very close spacing. This is especially important in locations of conflicting information, such as where traffic is directed over a double yellow centerline. In such locations a maximum channelizing device spacing of 10 feet is recommended. The 10 foot channelizing device spacing recommendation is intended for the area of conflicting information and not the entire work zone.

STANDARD PLANS
TEXAS DEPARTMENT OF TRANSPORTATION
Traffic Operations Division

TRAFFIC CONTROL PLAN

TCP(2-3)-03

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DN: LR	CK: MT	DW: DN	CK: DM	MSG NO.:

REVISIONS	STATE DISTRICT	FEDERAL REGION	FEDERAL AID PROJECT	SHEET
8-95		6		
1-97				
4-98	COUNTY	CONTROL	SECTION	JOB	HIGHWAY
3-03					

163

LEVELS DISPLAYED
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
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33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48
49 50 51 52 53 54 55 56 57 58 59 60 61 62 63

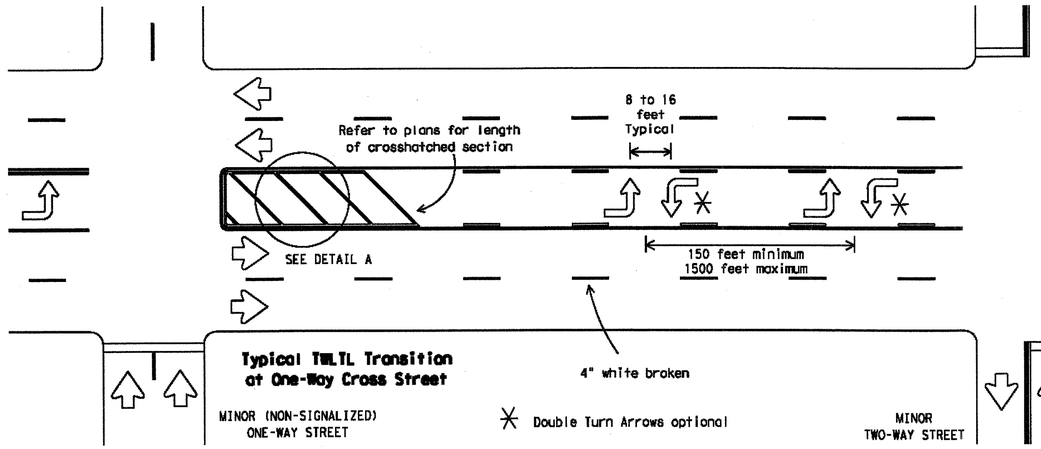
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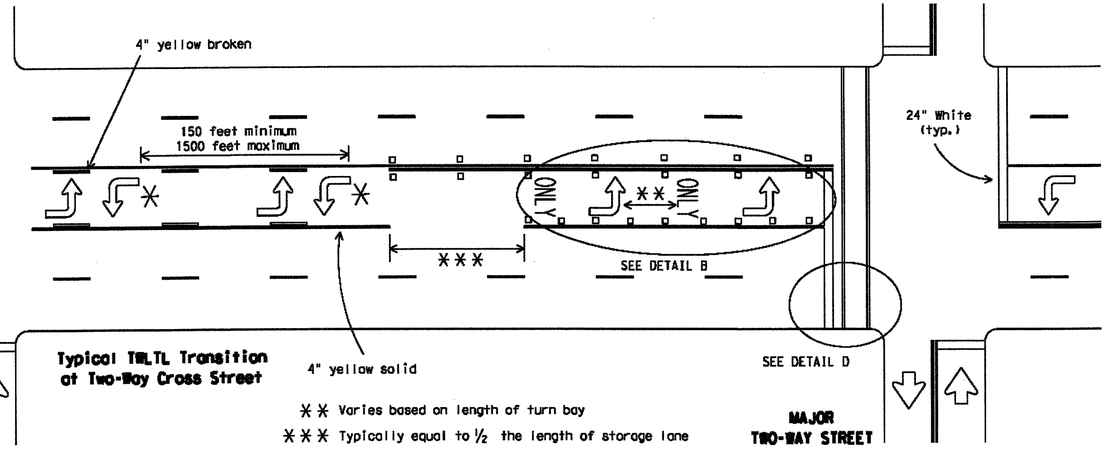
C8.04

PI NO: 1393-08-087
DWG NO: 1393-08-087-07A.DWG

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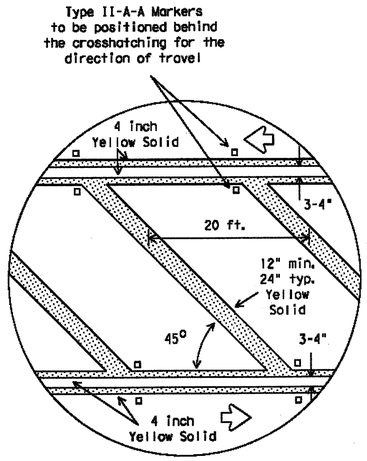
Typical TWLTL Transition at One-Way Cross Street



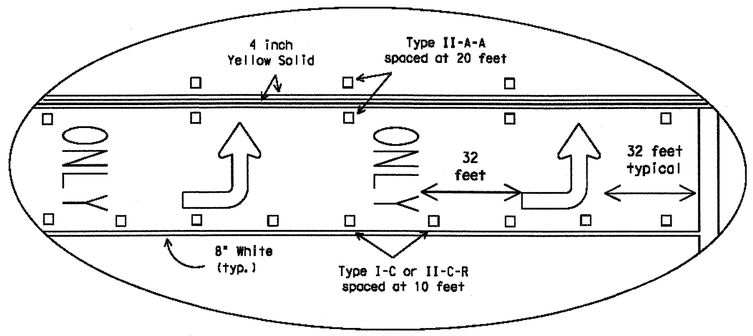
Typical TWLTL Transition at Two-Way Cross Street

** Varies based on length of turn bay

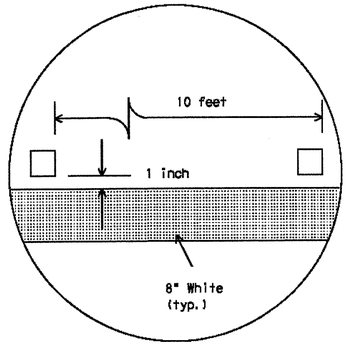
*** Typically equal to ½ the length of storage lane



DETAIL A

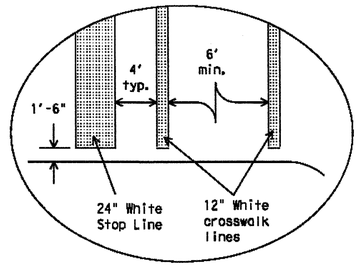


DETAIL B



DETAIL C

Raised pavement marker Type I-C with undivided highways, flush medians and two way left turn lanes. Raised pavement marker Type II-C-R with divided highways and raised medians.



DETAIL D

Final placement of Stop Bar and Crosswalk shall be approved by the Engineer in the field.

GENERAL NOTES

Refer elsewhere in plans for additional RPM placement and details.

Details for words and arrows as shown on other sheets.

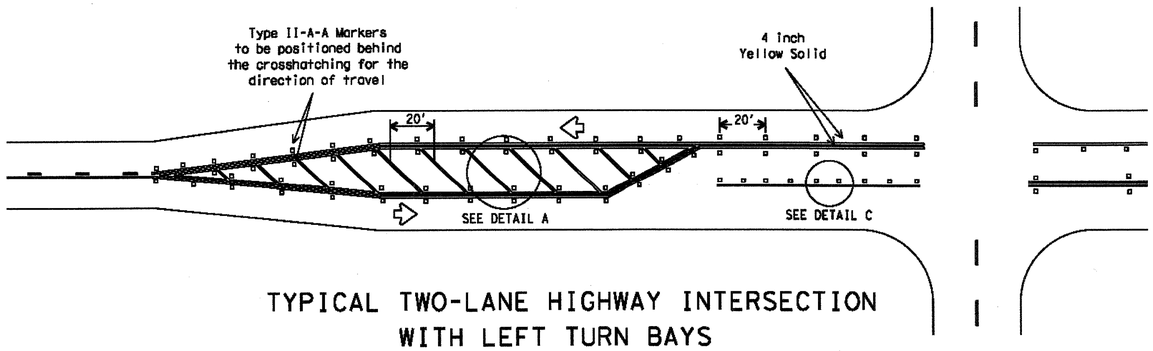
All pavement marking materials shall meet the required Departmental Material Specifications as specified by the plans.

For a left turn bay, two sets of words and arrows shall be used if the length of the bay is equal to or greater than 180 feet. The bottom of the first ONLY shall be placed at the beginning of the turn bay lane line as shown above.

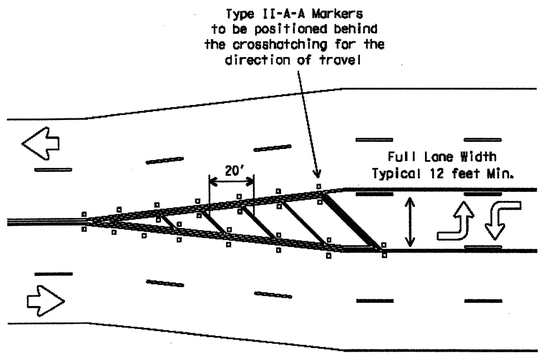
Other crosswalk paterns as shown in the "Texas Manual on Uniform Traffic Control Devices" may be used.

SPECIFICATION REFERENCE TABLE

MATERIAL SPECIFICATIONS	
PAVEMENT MARKERS (REFLECT.)	DMS-4200
EPOXY	DMS-6100
BITUMINOUS ADHESIVE FOR PAVE. MKS.	DMS-6130



TYPICAL TWO-LANE HIGHWAY INTERSECTION WITH LEFT TURN BAYS



TYPICAL TRANSITION FOR TWLTL AND DIVIDED HIGHWAY

STANDARD PLANS

Texas Department of Transportation

Traffic Operations Division

PAVEMENT MARKINGS FOR TWO-WAY LEFT TURN LANES DIVIDED HIGHWAYS AND RURAL LEFT TURN BAYS

PM(4)-03

©TxDOT April 1998	DN: BAS	CK: GRB	DW: FDN	CK: CAL	MSS NO.:
REVISIONS 5-00 8-00 3-03	STATE DISTRICT	FEDERAL REGION 6	FEDERAL AID PROJECT		SHEET
	COUNTY		CONTROL	SECTION	JOB / HIGHWAY

22D

LEVELS DISPLAYED

																ACC:
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	
33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	
49	50	51	52	53	54	55	56	57	58	59	60	61	62	63		

DISCLAIMER
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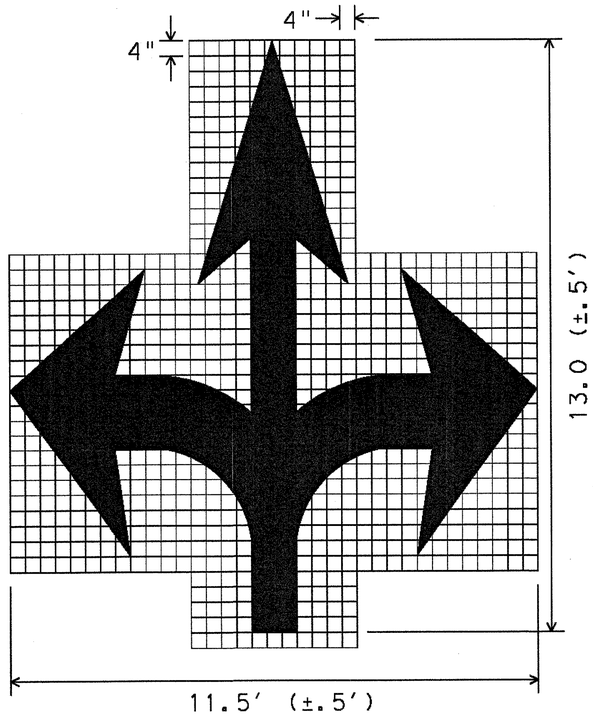
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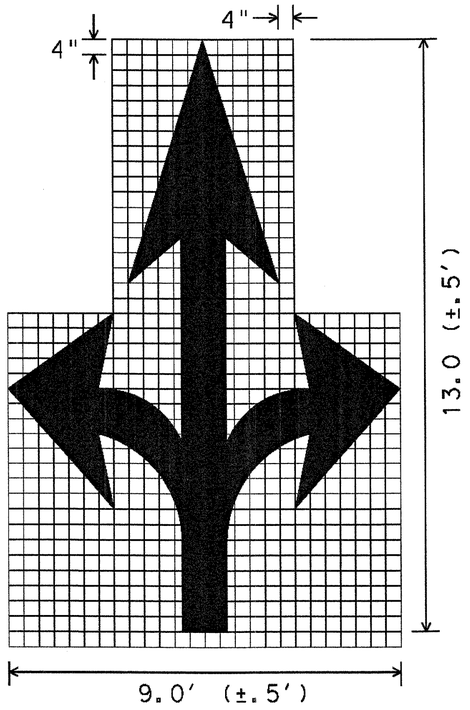
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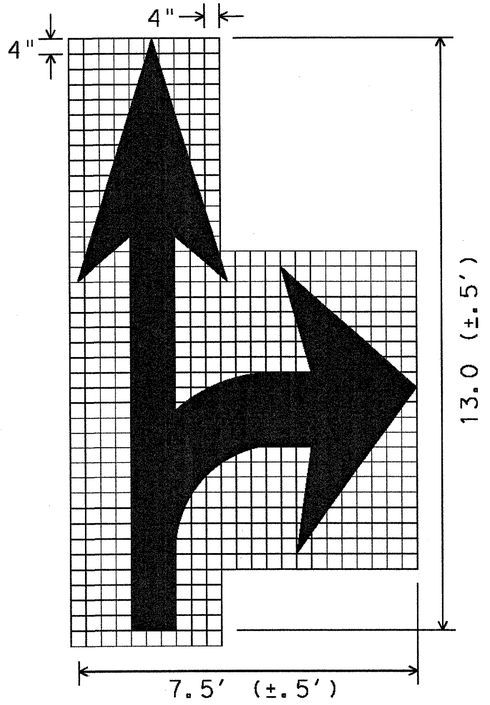
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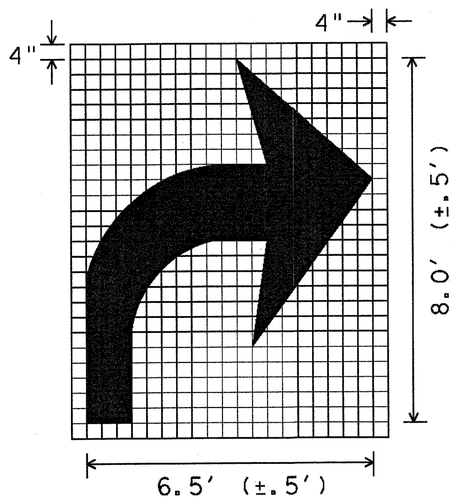
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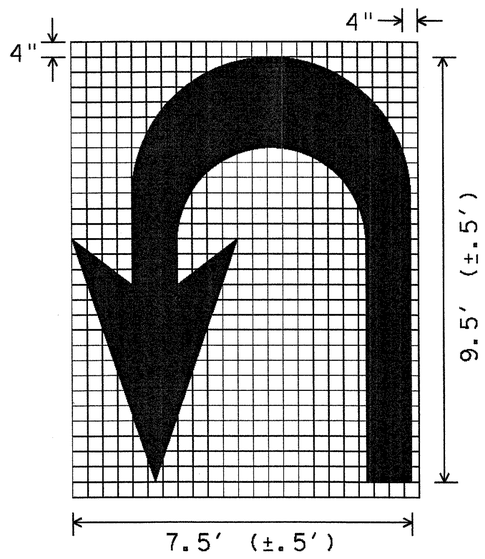
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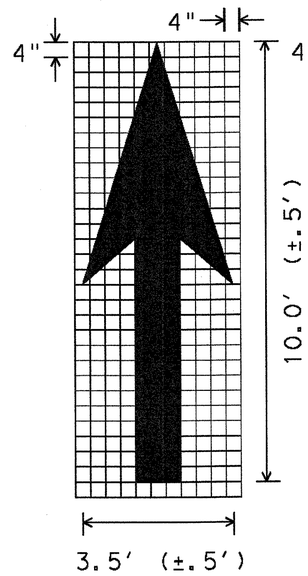


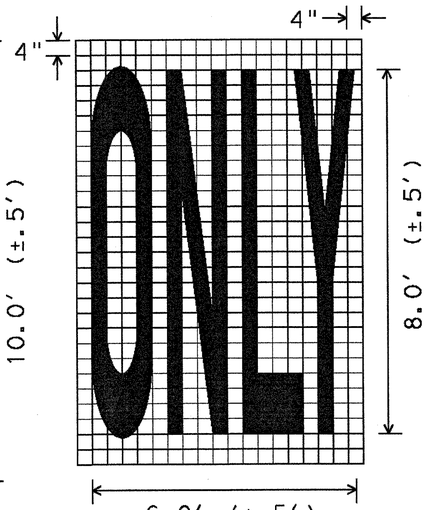












GENERAL NOTES;

1. Minimum 8 foot white markings should be used, unless otherwise noted. If message consists of more than one word, it should be placed with first word nearest the driver.
2. These details are standard size for normal installation; sizes may be reduced approximately one-third for low speed urban conditions; larger sizes may be needed for freeways, above average speed conditions or other critical locations.
3. The longitudinal space between markings should be at least four times the height of the markings, on low speed roads, but should not exceed ten times the height under any condition.
4. Markings considered appropriate for use when warranted include the following:
   A. Regulatory
      STOP
      RIGHT (LEFT) TURN ONLY
      25 MPH
      SYMBOL ARROWS
   B. Warning
      STOP AHEAD
      SIGNAL AHEAD
      SCHOOL
      SCHOOL X-ING
      PED X-ING
      R X R (see RCPM standard)
   C. Guide
      US XXX
      ROUTE XXX
      STATE XXX
      Other words or symbols may be necessary under certain conditions
5. Uncontrolled use of pavement markings can result in driver confusion. Word and symbol markings should be no more than three lines.
6. The word "STOP" shall not be used on the pavement unless accompanied by a Stop line and Stop sign. The word "STOP" shall not be placed on the pavement in advance to a stop line, unless every vehicle is required to stop at all times.
7. Pavement markings should generally be no more than one lane in width, with School messages being the exception. For details of School and School crossing pavement markings, refer to Part VII of the "Texas Manual on Uniform Traffic Control Devices".
8. Spacing between letters should be approximately 4 inches. The width of letters may vary depending on the width of the travel lanes.
9. Lane-Use arrow markings may be used to convey either guidance or mandatory messages. Arrows used to convey a mandatory movement must be accompanied by standard signs and the pavement marking word "ONLY".
10. Pavement markings are to be located as specified elsewhere in the plans.

SPACING BETWEEN LINES OF PAVEMENT MARKINGS	
MPH	SPACING
≤45	MINIMUM 4 TIMES THE LETTER HEIGHT
>45	MINIMUM - 4 TIMES THE LETTER HEIGHT MAXIMUM - 10 TIMES THE LETTER HEIGHT

LEVELS DISPLAYED
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32
33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48
49 50 51 52 53 54 55 56 57 58 59 60 61 62 63
ACC:

STANDARD PLANS
Texas Department of Transportation
Traffic Operations Division

STANDARD PAVEMENT MARKINGS (ARROWS)

PM(6)-01

©TxDOT March 2001	DN:	CK: GRB	DW: FDN	CK: CAL
REVISIONS	STATE DISTRICT	FEDERAL REGION	FEDERAL AID PROJECT	SHEET
		6		
	COUNTY	CONTROL	SECTION	JOB	HIGHWAY

22H

C8.06

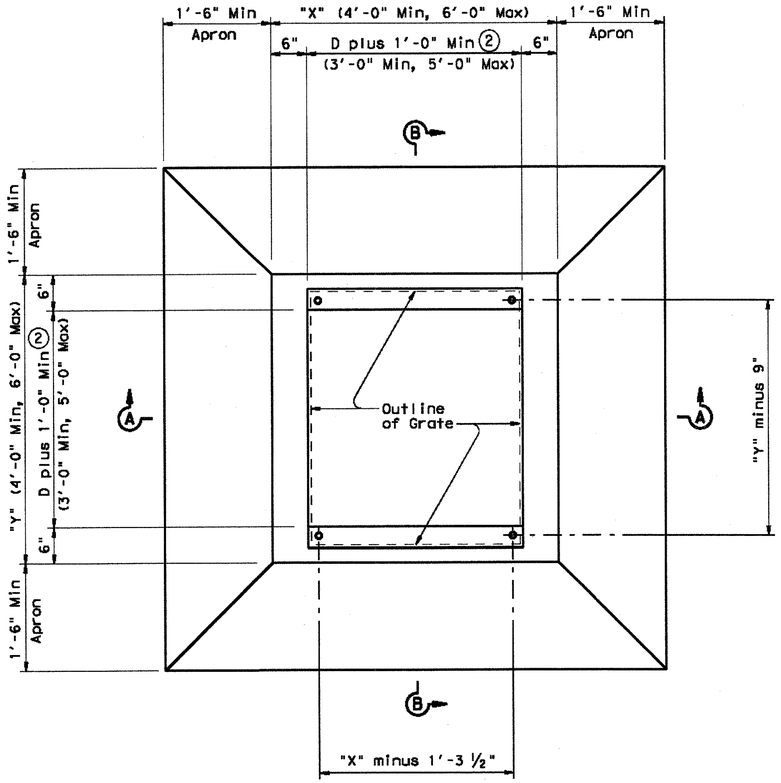
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DWG NO: 1393-08-087-07A.DWG

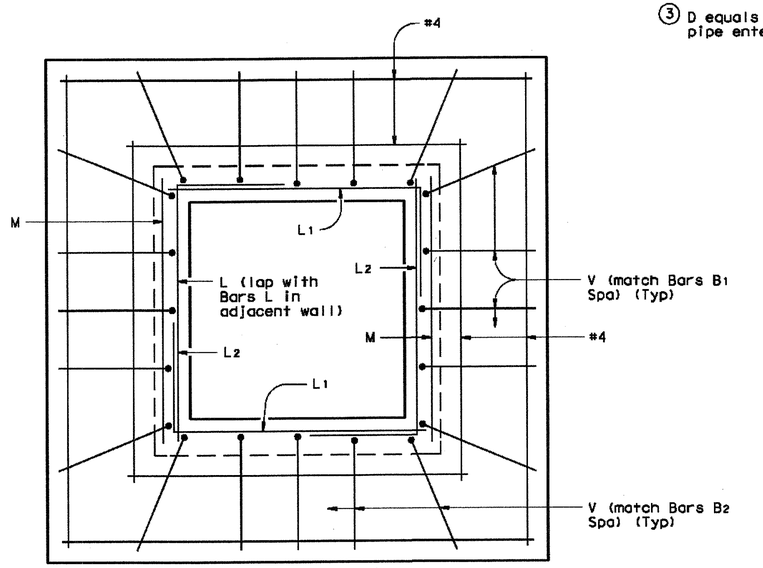
TEXAS BOARD OF PROFESSIONAL ENGINEERS, CERTIFICATE OF REGISTRATION #F-000481; TEXAS BOARD OF PROFESSIONAL LAND SURVEYING, CERTIFICATE OF REGISTRATION 100421-00

TWILLIAMS 04/29/2010 - 4:14PM
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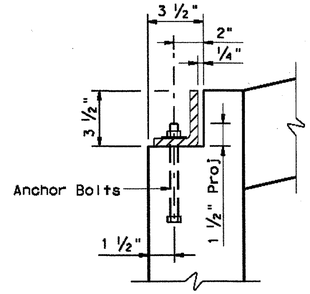


PLAN

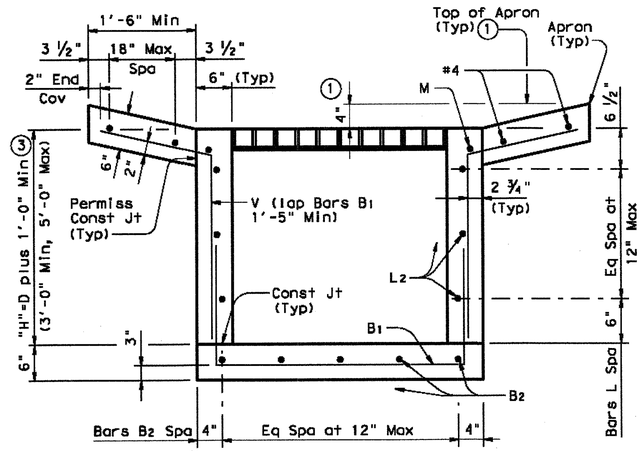


TYPICAL APRON PLAN
(Showing reinforcing in walls and in apron)

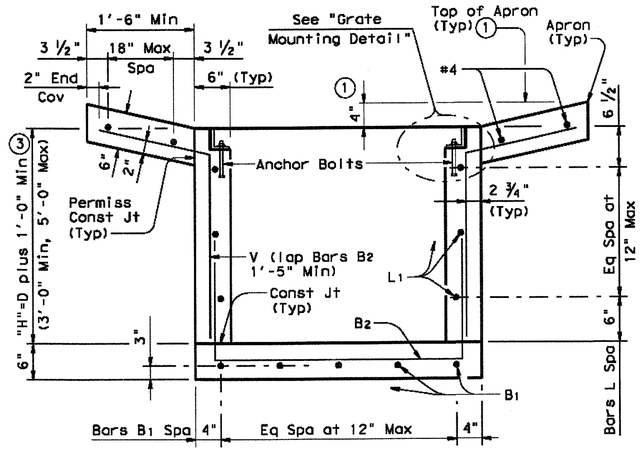
1. May be changed as directed by the Engineer.
2. D equals the maximum inside diameter of any pipe entering the wall shown or the opposite wall.
3. D equals the maximum inside diameter of any pipe entering the inlet.



GRATE MOUNTING DETAIL

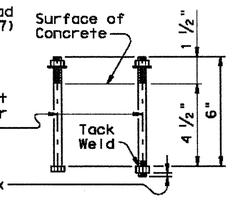


SECTION A-A



SECTION B-B

℄ ½" Dia x 6" Hex Head Anchor Bolt (ASTM-A307) or Threaded Rod (ASTM-A36) with one Plain Steel Washer placed under Hex Nut. One additional Hex Nut shall be furnished for each Threaded Rod.



ANCHOR BOLT OPTIONS

SHEET 1 OF 2

Texas Department of Transportation
Bridge Division

HORIZONTAL INLET TYPE H WITH GRATE (MAX 48" DIA PIPES)

IL-H-G

FILE:	tihste01.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
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REVISIONS					
		COUNTY	CONTROL	SECT	JOB	HIGHWAY

C8.07

PI NO: 1393-08-087

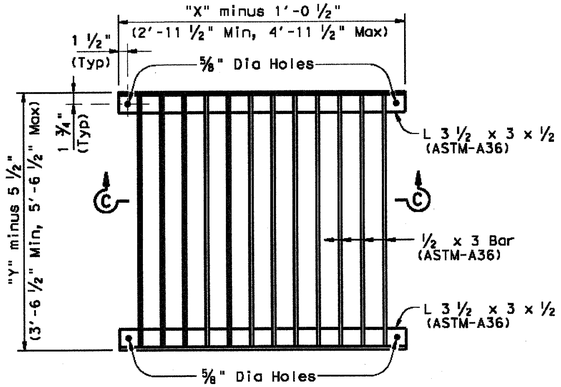
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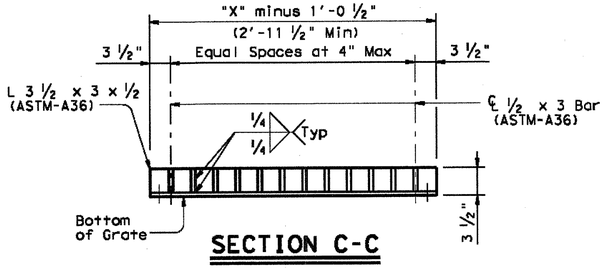
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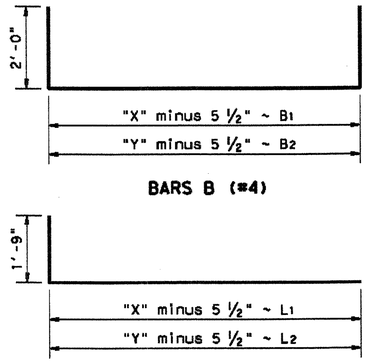
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TYPICAL GRATE PLAN

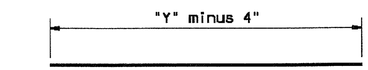


SECTION C-C

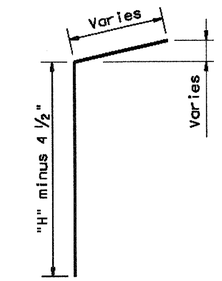


BARS B (#4)

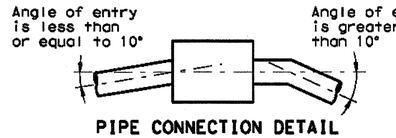
BARS L (#4)



BARS M (#4)

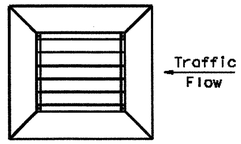


BARS V (#4)



PIPE CONNECTION DETAIL

Connecting pipes should enter within 10° of normal to inlet wall. If necessary, pipe elbow or curved approach alignment should be used to stay within this limit.



GRATE ORIENTATION DETAIL

If possible, horizontal grate inlet should be oriented such that both traffic and ditch water approach parallel to bars on grate. If this is not possible, orientation must favor traffic flow. Grate is not to be used under direct traffic, rather it is to be used in ditches and medians away from the roadway.

GENERAL NOTES:

When approved, precast inlets with equivalent structural capacity may be furnished. Sealed engineering calculations and drawings shall be submitted for approval prior to construction.

Shop drawings will not be required.

Apron shall be cast-in-place.

In areas of conflict between reinforcing steel, blockouts, pipes, anchor bolts or other reinforcing steel, the reinforcement shall be bent or adjusted to clear as directed by the Engineer.

Anchor Bolts are ½" Dia ASTM A307 Grade A bolts (or A36 threaded rods with one tack welded hex head nut each) with one hex head nut and one plain steel washer.

Structural Steel for grates shall conform to the requirements of ASTM Designation A-36 or AISI Designation M1010-M1020.

All reinforcing steel shall be Grade 60 unless otherwise noted.

All steel components except reinforcing, shall be galvanized after fabrication. Galvanizing damaged during transport or construction shall be repaired in accordance with the specifications.

All concrete shall be Class "A" (f'c = 3,000 psi).

SHEET 2 OF 2

Texas Department of Transportation
Bridge Division

HORIZONTAL INLET TYPE H WITH GRATE (MAX 48" DIA PIPES)

IL-H-G

FILE:	lihste01.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
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REVISIONS					
		COUNTY	CONTROL	SECT	JOB	HIGHWAY

LEVELS DISPLAYED
PATH:

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PI NO: 1393-08-087
DWG NO: 1393-08-087-07A.DWG

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