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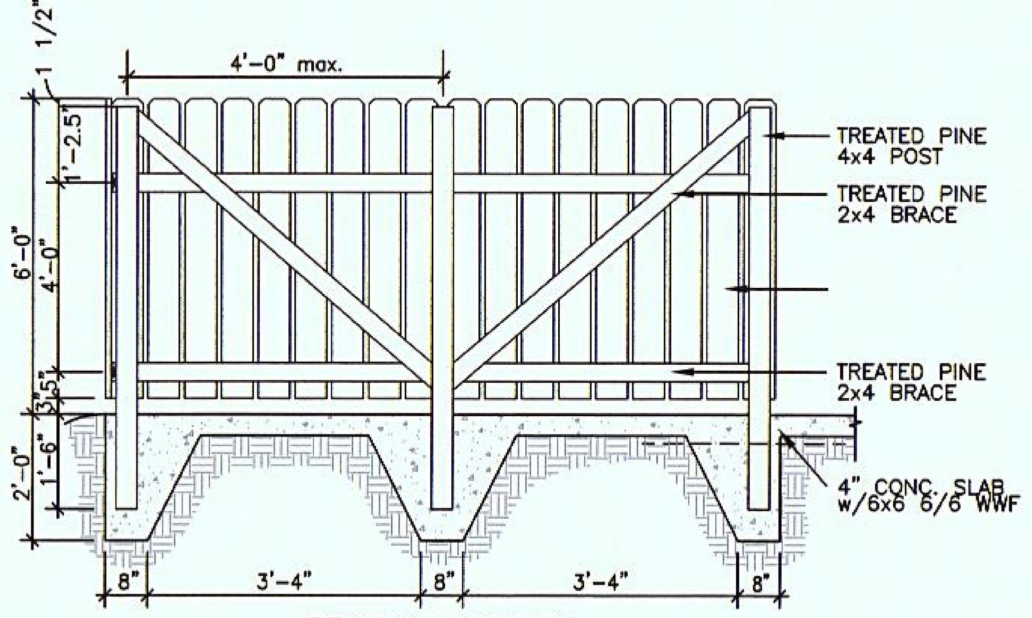
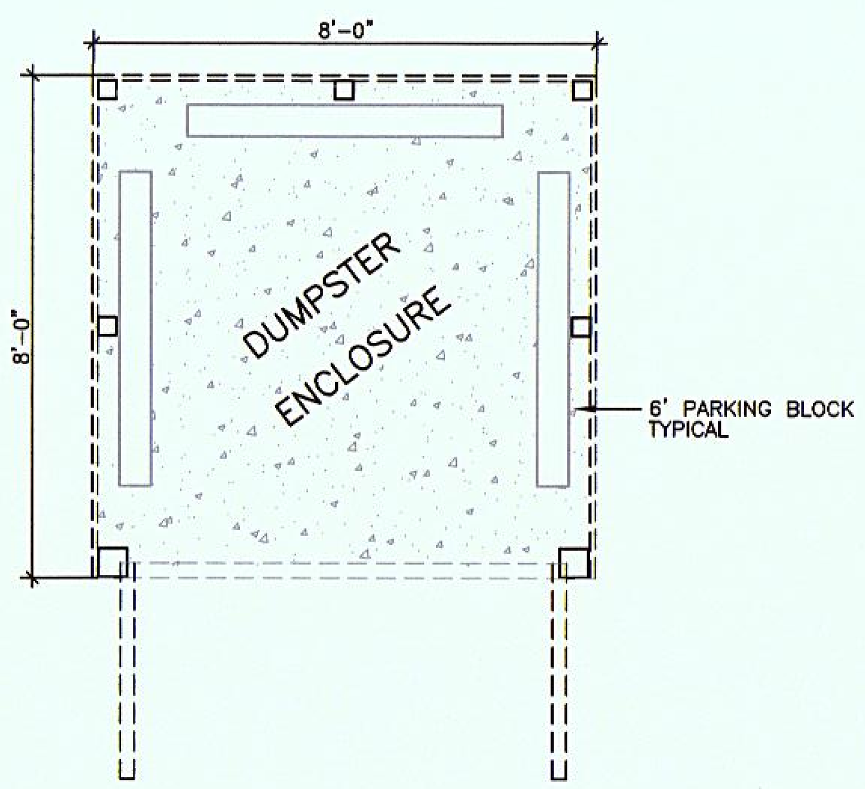


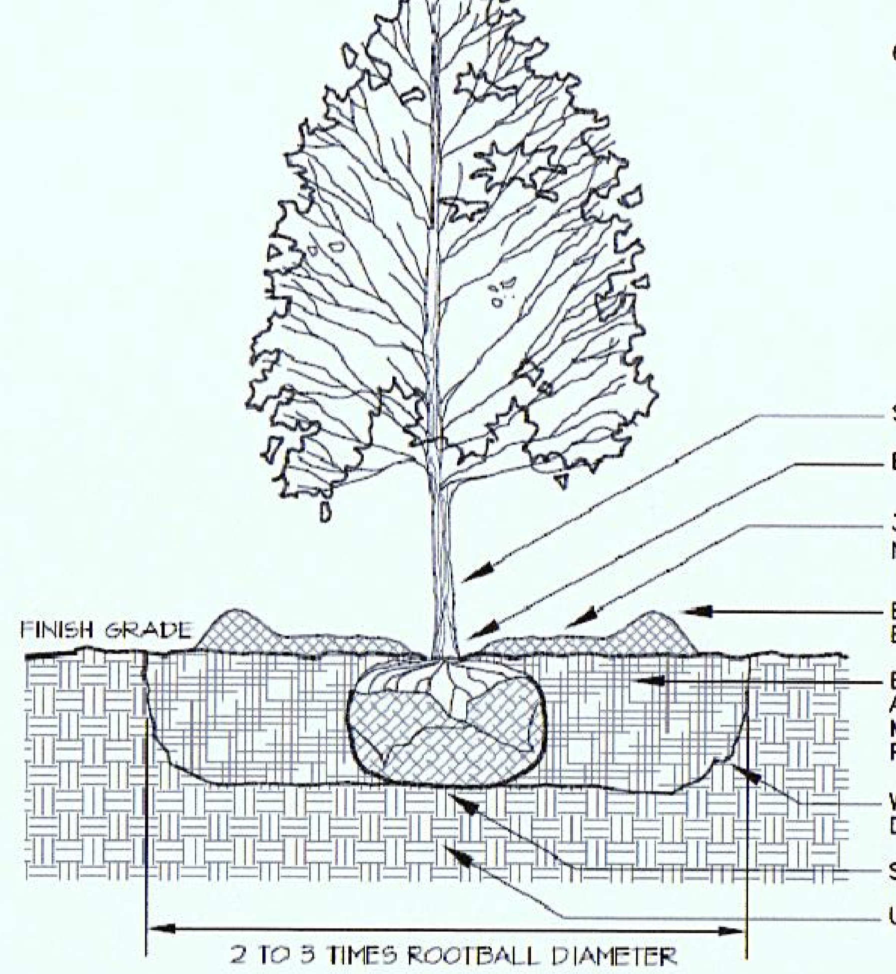
TRASH SCREEN
N.T.S.



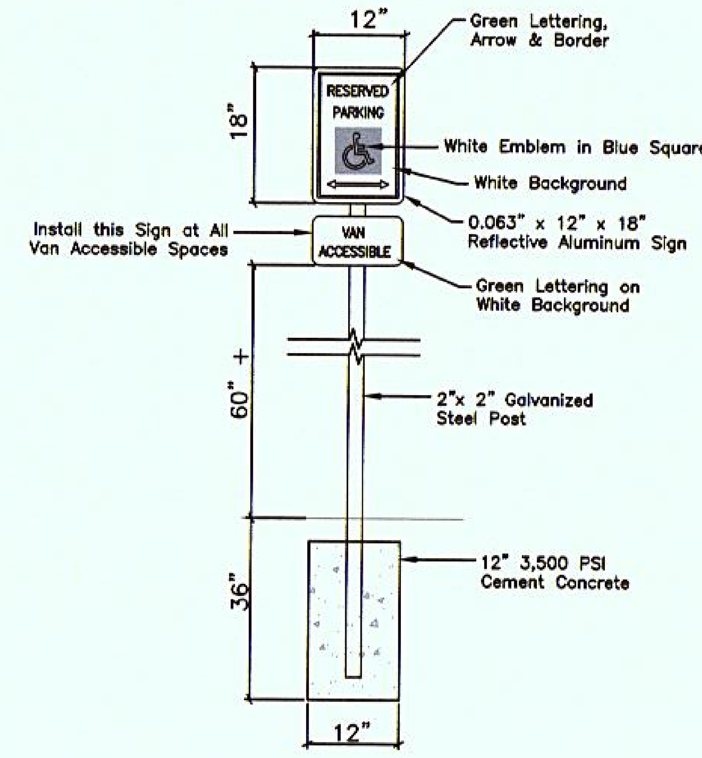
DUMPSTER ENCLOSURE
N.T.S.

NOTES:

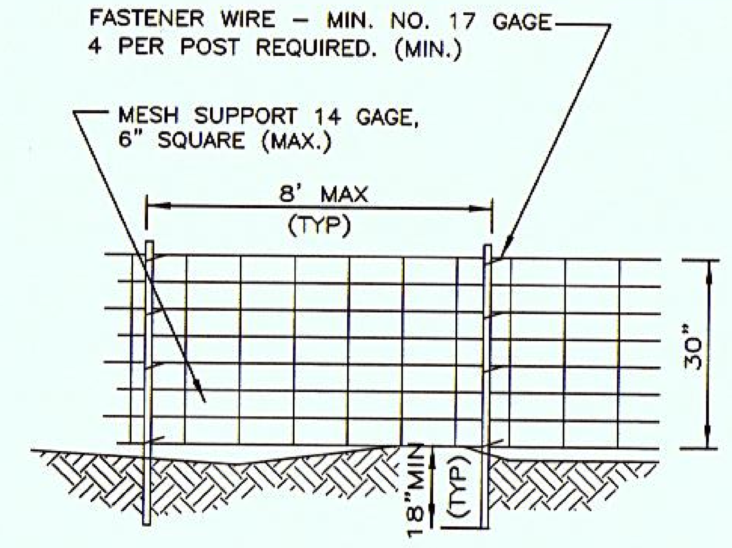
1. TREES SHALL BE 2.5" CALIPER MINIMUM.
2. THE HOLE FOR THE TREE SHALL BE EXCAVATED 2–3 TIMES THE SIZE OF THE ROOT BALL.
3. STAKE ONLY IF NECESSARY AND AS DIRECTED BY THE PROJECT MANAGER.
4. REMOVE ANY TWINE, ROPE, FLAGGING, WRAPPING, OR GUARDS FROM TREE.
5. PRUNE ONLY DEAD OR BROKEN BRANCHES OR DOUBLE LEADERS AT TIME OF PLANTING.
6. ROOTBALL–ROOT COLLAR SHALL BE VISIBLE. REMOVE EXCESS SOIL FROM TOP OF BALL IF NEEDED. SET TOP OF BALL 1" TO 2" ABOVE FINISHED GRADE TO ALLOW FOR SETTLING. AFTER SETTING BALL IN PLANTING HOLE, CUT AWAY OR REMOVE THE ENTIRE WIRE BASKET. CUT OR REMOVE ALL ROPES OR TWINE FROM BALL. CUT AWAY OR REMOVE BURLAP. IF ROOTBALL BEGINS FALLING APART DURING INSTALLATION OR WHILE REMOVING THE WIRE BASKET, CUT AWAY ONLY HALF OF THE BURLAP.



TREE PLANTING DETAIL
N.T.S.

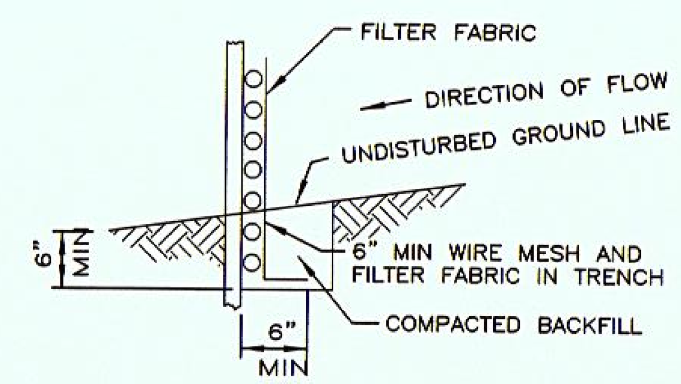


ADA PARKING SIGN DETAIL
N.T.S.

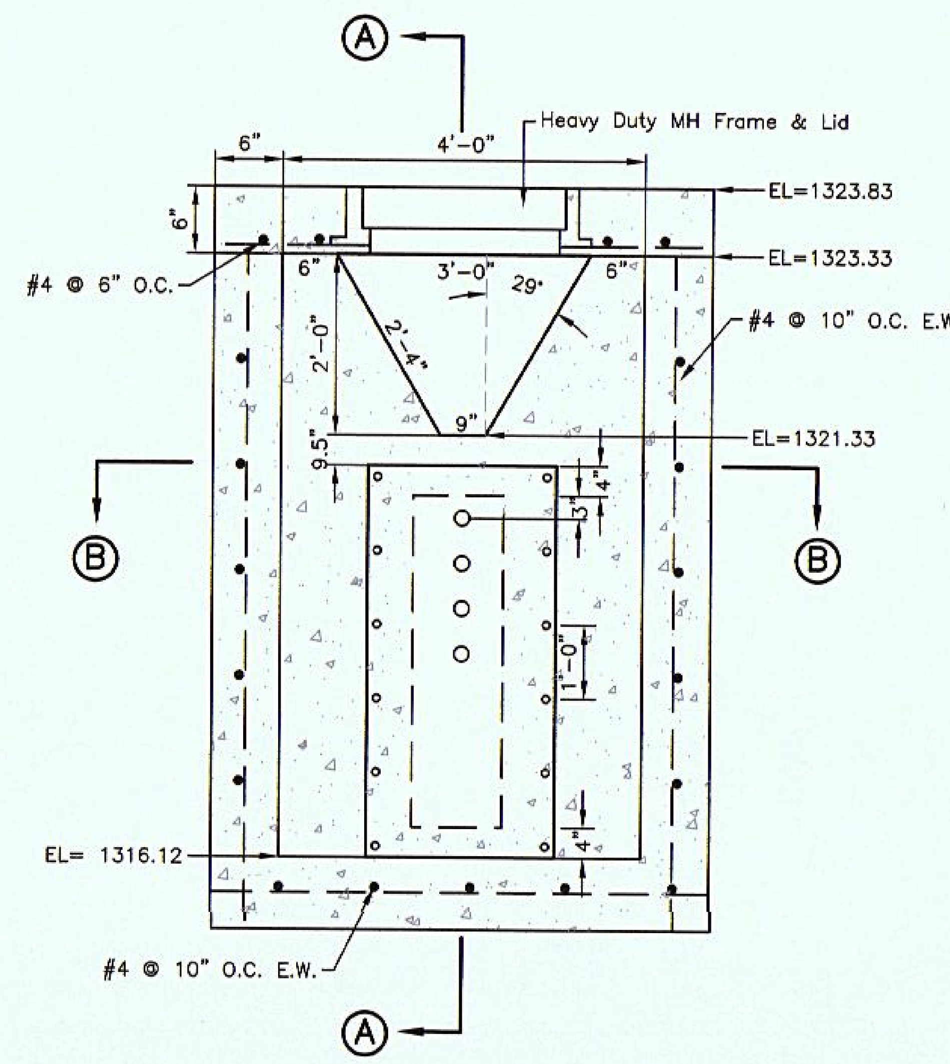


ELEVATION

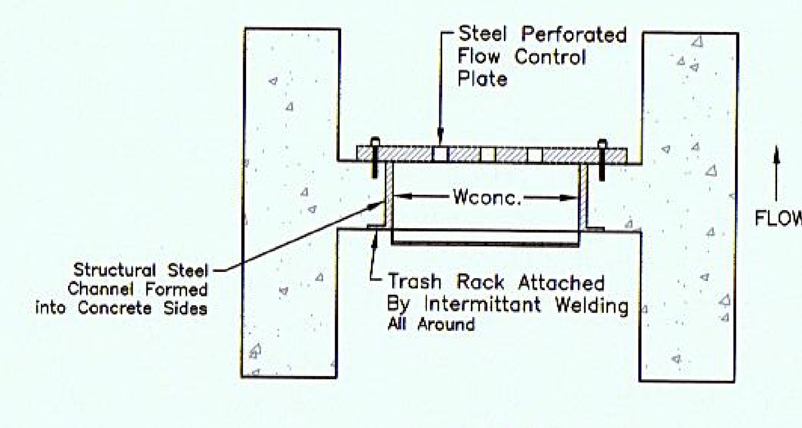
NOTE:
POSTS SHALL BE A MINIMUM OF 48" IN LENGTH. POSTS SHALL BE EITHER 2" x 2" OAK TIMBER, 2.5" DIA. SCH. 40 STEEL PIPE, OR STANDARD STEEL "T" OR "U" POSTS.



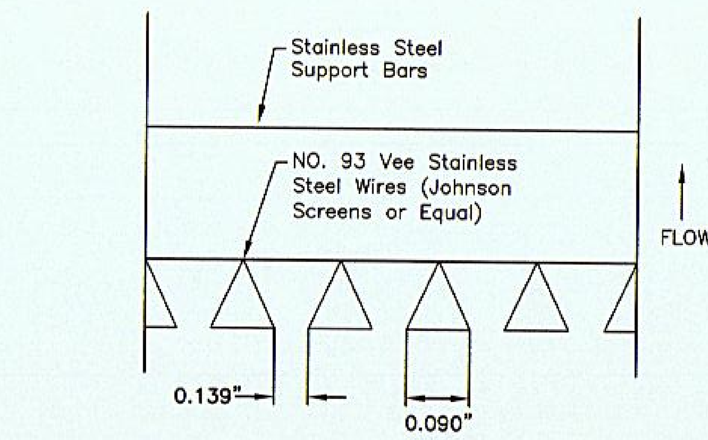
FABRIC ANCHOR DETAIL
NTS



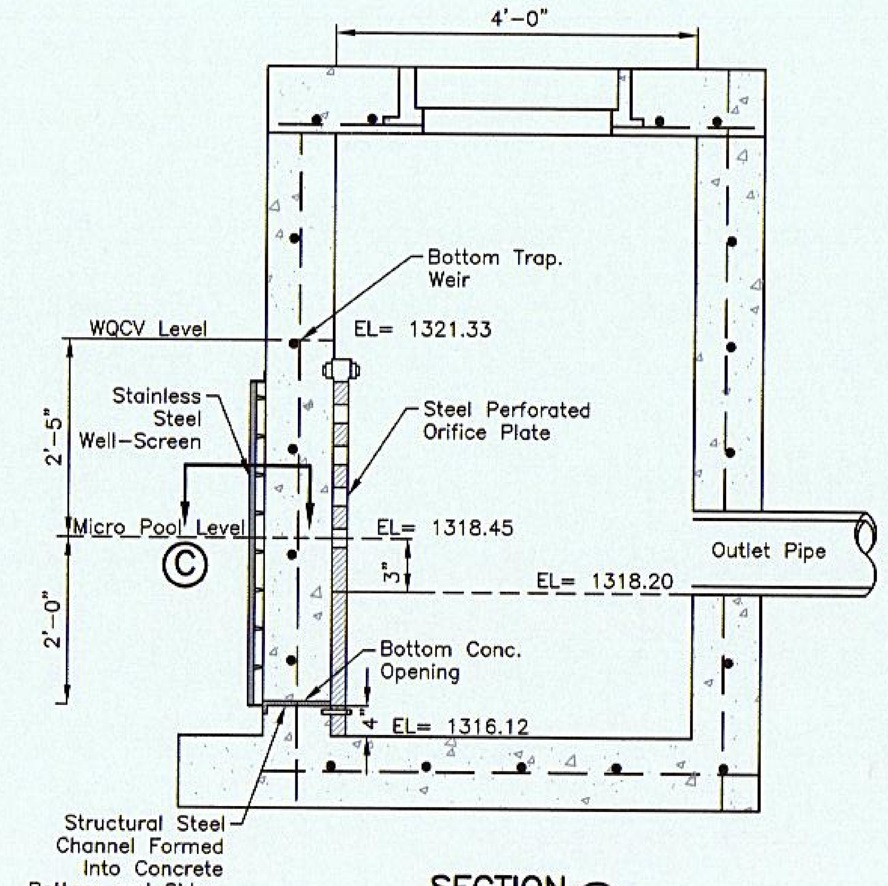
DETENTION/WATER QUALITY OUTLET STRUCTURE
NTS



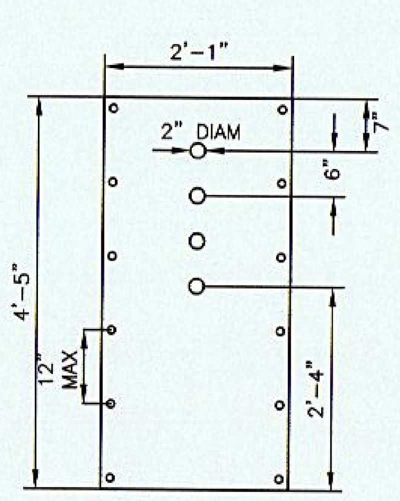
SECTION B
NTS



SECTION C
NTS



SECTION A
NTS



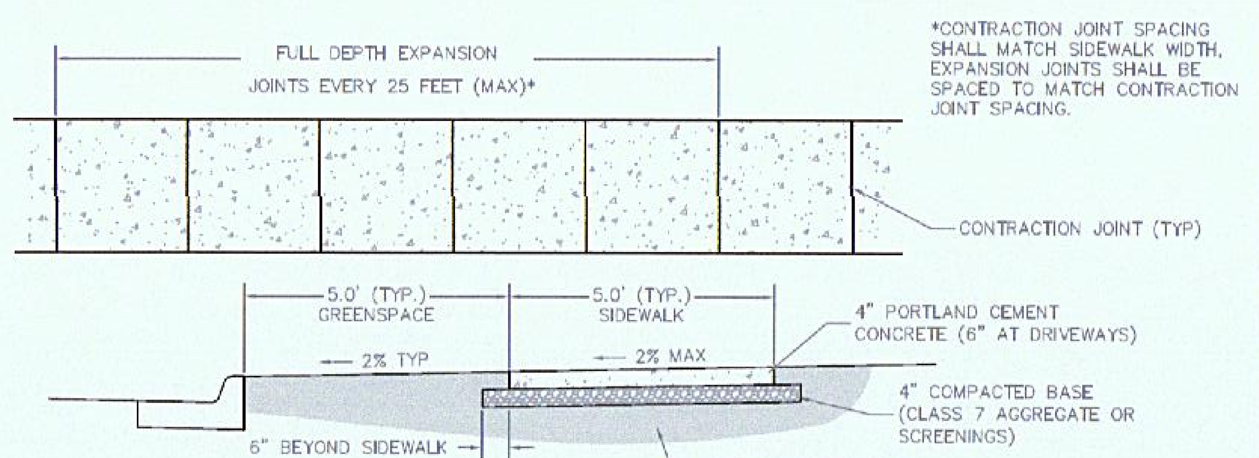
STEEL PERFORATED ORIFACE PLATE
NTS

PERFORATED PLATE INFO:

NUMBER OF ROWS: 4
PERFORATION DIAMETER: 2"
NUMBER OF HOLES PER ROW: 1
ROW SPACING: 6"

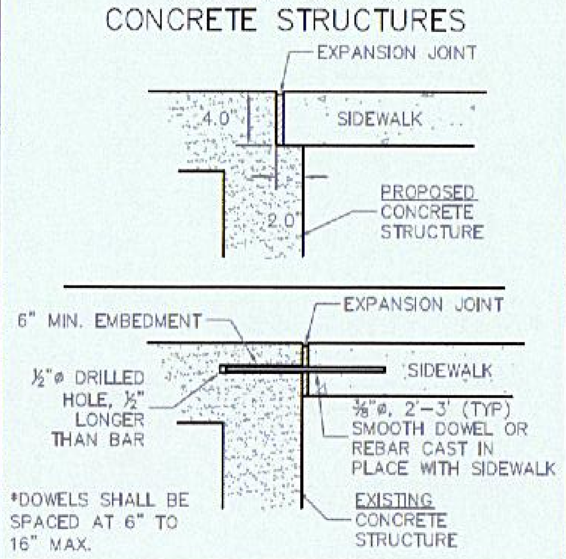
WIDTH OF CONCRETE OPENING: 13"
HEIGHT OF TRASH RACK: 48"
WIDTH OF TRASH RACK SCREEN: 25"
TRASH RACK – STAINLESS STEEL #93 VEE WIRES (JOHNSON SCREENS)

#93 VEE WIRE SLOT OPENING: 0.139"
SPACING OF SUPPORT RODS O.C.: 1"
SUPPORT RODS: TE 0.074" x 0.50"



1. ALL SIDEWALKS SHALL HAVE A MAXIMUM 2.0% CROSS SLOPE.
2. ALL SIDEWALKS SHALL RECEIVE A BROOM FINISH.
3. ALL SIDEWALK EDGES SHALL HAVE A ½" RADIUS EDGE.
4. ALL CONCRETE SHALL BE CLASS B (3500 PSI, 4–7% AIR ENTRAINED). CONCRETE MAY NOT BE POURED IF A FALLING AIR TEMPERATURE FALLS BELOW 40° F NOR RESUMED UNTIL AN ASCENDING AIR TEMPERATURE RISES ABOVE 35° F WITHOUT SPECIFIC AUTHORITY FROM THE CITY REPRESENTATIVE. ALL CONCRETE MATERIALS, HANDLING, PLACING, JOINTING, SAMPLING, FINISHING AND CURING SHALL BE PER CITY STANDARD SPECIFICATIONS.
5. EXPANSION JOINTS SHALL BE A MINIMUM OF ½" AND EXTEND THE FULL DEPTH OF THE CONCRETE. EXPANSION JOINT MATERIAL SHALL MEET AASHTO M213 FOR AN ASPHALTIC FIBER EXPANSION JOINT MATERIAL AND BE INSTALLED WITH A ZIP STRIP WHICH IS REMOVED AFTER THE CONCRETE HAS CURED AND SEALED WITH A MASTIC SEALER. OTHER ALLOWABLE EXPANSION JOINT MATERIAL ARE 1"x4" OR 2"x4" PRESSURE TREATED PINE, REDWOOD OR WESTERN RED CEDAR WITH NAILS DRIVEN THROUGH EACH SIDE TO PREVENT THE BOARD FROM BEING PUSHED OUT OF THE JOINT.
6. CONTRACTION JOINTS SHALL BE PLACED AT 5 FOOT INTERVALS.*
7. WHEN PLACING SIDEWALK AGAINST AN EXISTING CONCRETE STRUCTURE WHERE IT IS DESIRABLE THAT THE SIDEWALK REMAIN FLUSH, THE SIDEWALK SHALL BE DOWELED INTO THE STRUCTURE.
8. ALL SIDEWALK BASE SHALL BE PLACED ON FIRM, STABLE SUBGRADE.
9. CONTACT THE CITY 24 HOURS PRIOR TO POURING CONCRETE FOR AN INSPECTION.
10. CONTACT CITY FOR ACTUAL GREENSPACE AND SIDEWALK WIDTHS REQUIRED PRIOR TO BEGINNING OF CONSTRUCTION.
11. SIDEWALK AND GREENSPACE WIDTH MAY BE VARIED TO MATCH EXISTING FEATURES IF APPROVED BY THE PLANNING STAFF.

CONNECTION TO CONCRETE STRUCTURES

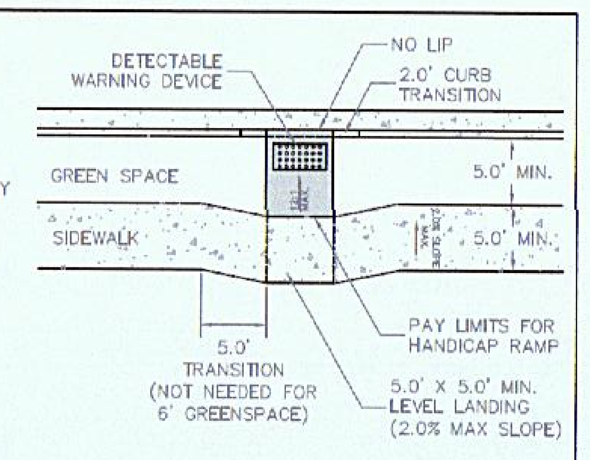


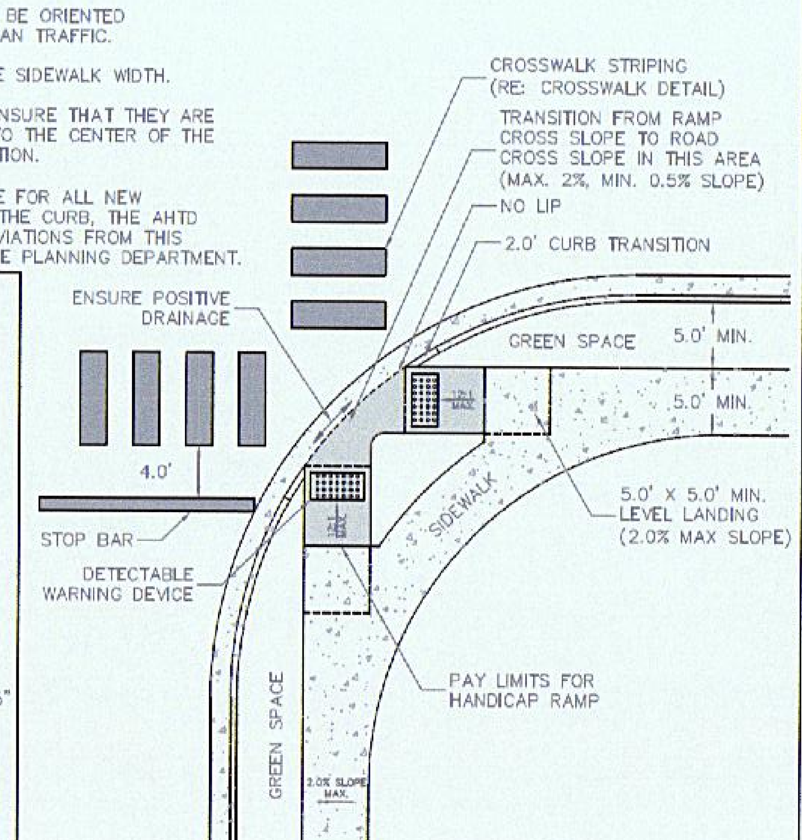
CITY OF ROGERS
301 WEST CHESTNUT STREET
ROGERS, ARKANSAS 72756
(479) 621-1186

TYPICAL SIDEWALK DETAILS

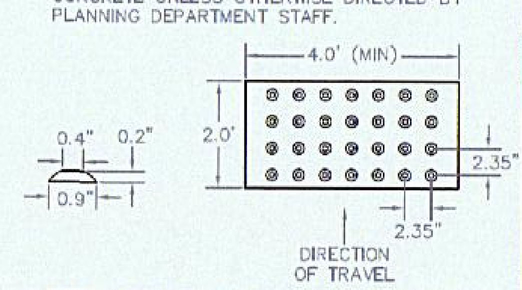
NOT TO SCALE — JANUARY 8, 2013

1. ALL ACCESSIBLE RAMPS SHALL HAVE A MAXIMUM SLOPE OF 8.33%.
2. ALL SIDEWALKS SHALL HAVE A MAXIMUM CROSS SLOPE OF 2.0%. SEE SIDEWALK DETAILS FOR SIDEWALK CONSTRUCTION REQUIREMENTS.
3. CONCRETE SHALL BE 6" THICK AND 3500 PSI WITH 4–7% AIR ENTRAINMENT. 4" OF AGGREGATE BASE SHALL BE REQUIRED BENEATH THE RAMP JUST LIKE SIDEWALK. ALL CONCRETE MATERIALS, HANDLING, PLACING, JOINTING, SAMPLING, FINISHING AND CURING SHALL BE PER CITY STANDARD SPECIFICATIONS.
4. DETECTABLE WARNING DEVICES SHALL BE PLACED AT ALL LOCATIONS WHERE RAMPS CROSS A STREET OR A COMMERCIAL DRIVEWAY FOR THE FULL WIDTH OF THE RAMP.
5. THE CONTRACTOR SHALL ENSURE THAT THE GUTTER IS MAINTAINED THROUGH THE AREA OF THE RAMP AND THAT ANY TRANSITION AREAS DRAIN TO THE STREET.
6. THE SHADED AREA SHOWN ON THE DETAIL SHALL BE THE PAY LIMITS CONSIDERED AS PART OF THE ACCESSIBLE RAMP.
7. RAMP AND DETECTABLE WARNING DEVICE SHALL BE ORIENTED PERPENDICULAR TO THE DIRECTION OF PEDESTRIAN TRAFFIC.
8. THE ACCESSIBLE RAMP WIDTH SHALL MATCH THE SIDEWALK WIDTH.
9. RAMPS SHALL BE MODIFIED AS NECESSARY TO INSURE THAT THEY ARE PARALLEL TO A LINE DRAWN FROM ONE RAMP TO THE CENTER OF THE RAMP ON THE OPPOSITE SIDE OF THE INTERSECTION.
10. THE RAMPS SHOWN ARE THE CITY'S PREFERENCE FOR ALL NEW CONSTRUCTION. FOR SIDEWALKS ADJACENT TO THE CURB, THE AHTD TYPE 1 RAMP SHALL BE USED. ANY OTHER DEVIATIONS FROM THIS DETAIL WILL REQUIRE SPECIFIC APPROVAL BY THE PLANNING DEPARTMENT.





1. THE DETECTABLE WARNING DEVICE SHALL BE LOCATED SO THAT THE NEAREST EDGE OF THE DEVICE IS LOCATED AT THE BACK OF CURB.
2. DOMES SHALL BE ALIGNED ON A SQUARE GRID IN THE PREDOMINANT DIRECTION OF TRAVEL TO PERMIT WHEELS TO ROLL BETWEEN DOMES.
3. DETECTABLE WARNING DEVICES SHALL BE A VITRIFIED POLYMER COMPOSITE (VCP) OR CAST IRON AND SHALL BE CAST IN PLASTIC CONCRETE UNLESS OTHERWISE DIRECTED BY PLANNING DEPARTMENT STAFF.



DETECTABLE WARNING DEVICE

CITY OF ROGERS
301 WEST CHESTNUT STREET
ROGERS, ARKANSAS 72756
(479) 621-1186

ACCESSIBLE RAMP DETAILS

NOT TO SCALE — JANUARY 8, 2013

STATE OF ARKANSAS — REGISTERED PROFESSIONAL ENGINEER — NO. 11660 — 3-25-16

CERTIFICATE OF AUTHORIZATION — BRIXEY ENGINEERING & LAND SURVEYING, INCORPORATED — NO. 98 — ARKANSAS ENGINEER

Revisions:

CONSTRUCTION DETAILS
MULTIFAMILY DEVELOPMENT
1603 WEST WALNUT
ROGERS, BENTON COUNTY, ARKANSAS
Prepared For: TRI-5, LLC

File Name: G:\ENGINEERING\16-0053 ROGERS MULTIFAMILY\WORK.dwg

Date:	03/25/2016
Drawn By:	TMC
Approved:	CNB
Job No.	16-0053
Sheet	C-14
Filed	

BRIXEY ENGINEERING & LAND SURVEYING, INC.
CONSULTING ENGINEERS -- LAND SURVEYORS
5223 East Highway 45 P.O. Box 6180 Fort Smith, Arkansas 72906 (479) 646-6394

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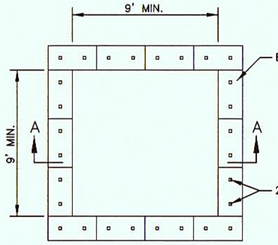
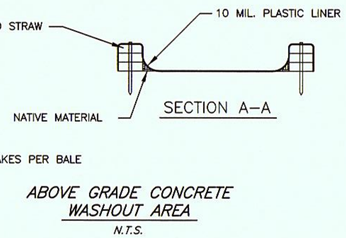
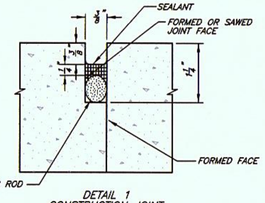


BALE CONFIGURATION PLAN

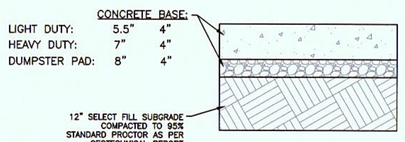


SECTION A–A

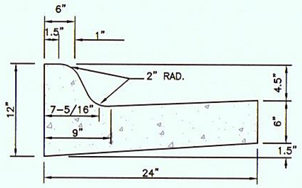
ABOVE GRADE CONCRETE WASHOUT AREA
N.T.S.



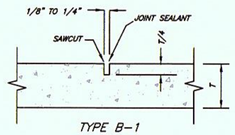
DETAIL 1
CONSTRUCTION JOINT



CONCRETE PAVEMENT SECTION
NTS

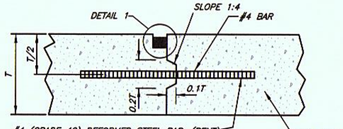


CONCRETE CURB SECTION
TYPE "A"
N.T.S.



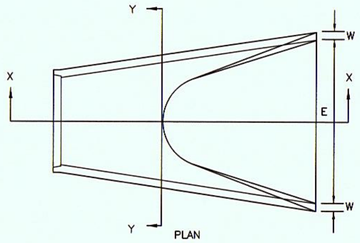
TYPE B–1

SECTION – SAW CUT CONTRACTION JOINT

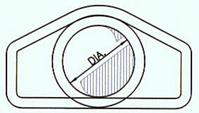


SECTION – CONSTRUCTION JOINT

JOINTING DETAILS
N.T.S.



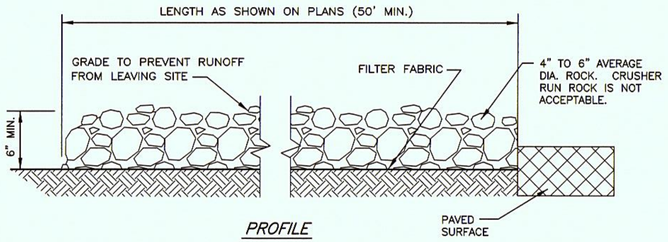
PLAN



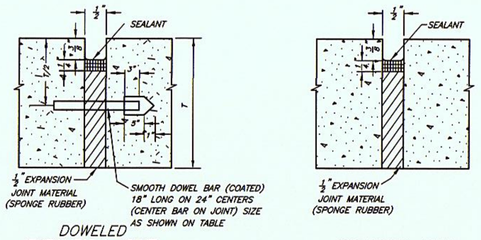
END VIEW

W= WALL THICKNESS OF PIPE

DIA.	D	E
18"	6'–1"	3'–0"
24"	6'–1 1/2	4'–0"
30"	6'–1 3/4	5'–0"
36"	8'–1 3/4	6'–0"
42"	8'–2"	6'–6"
48"	8'–2"	7'–0"
54"	8'–4"	7'–6"
60"	8'–4"	8'–0"
72"	8'–4"	9'–0"

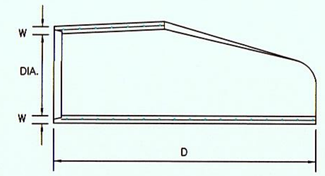


PROFILE

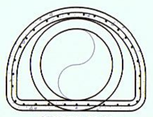


DOWELED EXPANSION JOINT
N.T.S.

EXPANSION JOINT
N.T.S.

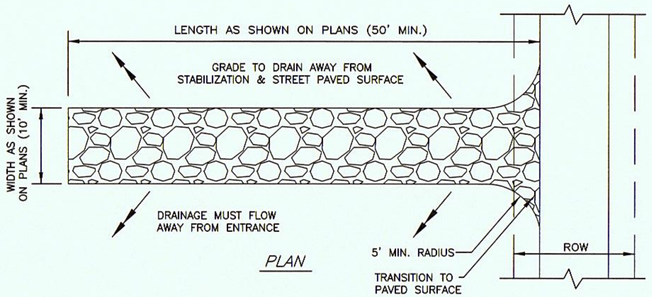


SECTION X–X



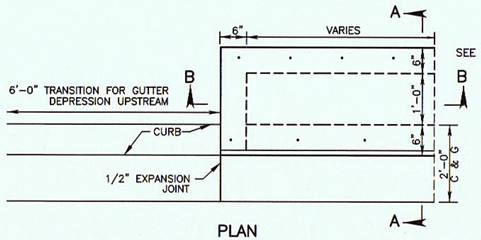
SECTION Y–Y

FLARED END SECTION
N.T.S.

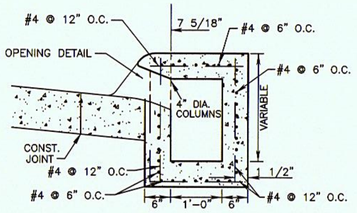


PLAN

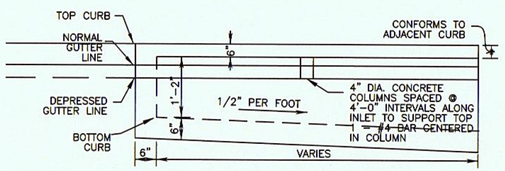
STABILIZED CONSTRUCTION ENTRANCE
N.T.S.



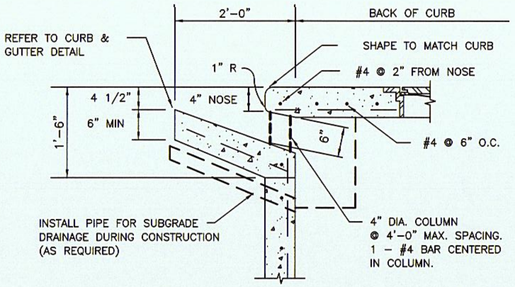
PLAN



SECTION "A–A"

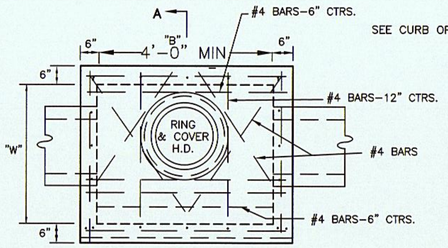


DROP INLET THROAT EXTENSION
N.T.S.



CURB OPENING
N.T.S.

NOTE: REFERENCE TO INLET DIMENSIONS ON THE PLAN SHEETS IS IN THE SEQUENCE B X W



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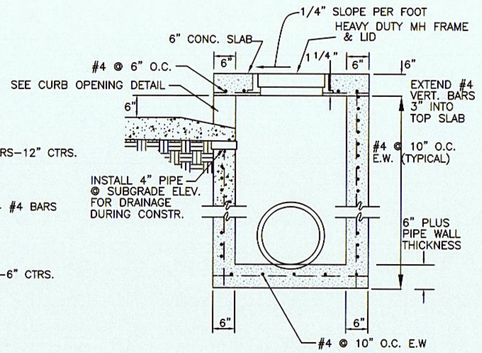

SECTION "A–A"

DROP INLET (TYPE C)
N.T.S.

NOTES:

1. WHEN AN INLET IS PLACED ADJACENT TO CONCRETE PAVEMENT THE GUTTER DEPRESSION SHALL BE FORMED IN CONCRETE PAVEMENT.
2. STANDARD JUNCTION BOXES TO BE CONSTRUCTED IDENTICALLY TO TYPE C INLET EXCEPT FOR THE ABSENCE OF A CURB OPENING.
3. ALL EXPOSED CORNERS TO HAVE 3/4" CHAMFER.
4. ALL REINFORCING BARS SHALL BE #4 AND HAVE A MINIMUM 1 1/2" COVER NEXT TO AIR, 3" NEXT TO GROUND UNLESS NOTED OTHERWISE.
5. 4" DIAMETER WEEP HOLES TO BE INSTALLED IN THE INLET WALLS AS DIRECTED BY THE ENGINEER. OUTSIDE ENDS OF WEEP HOLE PIPE SHALL BE WRAPPED WITH FILTER FABRIC TO PREVENT SOIL INTRUSION INTO THE PIPE.
6. CURB INLETS AND EXTENSIONS ON CURVED SECTIONS SHALL CONFORM TO THE CURVATURE OF THE CURB.
7. DURING CONSTRUCTION OF THE ROADWAY, THE CONTRACTOR SHALL MAINTAIN DRAINAGE INTO OR AROUND THE DROP INLET AS APPROVED BY THE ENGINEER.
8. PRECAST UNITS MAY BE USED FOR INLET BOTTOMS AND WALLS ONLY. TOPS MUST BE CAST–IN–PLACE. ADJUSTMENTS TO BOXES DUE TO GRADE CHANGES WILL BE AT NO COST TO THE OWNER.
9. INLET AND OUTLET PIPES SHALL BE PLACED TO ALLOW SUFFICIENT SPACE FOR INLET EXTENSION CONSTRUCTION.

BRIXEY ENGINEERING & LAND SURVEYING, INC.
CONSULTING ENGINEERS – LAND SURVEYORS
5223 East Highway 45 P.O. Box 6180 Fort Smith, Arkansas 72906 (479) 646-6394

Date: 03/25/2016
Drawn By: TMC
Approved: CRB
Job No. 16–0053
Sheet C–15
Filed

CONSTRUCTION DETAILS
MULTIFAMILY DEVELOPMENT
1603 WEST WALNUT
ROGERS, BENTON COUNTY, ARKANSAS
Prepared For: TR–5, LLC

Revisions:

LARGE SCALE DEVELOPMENT PLANS FOR

MULTIFAMILY DEVELOPMENT
1603 WEST WALNUT

CITY OF ROGERS
BENTON COUNTY, ARKANSAS
MARCH 2016

CITY OF ROGERS, AR

STEVE GLASS
301 W. CHESTNUT ST.
ROGERS, AR 72756

DIRECTOR OF PLANNING
& TRANSPORTATION
479-621-1186

LORI ERICSON
301 W. CHESTNUT ST.
ROGERS, AR 72756

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LANCE JOBE
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CITY INSPECTOR
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earlrausch@rwu.org

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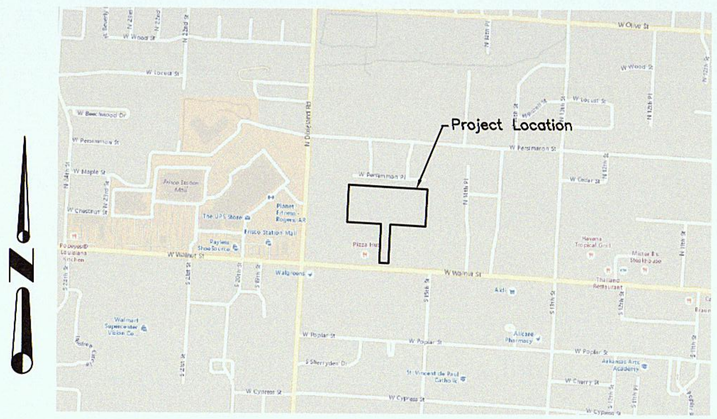
StephenPonder@rwu.org

ARKANSAS HIGHWAY DEPARTMENT DISTRICT 9

DOUG MEARS, PERMIT OFFICER
4510 HWY 65 / PO BOX 610
HARRISON, ARKANSAS 72602
870-743-2100 Doug.Mears@ahtd.ar.gov

DEVELOPER:
TRI-5, LLC.
P.O. BOX 11655
Fort Smith AR 72917



VICINITY MAP
1" = 500'

CURRENTLY ZONED: R-MF RESIDENTIAL MULTIFAMILY

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
NO. 11490
CHAD BRIXEY 3-25-16

PROJECT ENGINEER: CHAD BRIXEY
BRIXEY ENGINEERING & LAND SURVEYING, INC.
5223 EAST HIGHWAY 45, FORT SMITH, ARKANSAS 72916
479-646-6394 Chad@Brixeyeng.com

PUBLIC UTILITY COMPANIES

SOURCE GAS
655 E. MILLSAP RD.
SUITE 104
FAYETTEVILLE, AR 72703
1800-563-0012

KENNETH PETERS
FIELD COORDINATOR OFFICE:
479-333-7009 OR
479-877-0430
kenneth.peters@sourcegas.com

AT&T
1133 E. HAROLD ST.
FAYETTEVILLE, AR 72703

BRYAN WILLIAMS
479-442-3173
aw915@att.com

SOUTHWESTERN ELECTRIC POWER CO.
PO BOX 1328
FAYETTEVILLE, AR 72703

MARK BEASLEY
479-986-1004
mkbeasley@aep.com

COX COMMUNICATIONS
4901 S. 48TH ST.
SPRINGDALE, AR 72762

LARRY ALEXANDER
479-717-3740 OR
479-871-7606
larry.alexander@cox.com

CARROLL ELECTRIC COOPERATIVE CORP.
PO BOX 329
BENTONVILLE, AR 72712
479-273-2421

INDEX OF SHEETS

C-1	COVER - INDEX - LOCATION MAP
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C-3	SITE PLAN
C-4	SWPPP PLAN
C-5	GRADING PLAN
C-6	DRAINAGE PLAN
C-7	PRE-DEVELOPMENT DRAINAGE MAP
C-8	POST-DEVELOPMENT DRAINAGE MAP
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WD-2	WATER DETAILS
SD-1	SEWER DETAILS

CERTIFICATE OF AUTHORIZATION
BRIXEY ENGINEERING & LAND SURVEYING, INCORPORATED
NO. 98
ARKANSAS ENGINEERS

BRIXEY ENGINEERING & LAND SURVEYING, INC.
CONSULTING ENGINEERS -- LAND SURVEYORS
5223 East Highway 45 P.O. Box 6180 Fort Smith, Arkansas 72906 (479) 646-6394

CONSTRUCTION PLAN OF PROPOSED RESIDENTIAL DEVELOPMENT

"ALL CONSTRUCTION IS TO CONFORM TO THE CITY OF ROGERS STANDARD DRAWINGS AND SPECIFICATIONS"

File Name: G:\ENGINEERING16\16-0053 ROGERS MULTIFAMILY\WORK.dwg

NOTES:

1. WHEN AN INLET IS PLACED ADJACENT TO CONCRETE PAVEMENT THE GUTTER DEPRESSION SHALL BE FORMED IN CONCRETE PAVEMENT.
2. ALL EXPOSED CORNERS TO HAVE 3/4" CHAMFER.
3. ALL REINFORCING BARS SHALL BE #4 AND HAVE A MINIMUM 1 1/2" COVER NEXT TO AIR, 3" NEXT TO GROUND UNLESS NOTED OTHERWISE.
4. 4" DIAMETER WEEP HOLES TO BE INSTALLED IN THE INLET WALLS AS DIRECTED BY THE ENGINEER. OUTSIDE ENDS OF WEEP HOLE PIPE SHALL BE WRAPPED WITH FILTER FABRIC TO PREVENT SOIL INTRUSION INTO THE PIPE.
5. CURB INLETS AND EXTENSIONS ON CURVED SECTIONS SHALL CONFORM TO THE CURVATURE OF THE CURB.
6. DURING CONSTRUCTION OF THE ROADWAY, THE CONTRACTOR SHALL MAINTAIN DRAINAGE INTO OR AROUND THE DROP INLET AS APPROVED BY THE ENGINEER.
7. PRECAST UNITS MAY BE USED FOR INLET BOTTOMS AND WALLS ONLY. TOPS MUST BE CAST-IN-PLACE. ADJUSTMENTS TO BOXES DUE TO GRADE CHANGES WILL BE AT NO COST TO THE OWNER.
8. INLET AND OUTLET PIPES SHALL BE PLACED TO ALLOW SUFFICIENT SPACE FOR INLET EXTENSION CONSTRUCTION.

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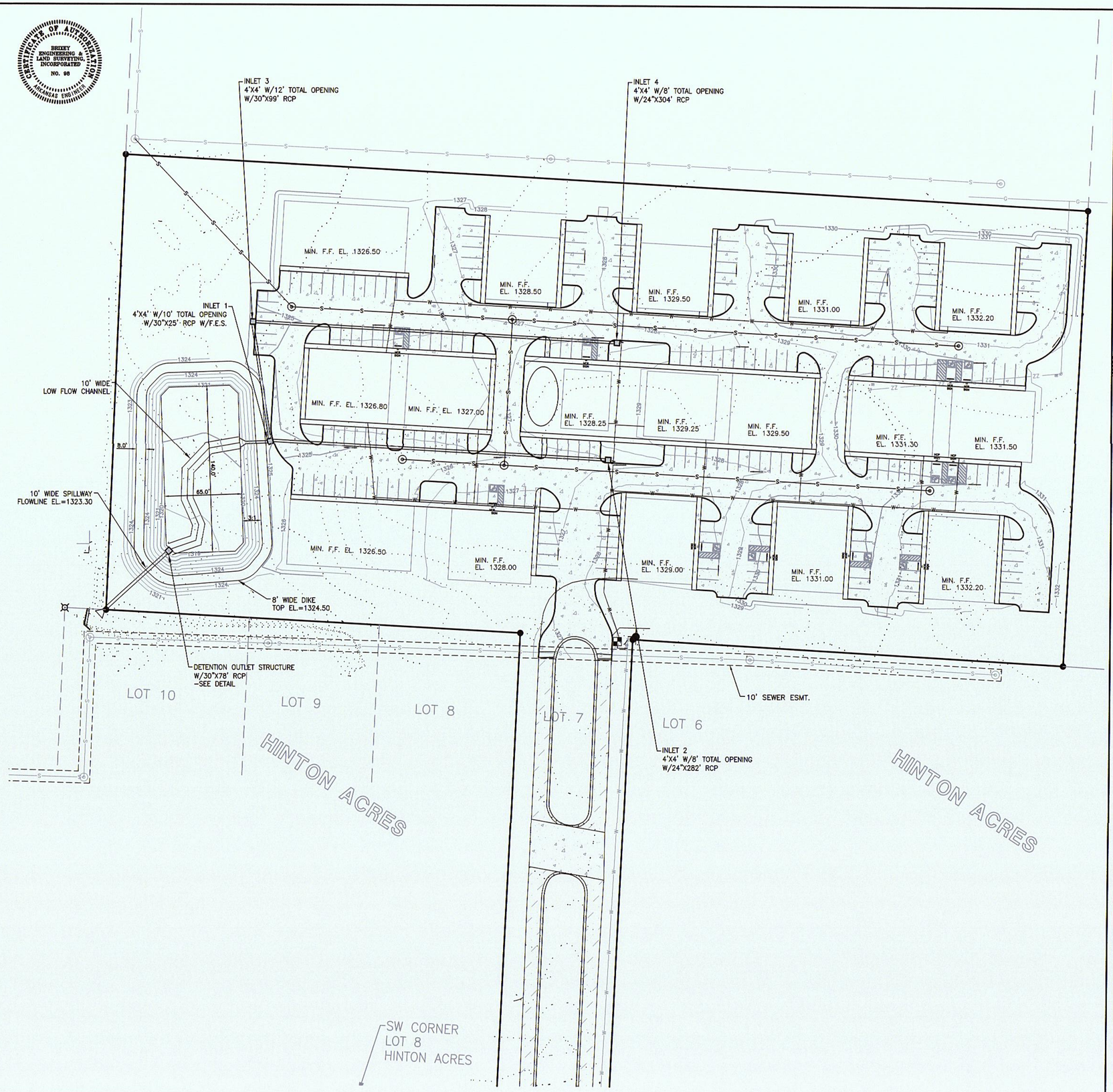

FINAL CONTOUR	1324
ORIGINAL CONTOUR	
EXISTING WATERLINE	W W
WATER METER	
FIRE HYDRANT	
MANHOLE	
SAN. SEWER SERVICE	S S
EXISTING SEWER	S S
WATER SERVICE	W W
EASEMENT LINE	

CONTOUR INTERVAL: 1 FOOT

OVERHEAD ELECTRIC	ZZ ZZ
GAS LINE	G G
TELEPHONE LINE	T T
SIDEWALK	
CONCRETE PARKING	
ASPHALT STREET	

SCALE IN FEET

40 0 40 80 120

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BASIS OF BEARING: Grid North as determined by City of Rogers Monuments.
PROJECTION: SPCS3-Arkansas (North)
DATUM: NAD83

File Name: G:\ENGINEERING\15-0053 ROGERS MULTIFAMILY\SITE PLAN.dwg

Date:	03/25/2016
Drawn By:	TMC
Approved:	CMB
Job No.	15-0053
Sheet	C-6
Filed	

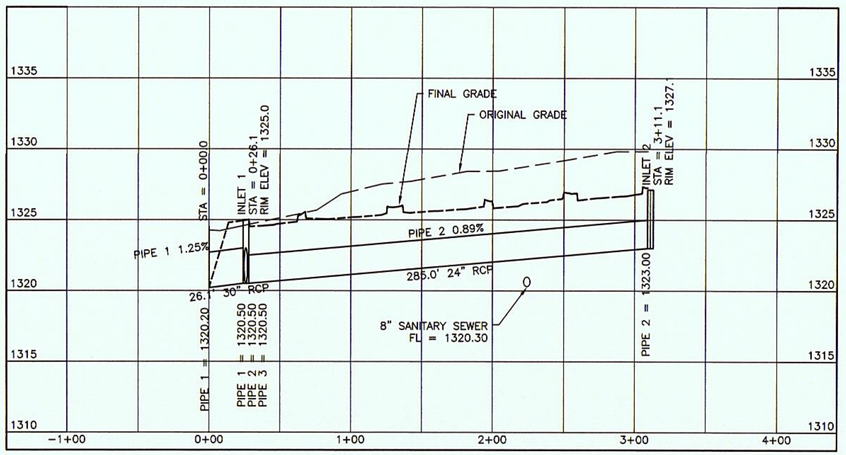
DRAINAGE PLAN
MULTIFAMILY DEVELOPMENT
1603 WEST WALNUT
ROGERS, BENTON COUNTY, ARKANSAS

Prepared For: TR-5, LLC

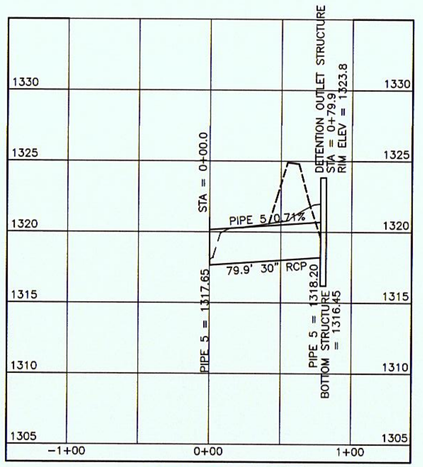
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
NO. 11100
3/25/16

Revisions:

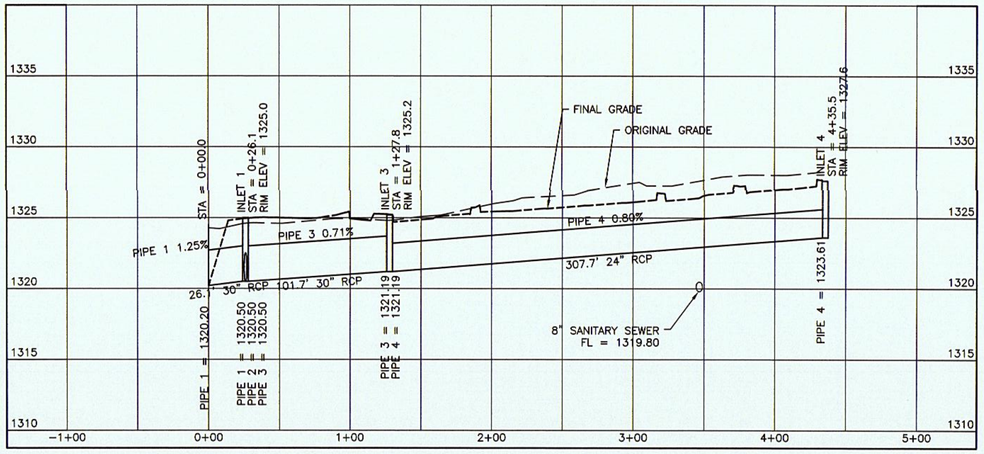
BRIXEY ENGINEERING & LAND SURVEYING, INC.
CONSULTING ENGINEERS — LAND SURVEYORS
5223 East Highway 45 P.O. Box 6180 Fort Smith, Arkansas 72906 (479) 646-5394



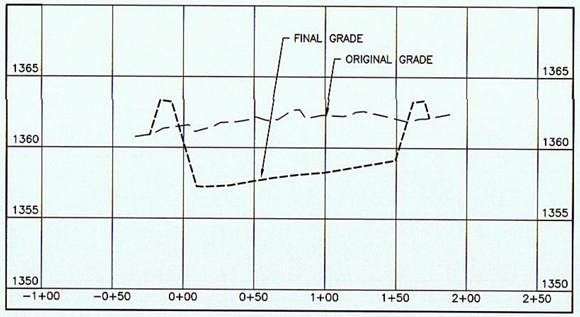
STORM SEWER PIPES 1 AND 2
HORIZONTAL SCALE: 1"=50'
VERTICAL SCALE: 1"=5'



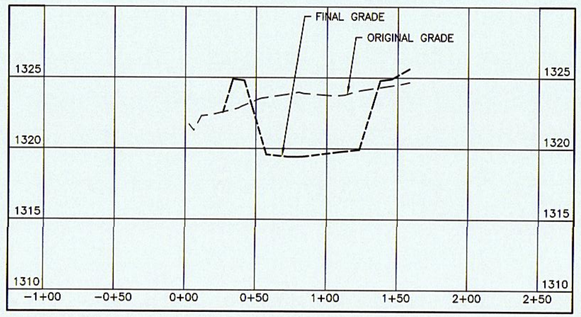
POND OUTLET PIPE
HORIZONTAL SCALE: 1"=50'
VERTICAL SCALE: 1"=5'



STORM SEWER PIPES 1, 3 AND 4
HORIZONTAL SCALE: 1"=50'
VERTICAL SCALE: 1"=5'



POND SECTION A–A
HORIZONTAL SCALE: 1"=50'
VERTICAL SCALE: 1"=5'



POND SECTION B–B
HORIZONTAL SCALE: 1"=50'
VERTICAL SCALE: 1"=5'

NOTES:

1. PIPE LENGTHS SHOWN ARE TO THE CENTER OF THE INLET. SEE PLAN SHEET FOR ACTUAL PIPE LENGTHS.

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NO. 98
ARKANSAS ENGINEERING

File Name: G:\ENGINEERING\16-0053 ROGERS MULTIFAMILY\SITE PLAN.dwg

Date: 03/29/2016	
Drawn By: TMC	
Approved: CNB	
Job No. 16-0053	
Sheet C-9	
Filed	

DRAINAGE PROFILES
MULTIFAMILY DEVELOPMENT
1603 WEST WALNUT
ROGERS, BENTON COUNTY, ARKANSAS
Prepared For: TRI-5, LLC

STATE OF ARKANSAS
CHAD NEWTON
REGISTERED PROFESSIONAL ENGINEER
NO. 11490
3-29-16

Revisions:

BRIXEY ENGINEERING & LAND SURVEYING, INC.
CONSULTING ENGINEERS -- LAND SURVEYORS
5223 East Highway 45 P.O. Box 6180 Fort Smith, Arkansas 72906 (479) 646-6394

NOTES:

1. THIS PROPERTY IS NOT SUBJECT TO A SPECIAL FLOOD HAZARD AREA PER FEMA FLOOD INSURANCE RATE MAP (FIRM) PANEL 05007C0260K, EFFECTIVE JUNE 05, 2012.
2. REMOVE TOPSOIL FROM ALL AREAS OF PROPOSED CONSTRUCTION AND COMPACT THE TOP 12 INCHES OF THE EXISTING SUBGRADE TO 95 PERCENT OF MAXIMUM DENSITY AS DETERMINED BY ASTM D-698 (STANDARD PROCTOR).
3. COMPACT ALL FILL MATERIAL TO 95 PERCENT OF MAXIMUM DENSITY AS DETERMINED BY ASTM D698, IN LIFTS NOT EXCEEDING 8 INCHES THICKNESS OF LOOSELY PLACED SOIL.
4. COMPACT CLASS 7 AGGREGATE BASE TO 98 PERCENT OF THE MAXIMUM DENSITY AS DETERMINED BY ASTM D1557 (MODIFIED PROCTOR) IN LIFTS NOT EXCEEDING 8 INCHES THICKNESS OF LOOSELY PLACED MATERIAL.
5. ALL UNSURFACED AREAS SHALL BE COVERED WITH A MINIMUM OF FOUR INCHES OF TOPSOIL (AS COMPACTED BY A STANDARD LAWN ROLLER), AND SHALL BE SEEDED, MULCHED, WATERED, AND MAINTAINED BY THE CONTRACTOR UNTIL A HEALTHY STAND OF GRASS IS OBTAINED, COVERING A MINIMUM OF 80 PERCENT OF THE DISTURBED AREA.
6. GRASS SEED SHALL CONSIST OF U-3 BERMUDA (50% UNHULLED), FREE OF WEEDS AND INERT ELEMENTS.
7. CONTRACTOR SHALL APPLY STABILIZATION FABRIC TO ALL SLOPES STEEPER THAN 3H:1V. ALL LANDSCAPING TO BE PER LANDSCAPE PLANS AND SPECIFICATIONS AND/OR AS DIRECTED BY OWNER.
8. ALL AREAS OUTSIDE THE LIMITS OF PAVING AND GRADING AS SHOWN SHALL REMAIN UNDISTURBED.
9. THE EARTHWORK FOR ALL BUILDING FOUNDATIONS AND SLABS SHALL BE IN ACCORDANCE WITH GEOTECHNICAL REPORT.
10. CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL UTILITIES AND NOTIFYING THE APPROPRIATE UTILITY COMPANY PRIOR TO BEGINNING CONSTRUCTION.
11. EXISTING GRADE CONTOURS INTERVAL SHOWN AT ONE FOOT (1').
12. PROPOSED GRADE CONTOURS INTERVAL SHOWN AT ONE FOOT (1').
13. CONTRACTOR SHALL COORDINATE WITH ARCHITECTURAL PLANS, POWER COMPANY, TELEPHONE COMPANY AND GAS COMPANY FOR ACTUAL ROUTING OF POWER AND SERVICES TO BUILDING.
14. ALL SPOT GRADES AND CONTOURS ARE TO FINISHED GRADE UNLESS OTHERWISE NOTED. FINISHED GRADE IS TO INCLUDE 4" TOPSOIL IN LANDSCAPED AREAS.

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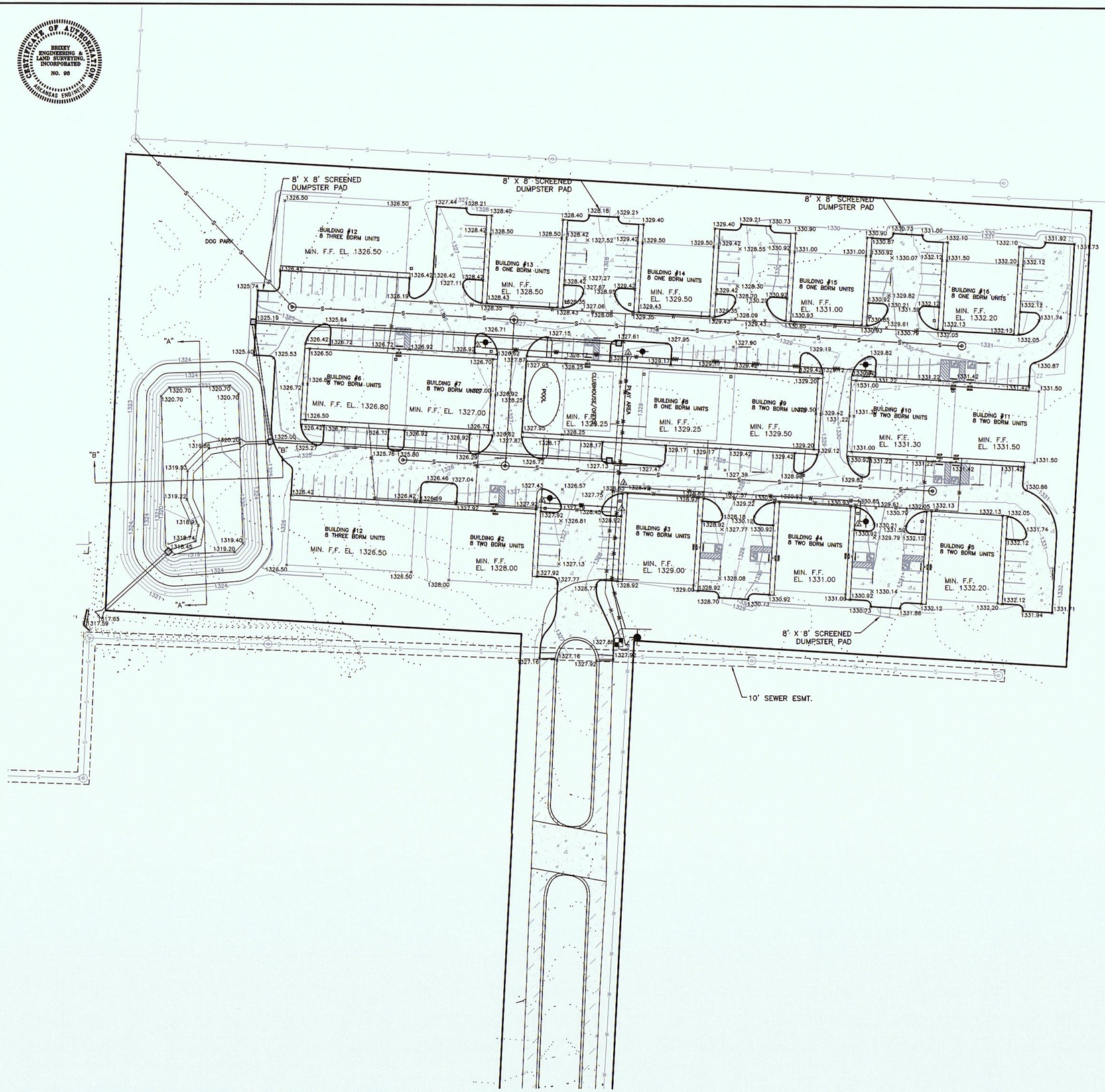
BRIXEY ENGINEERING & LAND SURVEYING, INCORPORATED
NO. 98
ARKANSAS ENGINEER



FINAL CONTOUR	1324
ORIGINAL CONTOUR	
WATERLINE SERVICE	W
WATER METER	
FIRE HYDRANT	
MANHOLE	
SAN. SEWER SERVICE	S
EXISTING SAN. SEWER	S
EXISTING WATER SERVICE	W
EASEMENT LINE	

CONTOUR INTERVAL: 1 FOOT

OVERHEAD ELECTRIC	ZZ
GAS LINE	G
TELEPHONE LINE	T
SIDEWALK	
CONCRETE PARKING	
ASPHALT STREET	

SCALE IN FEET

40 0 40 80 120

BASIS OF BEARING: Grid North as determined by City of Rogers Monuments.
PROJECTION: SPC83-Arkansas (North)
DATUM: NAD83

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File Name: G:\HOME\ENG\15-0053_ROGERS MULTIFAMILY\SITE PLAN.dwg

Date:	03/29/2016
Drawn By:	TMC
Approved:	CMB
Job No.	15-0053
Sheet	C-5
Filed	

GRADING PLAN
MULTIFAMILY DEVELOPMENT
1603 WEST WALNUT
ROGERS, BENTON COUNTY, ARKANSAS

Prepared For: TR-5, LLC

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
NO. 11169
CHRIS BRIXEY
3-29-16

Revisions:

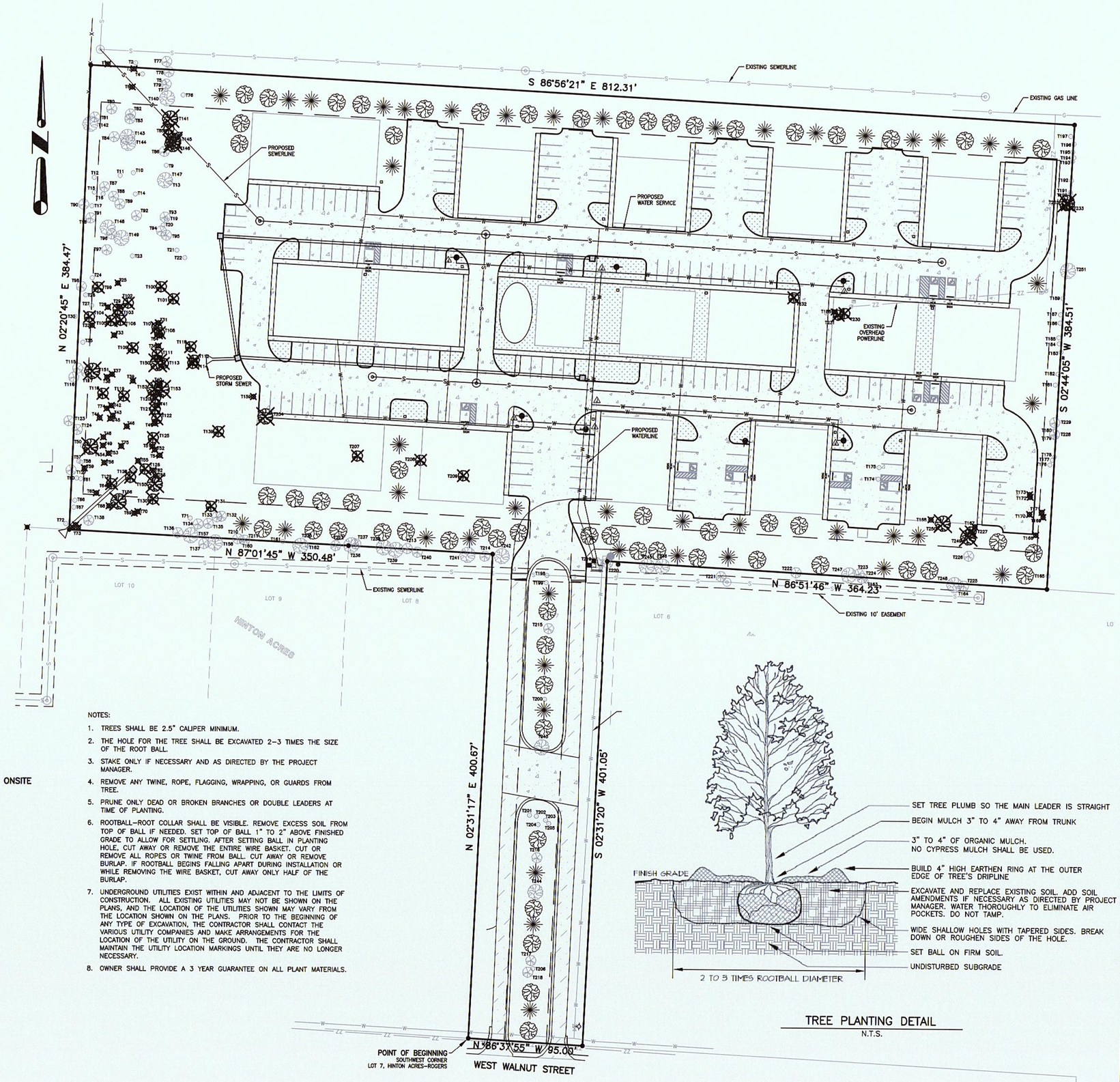
BRIXEY ENGINEERING & LAND SURVEYING, INC.
CONSULTING ENGINEERS -- LAND SURVEYORS
5223 East Highway 45 P.O. Box 6180 Fort Smith, Arkansas 72906 (479) 646-6394

TREES TO BE REMOVED (102)

ID #	TRUNK	DESCRIPTION	ID #	TRUNK	DESCRIPTION
T25	10"	CHERRY	T119	18"	OAK
T28	8"	CHERRY	T120	15"	HICKORY
T29	10"	CHERRY	T121	15"	HICKORY
T31	10"	HICKORY	T122	15"	HICKORY
T33	8"	HACKBERRY	T126	12"	HACKBERRY
T34	8"	CHERRY	T128	14"	HACKBERRY
T36	8"	TWIN HICKORY	T129	12"	CHERRY
T37	8"	ELM	T130	12"	HICKORY
T38	9"	ELM	T139	12"	DOUBLE SWEETGUM
T39	8"	HICKORY	T150	24"	CHERRY
T40	9"	ELM	T152	36"	OAK
T42	8"	OAK	T153	24"	ELM
T43	8"	OAK	T155	34"	OAK
T44	8"	HICKORY	T156	24"	CHERRY
T45	8"	CHERRY	T159	10"	DOUBLE ASH
T46	8"	HICKORY	T166	8"	BOXELDER
T47	8"	HICKORY	T167	10"	ASH
T48	10"	CHERRY	T168	8"	ASH
T49	8"	HACKBERRY	T169	8"	ASH
T51	8"	HICKORY	T170	8"	LOCUST
T52	8"	HACKBERRY	T171	8"	TWIN ASH
T53	8"	CHERRY	T172	8"	ASH
T54	8"	HACKBERRY	T173	8"	ASH
T55	8"	CHERRY	T188	10"	DOUBLE CEDAR
T56	9"	CHERRY	T207	14"	MAPLE
T62	8"	OAK	T208	15"	MAPLE
T63	8"	CHERRY	T209	14"	SPRUCE
T64	8"	CHERRY	T227	16"	ASH
T65	10"	CHERRY	T231	12"	CEDAR
T68	9"	CHERRY	T232	16"	CEDAR
T69	8"	HICKORY	T233	12"	CHERRY
T70	8"	HICKORY	T234	20"	ASH
T71	10"	HICKORY	T249	24"	ASH
T72	10"	ELM	T250	20"	ELM
T73	–	CLUSTER 3 HICKORY	T1	8"	CHERRY
T74	10"	OAK	T3	8"	PERSIMMON
T100	12"	CHERRY	T6	8"	OAK
T101	12"	HICKORY	T8	8"	OAK
T102	12"	CHERRY	T32	8"	HACKBERRY
T103	12"	CHERRY	T59	8"	HACKBERRY
T105	12"	OAK	T85	13"	CHERRY
T106	12"	CHERRY	T99	12"	CHERRY
T107	12"	TRIPLE HICKORY	T104	16"	CHERRY
T108	12"	HICKORY	T131	12"	HICKORY
T109	18"	OSAGE	T141	24"	OAK
T110	12"	CHERRY	T145	21"	OAK
T111	15"	CHERRY	T146	24"	OAK
T112	18"	CHERRY	T151	24"	CHERRY
T113	14"	ELM	T154	32"	OAK
T114	14"	CHERRY	T233	12"	CHERRY
T118	12"	OAK	T252	24"	ELM
			T73	–	CLUSTER 3 HICKORY

TREES TO BE REMOVED: (103)

TREES REMAINING ON SITE: (149)



LEGEND

OVERHEAD ELECTRIC LINE	TELEPED
TELEPHONE LINE	POWERPOLE
EXISTING GAS LINE	FIRE HYDRANT
EXISTING SANITARY SEWER	STORM SEWER
EXISTING WATERLINE	WATER VALVE
PROPOSED SEWERLINE	WATER METER
PROPOSED WATERLINE	ASPHALT PAVING
PROPOSED WATER SERVICE	CONCRETE PAVING
EASEMENT LINE	
BUILDING SETBACK LINE	

PROPOSED LANDSCAPING/SCREENING

2.5" CAL. HEDGE MAPLE

2.5" CAL. PIN OAK

GRASS OR SOD

OPEN SPACE REQUIREMENT: 10% REQ'D: 38% PROVIDED ONSITE

LANDSCAPE REQUIREMENT:
1 TREE PER 2000 SF OF LAND AREA
LAND AREA: 8.03 ac. or 349,658 SF
349,658/2000 = 174.8 OR 175 TREES REQ'D
103 EXISTING TREES TO BE REMOVED
149 EXISTING TREES REMAINING
TOTAL NUMBER OF TREES TO BE PLANTED: 103
FINAL NUMBER OF TREES ON LOT: 252
TREES SHALL BE 2.5" CALIBER X 6 FEET TALL, MINIMUM
SPECIES: PIN OAK AND HEDGE MAPLE.

NOTES:

1. TREES SHALL BE 2.5" CALIPER MINIMUM.
2. THE HOLE FOR THE TREE SHALL BE EXCAVATED 2–3 TIMES THE SIZE OF THE ROOT BALL.
3. STAKE ONLY IF NECESSARY AND AS DIRECTED BY THE PROJECT MANAGER.
4. REMOVE ANY TWINE, ROPE, FLAGGING, WRAPPING, OR GUARDS FROM TREE.
5. PRUNE ONLY DEAD OR BROKEN BRANCHES OR DOUBLE LEADERS AT TIME OF PLANTING.
6. ROOTBALL–ROOT COLLAR SHALL BE VISIBLE. REMOVE EXCESS SOIL FROM TOP OF BALL IF NEEDED. SET TOP OF BALL 1" TO 2" ABOVE FINISHED GRADE TO ALLOW FOR SETTLING. AFTER SETTING BALL IN PLANTING HOLE, CUT AWAY OR REMOVE THE ENTIRE WIRE BASKET. CUT OR REMOVE ALL ROPES OR TWINE FROM BALL. CUT AWAY OR REMOVE BURLAP. IF ROOTBALL BEGINS FALLING APART DURING INSTALLATION OR WHILE REMOVING THE WIRE BASKET, CUT AWAY ONLY HALF OF THE BURLAP.
7. UNDERGROUND UTILITIES EXIST WITHIN AND ADJACENT TO THE LIMITS OF CONSTRUCTION. ALL EXISTING UTILITIES MAY NOT BE SHOWN ON THE PLANS, AND THE LOCATION OF THE UTILITIES SHOWN MAY VARY FROM THE LOCATION SHOWN ON THE PLANS. PRIOR TO THE BEGINNING OF ANY TYPE OF EXCAVATION, THE CONTRACTOR SHALL CONTACT THE VARIOUS UTILITY COMPANIES AND MAKE ARRANGEMENTS FOR THE LOCATION OF THE UTILITY ON THE GROUND. THE CONTRACTOR SHALL MAINTAIN THE UTILITY LOCATION MARKINGS UNTIL THEY ARE NO LONGER NECESSARY.
8. OWNER SHALL PROVIDE A 3 YEAR GUARANTEE ON ALL PLANT MATERIALS.

TREE PLANTING DETAIL
N.T.S.

OWNER/DEVELOPER:
TRI – 5, LLC.
P.O. BOX 11655
Fort Smith AR 72917

CERTIFICATE OF AUTHORIZATION
BRIXEY ENGINEERING & LAND SURVEYING, INCORPORATED
NO. 98
ARKANSAS ENGINEERING

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SCALE IN FEET
40 0 40 80 120

File Name: C:\ENGINEERING\16-0053 ROGERS MULTIFAM\WORK.dwg

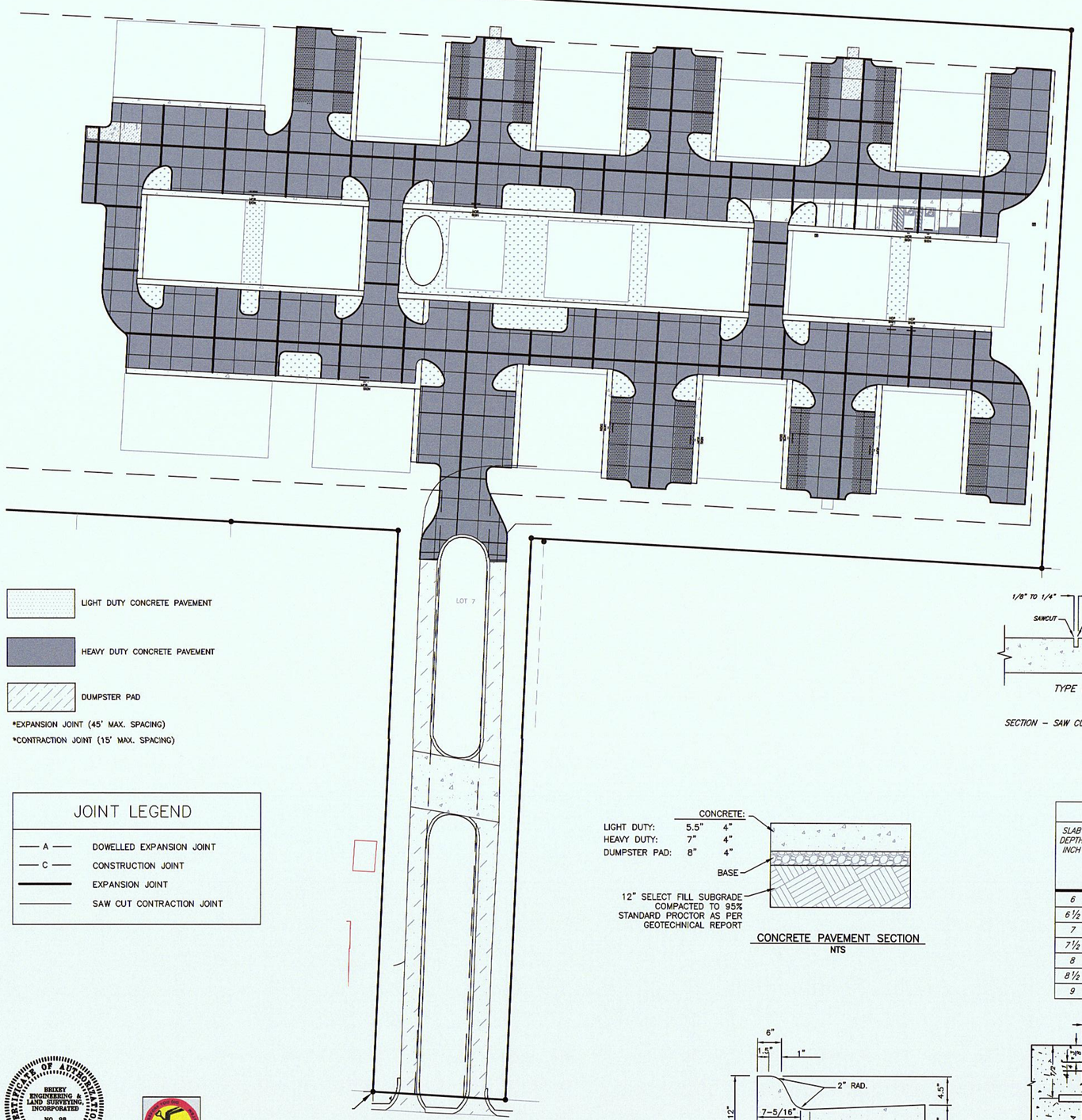
Date: 03/25/2016	
Drawn By: TMC	
Approved: CMB	
Job No. 16-0053	
Sheet C-11	
Filed	

LANDSCAPE PLAN
MULTIFAMILY DEVELOPMENT
1603 WEST WALNUT
ROGERS, BENTON COUNTY, ARKANSAS
Prepared For: TRI-5, LLC

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
NO. 11160
12-31-16

Revisions:

BRIXEY ENGINEERING & LAND SURVEYING, INC.
CONSULTING ENGINEERS -- LAND SURVEYORS
5223 East Highway 45 P.O. Box 6180 Fort Smith, Arkansas 72906 (479) 646-6394



LIGHT DUTY CONCRETE PAVEMENT

HEAVY DUTY CONCRETE PAVEMENT

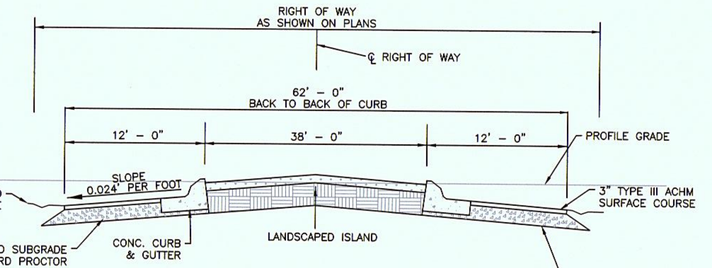
DUMPSTER PAD

*EXPANSION JOINT (45' MAX. SPACING)

*CONTRACTION JOINT (15' MAX. SPACING)

JOINT LEGEND

— A —	DOWELLED EXPANSION JOINT
— C —	CONSTRUCTION JOINT
━━━	EXPANSION JOINT
———	SAW CUT CONTRACTION JOINT

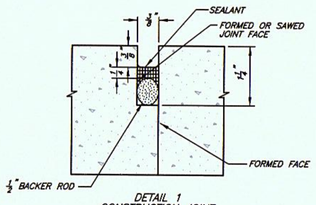


TYPICAL 62' STREET
WITH CENTER ISLAND

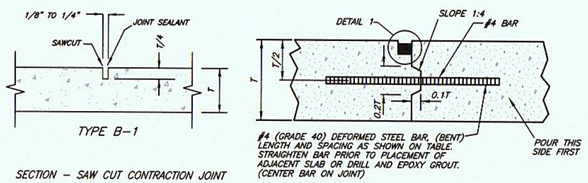
DETAIL C
N.T.S.

NOTES:

PAVING SECTION SHALL BE A MINIMUM OF 3–INCH HOT MIX ASPHALT AND 6–INCHES OF CLASS 7 AGGREGATE BASE (TO 1' BEYOND CURB) ON A STABLE SUBGRADE.



DETAIL 1
CONSTRUCTION JOINT



SECTION – SAW CUT CONTRACTION JOINT

SECTION – CONSTRUCTION JOINT

JOINTING DETAILS
N.T.S.

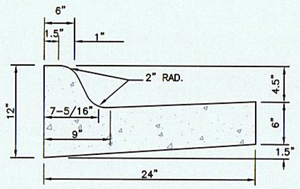
CONCRETE PAVEMENT SECTION
NTS

TIEBAR DIMENSIONS					
SLAB DEPTH INCH	TIEBAR SIZE INCH	TIEBAR SPACING			
		DISTANCE TO NEAREST FREE EDGE OR TO NEAREST JOINT WHERE MOVEMENT CAN OCCUR			
		10'	12'	14'	24'
6	½ X 24	30"	30"	30"	23"
6½	½ X 24	30"	30"	30"	21"
7	½ X 24	30"	30"	30"	20"
7½	½ X 24	30"	30"	30"	18"
8	½ X 24	30"	30"	30"	17"
8½	½ X 24	30"	30"	28"	16"
9	½ X 30	36"	36"	36"	24"

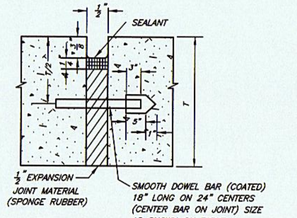
DOWEL SIZE	
SLAB DEPTH INCH	DOWEL DIAMETER INCH
6	¾
7	⅞
8	1
9	1⅛

GENERAL NOTES:

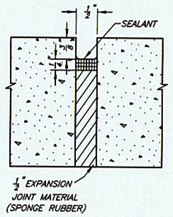
1. ALL CONSTRUCTION SHALL CONFORM TO THE MOST CURRENT VERSION OF THE CITY OF ROGERS STANDARD SPECIFICATIONS AND DETAILS.
2. ALL SUBGRADE AND PAVEMENT MATERIAL TESTING SHAL BE PROVIDED AS SPECIFIED.
3. FILL AREA SHOULD CONSIST OF APPROVED COHESIVE MATERIALS WHICH ARE FREE OF ORGANIC MATTER AND DEBRIS.
4. THE CONTRACTOR SHALL TAKE CARE TO PROVIDE POSITIVE DRAINAGE AND PREVENT PONDING ON THE SUBGRADE PRIOR TO CONSTRUCTING PAVEMENTS. ANY AREAS THAT ARE SUBJECT TO PONDING SHALL BE SCARIFIED, DRIED AND RECOMPACTED IN ACCORDANCE WITH THE ABOVE REQUIREMENTS PRIOR TO PAVING.
5. ALL CURB RADII SHOWN ARE TO BACK OF CURB.
6. ALL PAVING DIMENSIONS ARE TO BACK OF CURB WHERE APPLICABLE OR TO THE EDGE OF PAVEMENT WHEN NO CURB IS PROPOSED. UNLESS OTHERWISE NOTED.
7. CONTRACTOR SHALL MATCH EXISTING PAVEMENT IN GRADE AND ALIGNMENT.
8. CONTRACT SHALL MATCH EXISTING CURB AND GUTTER IN GRADE, SIZE, TYE AND ALIGNMENT AT ADJACENT ROADWAYS.



CONCRETE CURB SECTION
TYPE "A"
N.T.S.



DOWELED
EXPANSION JOINT
N.T.S.



EXPANSION JOINT
N.T.S.

JOINT NOTES:

1. ALL SAWED JOINTS TO BE SANDBLASTED IMMEDIATELY PRIOR TO SEALING.
2. GREASE DOWEL BARS WITH S.A.E. NO. 50 WEIGHT OIL OR APPROVED EQUAL.
3. EXPANSION JOINTS SHALL BE PLACED AS SHOWN ON THE JOINT LAYOUT PLAN.
4. CONTRACTION JOINTS SHALL BE PLACED AS SHOWN ON THE JOINT LAYOUT PLAN.
5. CONTRACTION JOINTS SHALL BE SAW CUT WITHIN 12 HOURS OF COMPLETING THE CONCRETE POUR FOR EACH DAY'S PAVING.

CERTIFICATE OF AUTHORIZATION
BRIXEY ENGINEERING & LAND SURVEYING, INCORPORATED
NO. 98
ARKANSAS

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File Name: G:\ENGINEERING\16-0053 ROGERS MULTIFAMILY\PAVING PLAN.dwg

Date: 03/24/2016	
Drawn By: TMC	
Approved: CNB	
Job No. 16-0053	
Sheet C-10	
Filed	

PAVING PLAN
MULTIFAMILY DEVELOPMENT
1603 WEST WALNUT
ROGERS, BENTON COUNTY, ARKANSAS

Prepared For: TR-5, LLC

STATE OF ARKANSAS
CHAD BRIXEY
REGISTERED PROFESSIONAL ENGINEER
NO. 11489
3-25-16

Revisions:

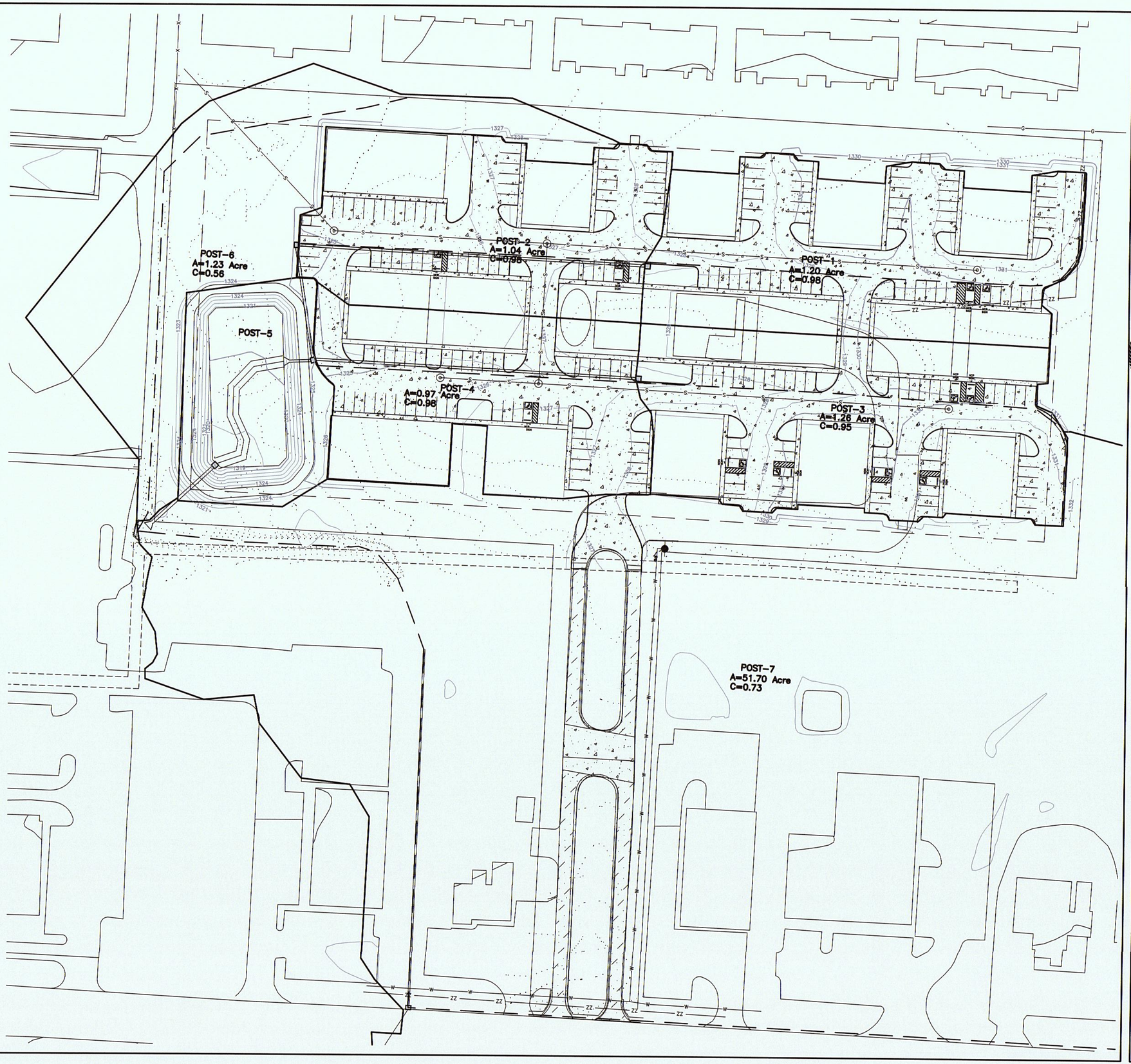
BRIXEY ENGINEERING & LAND SURVEYING, INC.
CONSULTING ENGINEERS -- LAND SURVEYORS
5223 East Highway 45 P.O. Box 6180 Fort Smith, Arkansas 72906 (479) 646-6394

CONTOUR INTERVAL: 1 FOOT

FINAL CONTOUR 1324

ORIGINAL CONTOUR

TIME OF CONCENTRATION FLOWPATH



SCALE IN FEET

40 0 40 80 120

BRIXEY ENGINEERING & LAND SURVEYING, INCORPORATED NO. 98 CERTIFICATE OF AUTHORIZATION ARKANSAS ENGINEER

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File Name: G:\ENGINEERING\16-0053 ROGERS MUL FAMILY\SITE PLAN.dwg

Date: 03/25/2016	
Drawn By: TMC	
Approved: CNB	
Job No. 16-0053	
Sheet C-8	
Filed	

POST-DEVEL. DRAINAGE MAP

MULTIFAMILY DEVELOPMENT
1603 WEST WALNUT
ROGERS, BENTON COUNTY, ARKANSAS

Prepared For: TRI-S, LLC

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER NO. 11169 CORD BRIXEY 3-25-16

Revisions:

BRIXEY ENGINEERING & LAND SURVEYING, INC.
CONSULTING ENGINEERS -- LAND SURVEYORS
5223 East Highway 45 P.O. Box 6180 Fort Smith, Arkansas 72906 (479) 646-5394

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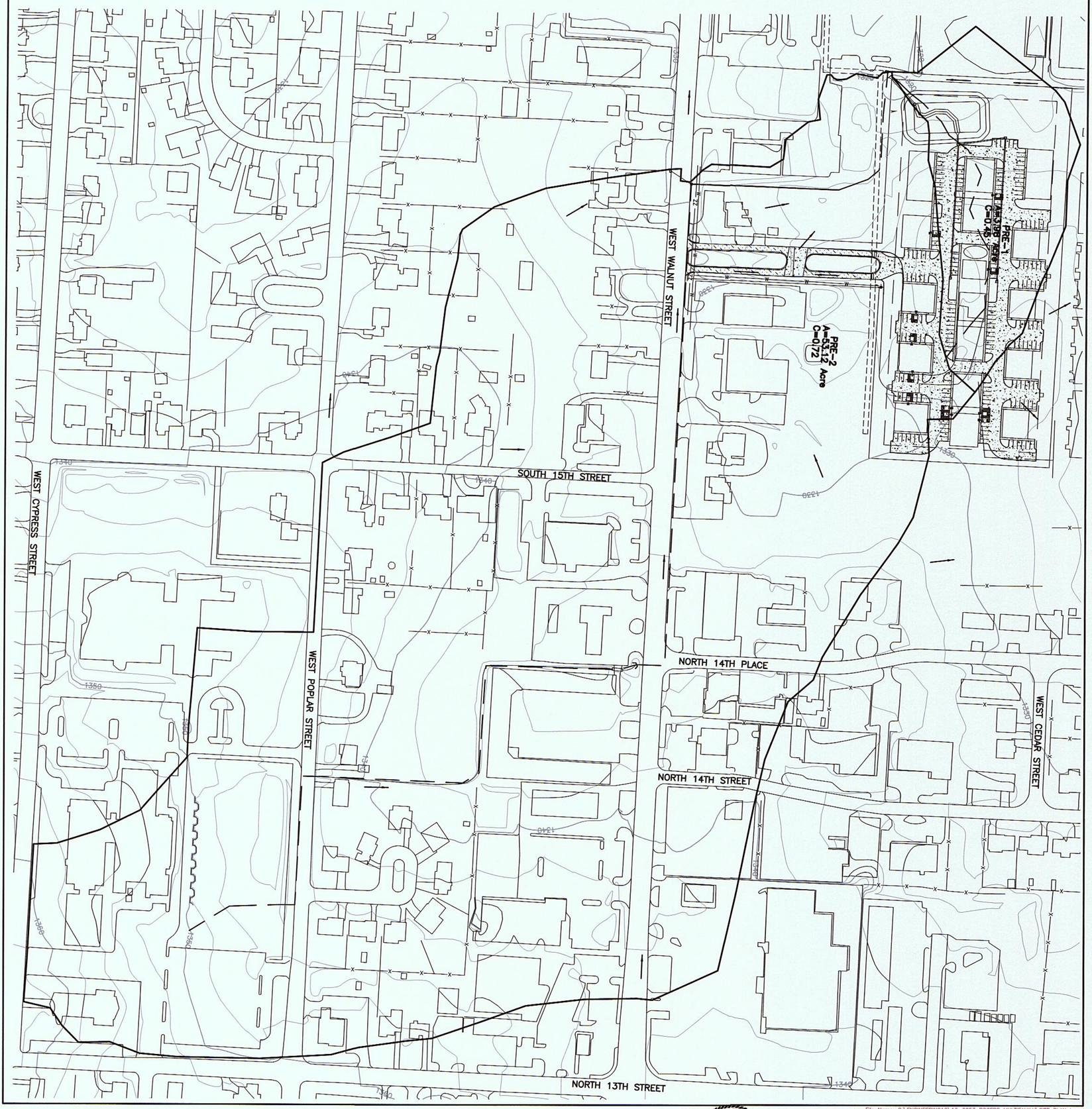
STATE OF ARKANSAS
BRIXEY ENGINEERING & LAND SURVEYING, INCORPORATED
NO. 98

SCALE IN FEET
100 0 100 200 300

CONTOUR INTERVAL 2 FOOT
TIME OF CONCENTRATION ____
FLOWPATH ____



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5223 East Highway 45 P.O. Box 6180 Fort Smith, Arkansas 72906 (479) 646-6394

Revisions:

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
NO. 11490
CHAD BRIXEY
2-25-16

PRE-DEVEL. DRAINAGE MAP

MULTIFAMILY DEVELOPMENT
1603 WEST WALNUT
ROGERS, BENTON COUNTY, ARKANSAS

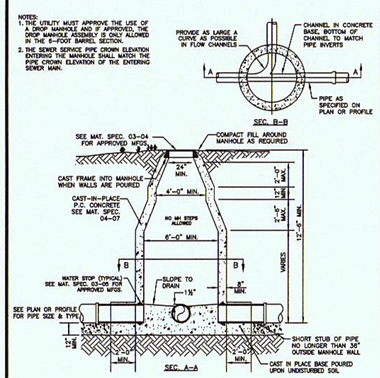
Prepared For: TRI-5, LLC

Date: 03/24/2016	
Drawn By: TMC	
Approved: CNB	
Job No. 16-0053	
Sheet C-7	
Filed	

SEE MATERIAL SPECIFICATIONS FOR APPROVED MANUFACTURERS

NOTES:
1. A MANHOLE BARREL CONSTRUCTION JOINT IS ALLOWED WITHIN A STRAIGHT WALL SEGMENT OF THE BARREL AT 12-FOOT ABOVE THE MANHOLE BASE AND SHALL HAVE A KEY WAY AND #4 REBAR AT 12-INCH ON CENTERS WITH 15" EMBEDDED IN EACH SIDE. STOP SHALL BE USED IF DIRECTED BY THE UTILITY.
2. THE BASE AND WALLS SHALL BE POURED MONOLITHICALLY.
3. THE CENTERLINE OF ALL PIPES ENTERING AND LEAVING MANHOLE SHALL PASS THROUGH THE CENTER OF THE MANHOLE.
4. MANHOLES THAT ARE LESS THAN 12'-8" IN DEPTH SHALL BE INDIVIDUALLY DESIGNED PER LOCATION CONDITIONS AND MUST BE APPROVED BY THE UTILITY.
5. POUR OUTSIDE MANHOLE BASE SO THAT THE TOP OF OUTSIDE BASE IS EVEN OR 2-INCH ABOVE THE CROWN OF THE PIPES ENTERING THE MANHOLE. BASE EXTEND MANHOLE BASE TO LIMITS OF EXCAVATION IN ALL DIRECTIONS 24" MINIMUM.
6. CONSTRUCT FLOW CHANNEL FOR ALL PIPES ENTERING MANHOLE, INCLUDING SERVICES. SLOPE CHANNELS TO MATCH PIPE INVERTS.
7. THE TOP OF MANHOLE TO BE LEVEL WITH FINISHED GRADE, UNLESS OTHERWISE NOTED OR DIRECTED BY THE UTILITY.
8. BRUSH FINISH SURFACES OF CONCRETE AND REMOVE ALL SHARP EDGES.

NOTES:
1. THE UTILITY MUST APPROVE THE USE OF A DROP MANHOLE AND IF APPROVED, THE DROP MANHOLE ASSEMBLY IS ONLY ALLOWED IN THE 6-FOOT BARREL SECTION.
2. THE SEWER SERVICE PIPE CROWN ELEVATION ENTERING THE MANHOLE SHALL MATCH THE PIPE CROWN ELEVATION OF THE ENTERING SEWER MAIN.

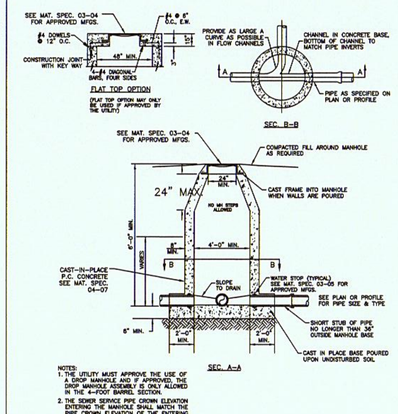


6 FT. CAST-IN-PLACE SANITARY SEWER MANHOLE DETAIL
N.T.S.

SD-1 / 1
REV. DEC. 2006

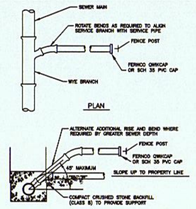
SEE MATERIAL SPECIFICATIONS FOR APPROVED MANUFACTURERS

NOTES:
1. A MANHOLE BARREL CONSTRUCTION JOINT IS ALLOWED WITHIN A STRAIGHT WALL SEGMENT OF THE BARREL AT 12-FOOT ABOVE THE MANHOLE BASE AND SHALL HAVE A KEY WAY AND #4 REBAR AT 12-INCH ON CENTERS WITH 15" EMBEDDED IN EACH SIDE. STOP SHALL BE USED IF DIRECTED BY THE UTILITY.
2. THE BASE AND WALLS SHALL BE POURED MONOLITHICALLY.
3. THE CENTERLINE OF ALL PIPES ENTERING AND LEAVING MANHOLE SHALL PASS THROUGH THE CENTER OF THE MANHOLE.
4. MANHOLES THAT ARE LESS THAN 6-FOOT IN DEPTH SHALL BE INDIVIDUALLY DESIGNED PER LOCATION CONDITIONS AND MUST BE APPROVED BY THE UTILITY.
5. POUR OUTSIDE MANHOLE BASE SO THAT THE TOP OF OUTSIDE BASE IS EVEN OR 2-INCH ABOVE THE CROWN OF THE PIPES ENTERING THE MANHOLE. BASE EXTEND MANHOLE BASE TO LIMITS OF EXCAVATION IN ALL DIRECTIONS 24" MINIMUM.
6. CONSTRUCT FLOW CHANNEL FOR ALL PIPES ENTERING MANHOLE, INCLUDING SERVICES. SLOPE CHANNELS TO MATCH PIPE INVERTS.
7. THE TOP OF MANHOLE TO BE LEVEL WITH FINISHED GRADE, UNLESS OTHERWISE NOTED OR DIRECTED BY THE UTILITY.
8. BRUSH FINISH SURFACES OF CONCRETE AND REMOVE ALL SHARP EDGES.



4 FT. CAST-IN-PLACE SANITARY SEWER MANHOLE DETAIL
N.T.S.

SD-1 / 2
REV. DEC. 2006

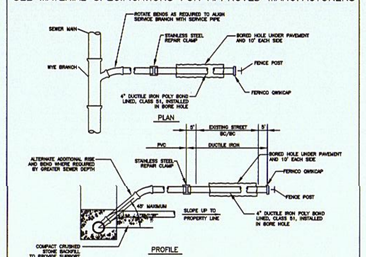


NOTES:
1. MODIFIED RISER LATERAL SHALL BE USED WHEN DEPTH OF SEWER EXCEEDS 10'-0".
2. PROVIDE 4" MIN. DEPTH OF CLASS 7 CRUSHED STONE FOR BEDDING AS REQUIRED FOR MAINS.
3. SERVICE LATERAL STUBS SHALL TERMINATE AT LEAST 2 FEET INSIDE THE PROPERTY LINE BUT IN NO CASE SHALL THE SERVICE LATERAL STUB TERMINATE AT A DISTANCE LESS THAN 8 FEET FROM THE FINISHED GRADE OF PROPERTY.
4. BURY A 6-FOOT STEEL TEE FENCE POST AT END OF SERVICE LATERAL STUB AND BACK FILL TO FINISHED GRADE OF PROPERTY. A GUARD 6-FOOT TEE FENCE POST SHALL ALSO BE REQUIRED IF BURIED STEEL POST FOR IS BELOW FINISHED GRADE OF PROPERTY.
5. CLASS 51, 4" DUCTILE IRON PIPE, LINED FOR SANITARY SEWER USE, AND 90° BELL TO PLAIN END FITTINGS SHALL BE INSTALLED FOR SERVICES BURIED AT DEPTHS OF 14 FEET AND GREATER.

STANDARD SEWER SERVICE LATERAL
N.T.S.

SD-1 / 3

SEE MATERIAL SPECIFICATIONS FOR APPROVED MANUFACTURERS

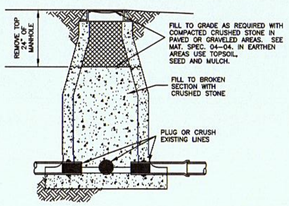


NOTES:
1. MODIFIED RISER LATERAL SHALL BE USED WHEN DEPTH OF SEWER EXCEEDS 10'-0".
2. PROVIDE 4" MIN. DEPTH OF CLASS 7 CRUSHED STONE FOR BEDDING AS REQUIRED FOR MAINS. SEE MAT. SPEC. 04-03.
3. SERVICE LATERAL STUBS SHALL TERMINATE AT LEAST 2 FEET INSIDE THE PROPERTY LINE BUT IN NO CASE SHALL THE SERVICE LATERAL STUB TERMINATE AT A DISTANCE LESS THAN 8 FEET FROM THE FINISHED GRADE OF PROPERTY.
4. BURY A 6 FOOT STEEL TEE FENCE POST AT END OF SERVICE LATERAL STUB AND BACK FILL TO FINISHED GRADE OF PROPERTY. A GUARD 6-FOOT TEE FENCE POST SHALL ALSO BE REQUIRED IF BURIED STEEL POST FOR IS BELOW FINISHED GRADE OF PROPERTY.
5. CLASS 51, 4" DUCTILE IRON PIPE, LINED FOR SANITARY SEWER USE, AND 90° BELL TO PLAIN END FITTINGS SHALL BE INSTALLED FOR SERVICES BURIED AT DEPTHS OF 14 FEET AND GREATER. SEE MAT. SPEC. 03-02 FOR APPROVED MFGS.

BORED SEWER SERVICE LATERAL UNDER EXISTING STREET
N.T.S.

SD-1 / 4

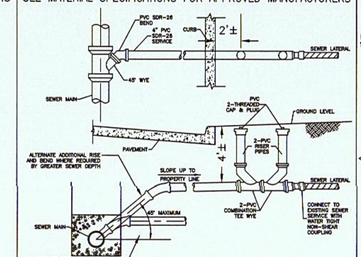
SEE MATERIAL SPECIFICATIONS FOR APPROVED MANUFACTURERS



SANITARY SEWER MANHOLE ABANDONMENT
N.T.S.

SD-1 / 5

SEE MATERIAL SPECIFICATIONS FOR APPROVED MANUFACTURERS

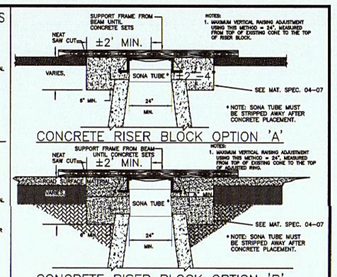


TWO-WAY CLEANOUTS WILL BE INSTALLED WHEN SEWER SERVICE IS IN THE STREET

4 INCH TWO-WAY SERVICE CLEANOUT
NTS

SD-1 / 6
REV. MAY. 2012

SEE MATERIAL SPECIFICATIONS FOR APPROVED MANUFACTURERS

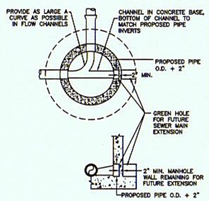


N.T.S.

FOR MANHOLE EXTENSION ADJUSTMENT WHICH EXCEED 24" IN PAVED AREAS, OR FOR MANHOLE SHORTENING IN PAVED AREAS, SEE DETAIL SD-1 / 10
SANITARY SEWER MANHOLE EXTENSION/SHORTENING DETAIL

MANHOLE ADJUSTMENT IN PAVED AREAS
N.T.S.

SD-1 / 6A
REV. DEC. 2006

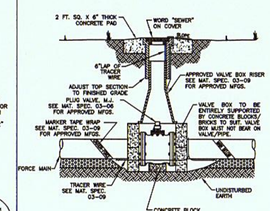


GREENHOLE/BLOCK OUT FOR FUTURE EXTENSION

SD-1 / 7
REV. DEC. 2006

SEE MATERIAL SPECIFICATIONS FOR APPROVED MANUFACTURERS

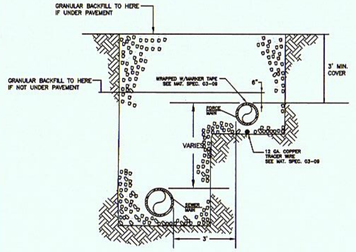
NOTES:
1. IF DEPTH OF BURY EXCEEDS 4 FT., A SIDE-LOADING VALVE EXTENSION STEM SHALL BE REQUIRED. THE VALVE EXTENSION STEM SHALL EXTEND TO 2 FEET BELOW FINISHED GRADE SURFACE. SEE MAT. SPEC. 03-09 FOR APPROVED MFGS.
2. THE TRACER WIRE SHALL EXTEND ALONG THE OUTSIDE AND TO THE TOP OF THE BOX. 6" LAP SHALL BE PROVIDED INTO THE BOX.



4"-12" SEWER FORCE MAIN PLUG VALVE DETAIL
N.T.S.

SD-1 / 8

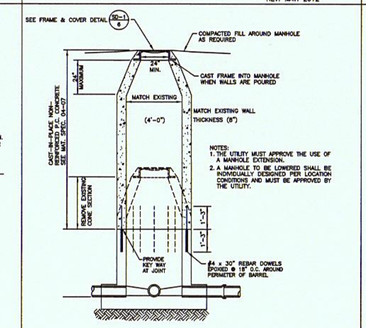
SEE MATERIAL SPECIFICATIONS FOR APPROVED MANUFACTURERS



PARALLEL SEWER FORCE MAIN & SANITARY SEWER MAIN
N.T.S.

SD-1 / 9

SEE MATERIAL SPECIFICATIONS FOR APPROVED MANUFACTURERS

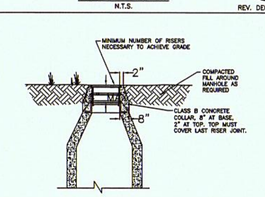


NOTES:
1. THE UTILITY MUST APPROVE THE USE OF A MANHOLE EXTENSION.
2. A MANHOLE TO BE LOWERED SHALL BE INDIVIDUALLY DESIGNED PER LOCATION CONDITIONS AND MUST BE APPROVED BY THE UTILITY.

SANITARY SEWER MANHOLE EXTENSION/SHORTENING DETAIL
N.T.S.

SD-1 / 10
REV. DEC. 2006

SEE MATERIAL SPECIFICATIONS FOR APPROVED MANUFACTURERS



FOR MANHOLE EXTENSION ADJUSTMENT WHICH EXCEED 24" IN GREEN AREAS, OR FOR MANHOLE SHORTENING IN GREEN AREAS, SEE DETAIL SD-1 / 10
SANITARY SEWER MANHOLE EXTENSION/SHORTENING DETAIL

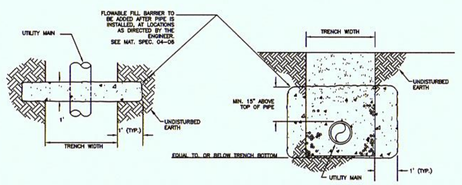
MANHOLE ADJUSTMENT IN GREEN AREAS
N.T.S.

SD-1 / 10B
REV. DEC. 2006

RESERVED

SD-1 / 11

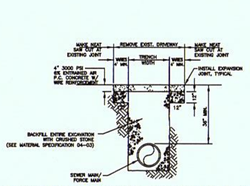
SEE MATERIAL SPECIFICATIONS FOR APPROVED MANUFACTURERS



ANTI-SEEPAGE BARRIER COLUMN
N.T.S.

SD-1 / 12
REV. DEC. 2006

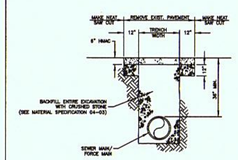
SEE MATERIAL SPECIFICATIONS FOR APPROVED MANUFACTURERS



CONCRETE DRIVEWAY CROSSING REPAIR
N.T.S.

SD-1 / 13

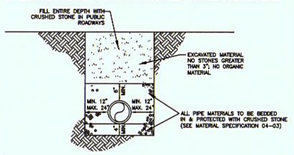
SEE MATERIAL SPECIFICATIONS FOR APPROVED MANUFACTURERS



ASPHALT DRIVEWAY/STREET CROSSING REPAIR
N.T.S.

SD-1 / 14

SEE MATERIAL SPECIFICATIONS FOR APPROVED MANUFACTURERS



TRENCH/PIPE BEDDING DETAIL FOR SEWER FORCE MAINS & SANITARY SEWER MAINS
N.T.S.

SD-1 / 15

SEE MATERIAL SPECIFICATIONS FOR APPROVED MANUFACTURERS

RESERVED

SD-1 / 16
REV. DEC. 2006

GENERAL CONSTRUCTION NOTES:

A. The contractor will be held solely responsible for damage occurring to any property during the construction of this project. Said contractor shall take all necessary precautions to prevent property damage.

B. In accordance with generally accepted construction practices, the contractor will be solely and completely responsible for conditions of the job site, including safety of all persons and property during performance of the work. This requirement will apply continuously and not be limited to normal working hours.

The duty of Rogers Water Utilities to conduct construction inspection or review of the contractor's performance is not an inspection or review of the adequacy of the contractor's safety measures in, on, or near the construction site.

C. All water and sewer improvements shall be constructed in accordance with the latest revision to the Rogers Water Utilities Standard Specifications.

D. The contractor is specifically cautioned that the location and/or elevation of existing utilities as shown on these plans is based on records of the various utility companies and, where possible, measurements taken in the field. The information is not to be relied on as being exact or complete. The contractor must call the appropriate utility company at least 48 hours before any excavation to request exact field location of utilities. It shall be the responsibility of the contractor to relocate all existing utilities which conflict with the proposed improvements shown on the plans.

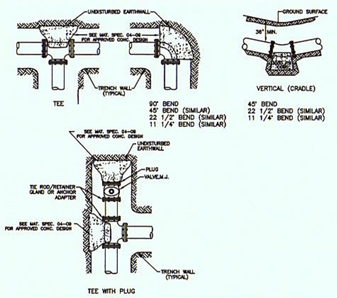
E. Contractor is to remove and dispose of all debris, rubbish and other materials resulting from previous and current demolition operations. Disposal will be in accordance with all local, state and/or federal regulations governing such operations.

F. Prior to installation of any utilities, the contractor is to excavate, verify, and calculate all crossings and inform the Rogers Water Utilities of any conflicts prior to construction.

G. Construction shall not start on any water utility until approval is given by Rogers Water Utilities. Said contractor shall not operate any valve, hydrant, or water utility appurtenance nor shall he attach to or tap any water utility main without approval. The contractor shall bear the cost and consequence of any disruption of utility operation caused by construction.

SD-1 / 17

SEE MATERIAL SPECIFICATIONS FOR APPROVED MANUFACTURERS



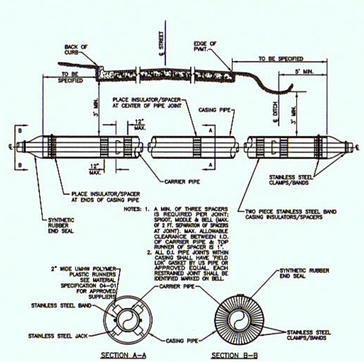
NOTES:
1. All fittings shall be mechanical joint.
2. Do not cover bells or flanges with concrete.
3. Wrap all fittings with vinepaper.
4. Back all tees according to size of branch.
5. Blocking future line extensions shall be such that later removal is possible.
6. All bends where fittings are used, both horizontal and vertical, shall be backed.
7. Assumed bearing table is based on 150 p.s.i. and soil bearing pressure of 2,500 lb./sq. ft. Additional blocking may be required in some areas as directed by engineer.

REACTION BACKING TABLE						
REQUIRED SQ. FT. OF UNDISTURBED EARTHWALL FOR REACTION BACKING						
	TYPE OF FITTINGS					
SIZE	TEE OR PLUG/CAP	90°	45°	22 1/2°	11 1/4°	
4"	1	1	1	1	1	
6"	2	1	1	1	1	
8"	3	2	1	1	1	
10"	4	3	2	1	1	
12"	5	4	2	2	1	

SEWER FORCE MAIN THRUST BLOCKING DETAIL
N.T.S.

SD-1 / 18

SEE MATERIAL SPECIFICATIONS FOR APPROVED MANUFACTURERS



NOTES: 1. A MIN. OF THREE SPACERS (S REQUIRED PER JOINT) SPACED MIDDLE & BELL SEAL. 2. ALL BELL AND SPIGOT JOINTS AT JOINT MAX. ALLOWABLE CLEARANCE BETWEEN I.D. OF CARRIER PIPE & TOP OF BELL SEAL. 3. ALL BELL AND SPIGOT JOINTS WITHIN CASING SHALL HAVE FIELD LOK GASKET BY US PIPE OR APPROVED EQUAL. EACH GASKET SHALL BE FIELD MARKED OR APPROVED MARKED ON BELL.

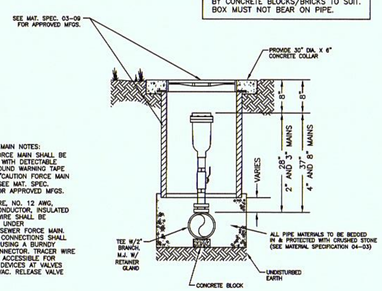
CARRIER & CASING SIZES								
CARRIER	6"	8"	10"	12"	15"	18"	20"	24"
CASING	16"	18"	18"	24"	30"	30"	30"	36"
CASING/WALL THICKNESS	.250	.250	.250	.375	.500	.500	.500	.500

JACK & BORE UNDER ROADWAY DETAIL
N.T.S.

SD-1 / 19
REV. DEC. 2006

SEE MATERIAL SPECIFICATIONS FOR APPROVED MANUFACTURERS

METER BOX TO BE ENTIRELY SUPPORTED BY CONCRETE BLOCKS/BRICKS TO SUIT. BOX MUST NOT BEAR ON PIPE.

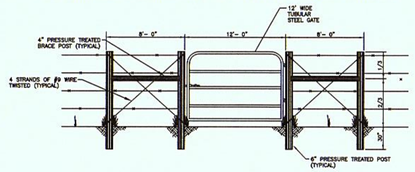


PVC FORCE MAIN NOTES:
1. SEWER FORCE MAIN SHALL BE WRAPPED WITH DETECTABLE UNDERGROUND WARNING TAPE LABELED "CAUTION FORCE MAIN BELOW". SEE MAT. SPEC. 03-09 FOR APPROVED MFGS.
2. TRACE WIRE, NO. 12 AWG, SINGLE CONDUCTOR, INSULATED COPPER WIRE SHALL BE INSTALLED UNDER THE PVC SEWER FORCE MAIN. ALL WIRE CONNECTIONS SHALL BE MADE USING A BURNDY CRIMP CONNECTOR. TRACER WIRE SHALL BE ACCESSIBLE FOR LOCATING DEVICES AT VALVES AND AIR VAC. RELEASE VALVE BOXES.

SEWER FORCE MAIN AIR AND VACUUM RELEASE VALVE ASSEMBLY
N.T.S.

SD-1 / 20

SEE MATERIAL SPECIFICATIONS FOR APPROVED MANUFACTURERS

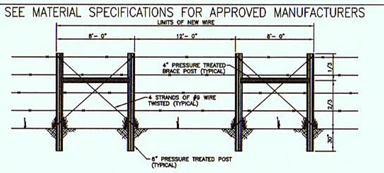


NOTES: 1. H-brace units shall be installed prior to cutting existing fence
2. Height of post to match existing posts.
3. New wire shall be the same type as existing fence.

FARM GATE INSTALLATION DETAIL
N.T.S.

SD-1 / 21

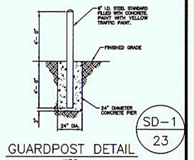
SEE MATERIAL SPECIFICATIONS FOR APPROVED MANUFACTURERS



NOTES: 1. H-brace units shall be installed prior to cutting existing fence
2. Height of post to match existing posts.
3. New wire shall be the same type as existing fence.

BARBED WIRE FENCE CROSSING REPAIR DETAIL
N.T.S.

SD-1 / 22



GUARDPOST DETAIL
N.T.S.

SD-1 / 23

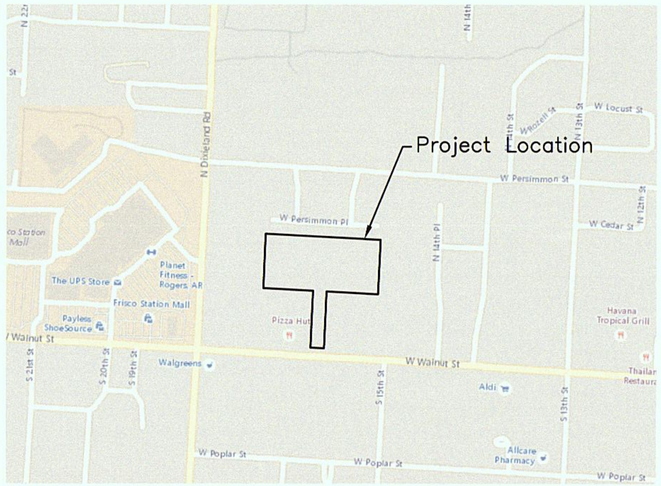
SEWER DETAILS

REVISED 05/08/2012

RWU ROGERS WATER UTILITIES
P.O. DRAWER 338
OFFICE - 601 SOUTH 2ND ROGERS, ARKANSAS
72757-0338

DRAWN BY: DDS	DATE: REV AUG./2007	SHEET NO. SD-1
CHECKED BY: EB	PROJECT NUMBER: STANDARD SEWER DETAILS	

50-0-2012/06



VICINITY MAP
Scale: 1" = 500'

LEGEND

- PROPERTY LINE
- EXISTING WATERLINE
- PROPOSED WATER SERVICE
- PROPOSED WATERLINE
- EXISTING SEWERLINE
- PROPOSED SEWERLINE
- FIRE HYDRANT
- CENTERLINE STREET
- EASEMENT LINE
- BUILDING SETBACK LINE
- OVERHEAD ELECTRIC
- UNDERGROUND ELECTRIC
- EXISTING GAS LINE
- UNDERGROUND TELEPHONE
- EXISTING PRIVACY FENCE
- SIDEWALK EXISTING
- SIDEWALK PROPOSED
- CURB
- CONCRETE PARKING
- ASPHALT STREET

OWNER/DEVELOPER:

TRI – 5, LLC.
P.O. BOX 11655
Fort Smith AR 72917

SITE INFORMATION:

ADDRESS: 1603 W. WALNUT ST. ROGERS, AR 72956
CURRENT ZONING: R–MF RESIDENTIAL MULTIFAMILY
AREA: 349,658 SF or 8.03 Acres
IMPERVIOUS AREA: ≤ 70% REQ'D; 62% PROVIDED
OPENSPACE: 10% REQ'D; 38% PROVIDED

PARKING REQUIREMENTS:

3 SPACES/2 UNITS = 192 SPACES REQUIRED
192 SPACES PROVIDED

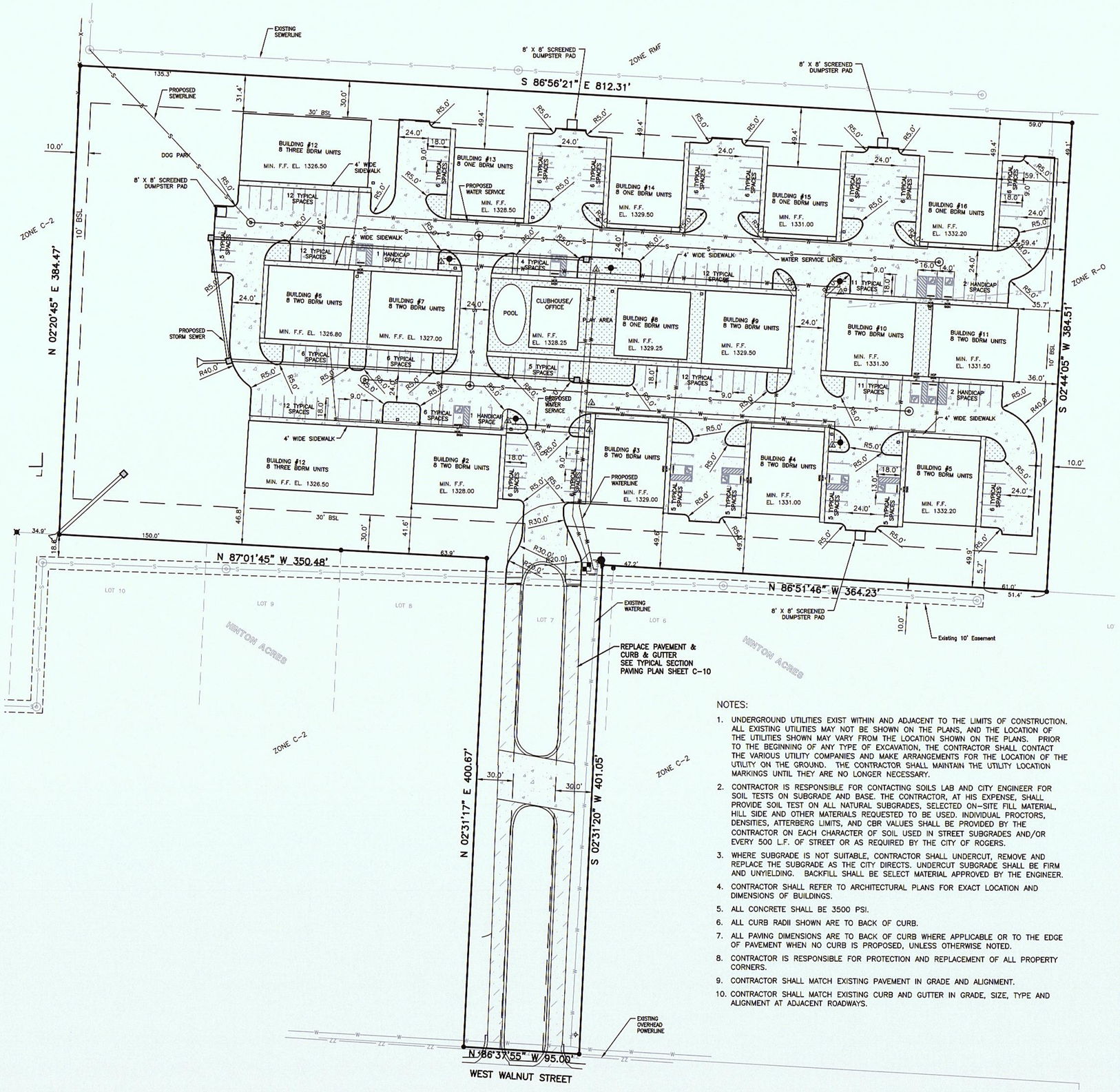
BUILDING SET BACKS

FRONT YARD: 30'
INTERIOR SIDE YARD: 10'
EXTERIOR SIDE YARD: 30'
REAR YARD: 30'

FLOOD ZONE STATEMENT

THE PROPERTY IS LOCATED IN ZONE "X", BEING OUTSIDE THE 500 YEAR FLOOD ZONE, AS GRAPHICALLY DEPICTED ON F.I.R.M. MAP NO. 05007C0260K, DATED JUNE 5, 2012.

*NOTE: REFER TO LANDSCAPE PLAN FOR LANDSCAPING REQUIREMENTS



NOTES:

1. UNDERGROUND UTILITIES EXIST WITHIN AND ADJACENT TO THE LIMITS OF CONSTRUCTION. ALL EXISTING UTILITIES MAY NOT BE SHOWN ON THE PLANS, AND THE LOCATION OF THE UTILITIES SHOWN MAY VARY FROM THE LOCATION SHOWN ON THE PLANS. PRIOR TO THE BEGINNING OF ANY TYPE OF EXCAVATION, THE CONTRACTOR SHALL CONTACT THE VARIOUS UTILITY COMPANIES AND MAKE ARRANGEMENTS FOR THE LOCATION OF THE UTILITY ON THE GROUND. THE CONTRACTOR SHALL MAINTAIN THE UTILITY LOCATION MARKINGS UNTIL THEY ARE NO LONGER NECESSARY.
2. CONTRACTOR IS RESPONSIBLE FOR CONTACTING SOILS LAB AND CITY ENGINEER FOR SOIL TESTS ON SUBGRADE AND BASE. THE CONTRACTOR, AT HIS EXPENSE, SHALL PROVIDE SOIL TEST ON ALL NATURAL SUBGRADES, SELECTED ON-SITE FILL MATERIAL, HILL SIDE AND OTHER MATERIALS REQUESTED TO BE USED. INDIVIDUAL PROCTORS, DENSITIES, ATTERBERG LIMITS, AND CBR VALUES SHALL BE PROVIDED BY THE CONTRACTOR ON EACH CHARACTER OF SOIL USED IN STREET SUBGRADES AND/OR EVERY 500 L.F. OF STREET OR AS REQUIRED BY THE CITY OF ROGERS.
3. WHERE SUBGRADE IS NOT SUITABLE, CONTRACTOR SHALL UNDERCUT, REMOVE AND REPLACE THE SUBGRADE AS THE CITY DIRECTS. UNDERCUT SUBGRADE SHALL BE FIRM AND UNYIELDING. BACKFILL SHALL BE SELECT MATERIAL APPROVED BY THE ENGINEER.
4. CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATION AND DIMENSIONS OF BUILDINGS.
5. ALL CONCRETE SHALL BE 3500 PSI.
6. ALL CURB RADII SHOWN ARE TO BACK OF CURB.
7. ALL PAVING DIMENSIONS ARE TO BACK OF CURB WHERE APPLICABLE OR TO THE EDGE OF PAVEMENT WHEN NO CURB IS PROPOSED, UNLESS OTHERWISE NOTED.
8. CONTRACTOR IS RESPONSIBLE FOR PROTECTION AND REPLACEMENT OF ALL PROPERTY CORNERS.
9. CONTRACTOR SHALL MATCH EXISTING PAVEMENT IN GRADE AND ALIGNMENT.
10. CONTRACTOR SHALL MATCH EXISTING CURB AND GUTTER IN GRADE, SIZE, TYPE AND ALIGNMENT AT ADJACENT ROADWAYS.

SCALE IN FEET
40 0 40 80 120

CERTIFICATE OF AUTHORIZATION
BRIXEY ENGINEERING & LAND SURVEYING, INCORPORATED
NO. 98
ARKANSAS ENGINEERING

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File Name: G:\ENGINEERING\16-0053 ROGERS MULTIFAM\16-0053.dwg

Date:	02/25/2016
Drawn By:	TMC
Approved:	CMB
Job No.	16-0053
Sheet	C-3
Filed	

SITE PLAN
MULTIFAMILY DEVELOPMENT
1603 WEST WALNUT
ROGERS, BENTON COUNTY, ARKANSAS

Prepared For: TRI-5, LLC

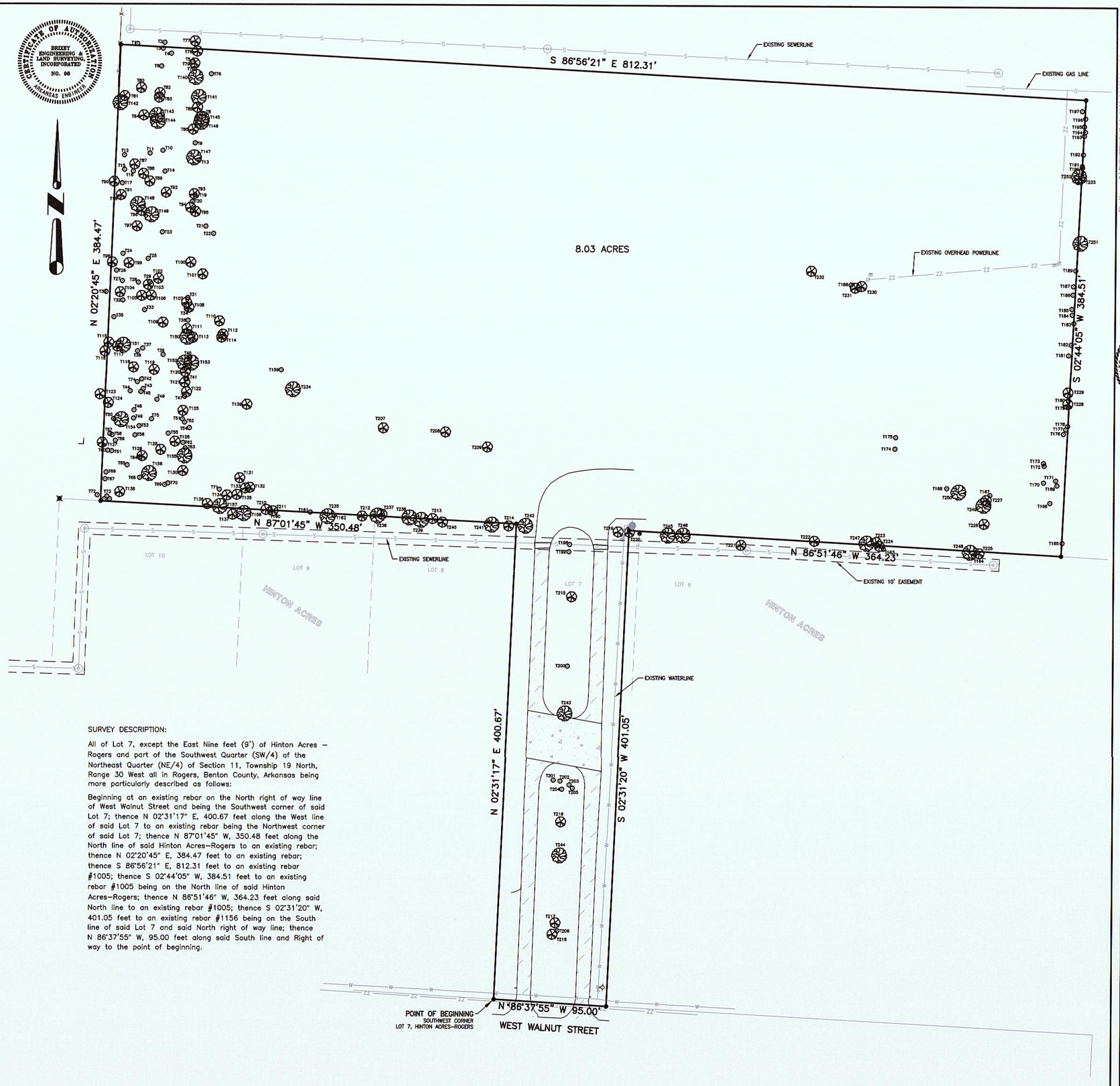
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
NO. 1160
02/25/16

Revisions:

BRIXEY ENGINEERING & LAND SURVEYING, INC.
CONSULTING ENGINEERS – LAND SURVEYORS
5223 East Highway 45 P.O. Box 6580 Fort Smith, Arkansas 72906 (479) 646-6394

TREE TABLE:

ID #	TRUNK	DESCRIPTION	ID #	TRUNK	DESCRIPTION	ID #	TRUNK	DESCRIPTION
T1	8"	CHERRY	T85	13"	CHERRY	T169	8"	ASH
T2	8"	PERSIMMON	T86	14"	OAK	T170	8"	LOCUST
T3	8"	PERSIMMON	T87	14"	HICKORY	T171	8"	TWIN ASH
T4	8"	TRIPLE HICKORY	T88	12"	HICKORY	T172	8"	ASH
T5	8"	OAK	T89	15"	HACKBERRY	T173	8"	ASH
T6	8"	OAK	T90	14"	ELM	T174	8"	ELM
T7	11"	OAK	T91	12"	CHERRY	T175	8"	ELM
T8	8"	OAK	T92	12"	CHERRY	T176	8"	CHERRY
T9	8"	DOUBLE OAK	T93	12"	HICKORY	T177	8"	CHERRY
T10	8"	LOCUST	T94	12"	OAK	T178	10"	ASH
T11	8"	DOUBLE HICKORY	T95	12"	OAK	T179	10"	CHERRY
T12	8"	DOUBLE OAK	T96	13"	CHERRY	T180	10"	CHERRY
T13	8"	CHERRY	T97	12"	OAK	T181	8"	APPLE
T14	8"	HICKORY	T98	12"	TRIPLE OAK	T182	8"	APPLE
T15	9"	HICKORY	T99	12"	CHERRY	T183	8"	ASH
T16	9"	HICKORY	T100	12"	CHERRY	T184	8"	DOUBLE ASH
T17	8"	CHERRY	T101	12"	HICKORY	T185	8"	DOUBLE ASH
T18	8"	CHERRY	T102	12"	CHERRY	T186	10"	CHERRY
T19	8"	DOUBLE HICKORY	T103	12"	CHERRY	T187	9"	ASH
T20	8"	DOUBLE CHERRY	T104	16"	CHERRY	T188	10"	DOUBLE CEDAR
T21	8"	CHERRY	T105	12"	OAK	T189	10"	CHERRY
T22	8"	CHERRY	T106	12"	CHERRY	T190	10"	CHERRY
T23	8"	CHERRY	T107	12"	TRIPLE HICKORY	T191	9"	CHERRY
T24	8"	CHERRY	T108	12"	HICKORY	T192	10"	CHERRY
T25	10"	CHERRY	T109	18"	OSAGE	T193	10"	CHERRY
T26	8"	CHERRY	T110	12"	CHERRY	T194	8"	ASH
T27	8"	CHERRY	T111	15"	CHERRY	T195	8"	ASH
T28	8"	CHERRY	T112	18"	CHERRY	T196	10"	CHERRY
T29	10"	CHERRY	T113	14"	ELM	T197	10"	CHERRY
T30	10"	ELM	T114	14"	CHERRY	T198	9"	REDBUD
T31	10"	HICKORY	T115	14"	OAK	T199	8"	CLUSTER OF CEDARS
T32	8"	HACKBERRY	T116	13"	OSAGE	T200	8"	CLUSTER OF CEDARS
T33	8"	HACKBERRY	T117	12"	HACKBERRY	T201	8"	TRIPLE ASH
T34	8"	CHERRY	T118	12"	OAK	T202	8"	ASH
T35	8"	TRIPLE OAK	T119	18"	OAK	T203	8"	ASH
T36	8"	TWIN HICKORY	T120	15"	HICKORY	T204	8"	CLUSTER OF CEDARS
T37	8"	ELM	T121	15"	HICKORY	T205	10"	TREE
T38	9"	ELM	T122	15"	HICKORY	T206	10"	HACKBERRY
T39	8"	HICKORY	T123	14"	OAK	T207	14"	MAPLE
T40	9"	ELM	T124	12"	ELM	T208	15"	MAPLE
T41	9"	ELM	T125	15"	OAK	T209	14"	SPRUCE
T42	8"	OAK	T126	12"	HACKBERRY	T210	12"	ELM
T43	8"	OAK	T127	12"	HICKORY	T211	12"	OAK
T44	8"	HICKORY	T128	14"	HACKBERRY	T212	13"	CHERRY
T45	8"	CHERRY	T129	12"	CHERRY	T213	12"	ELM
T46	8"	HICKORY	T130	12"	HICKORY	T214	16"	CHERRY
T47	8"	HICKORY	T131	12"	HICKORY	T215	14"	BRADFORD
T48	10"	CHERRY	T132	12"	HICKORY	T216	16"	DOUBLE ASH
T49	8"	HACKBERRY	T133	12"	HICKORY	T217	12"	ASH
T50	8"	CHERRY	T134	12"	HICKORY	T218	12"	HACKBERRY
T51	8"	HICKORY	T135	12"	HICKORY	T219	17"	CHERRY
T52	8"	HACKBERRY	T136	18"	OAK	T220	16"	CHERRY
T53	8"	CHERRY	T137	16"	HICKORY	T221	12"	TREE
T54	8"	HACKBERRY	T138	18"	HACKBERRY	T222	12"	CHERRY
T55	8"	CHERRY	T139	12"	DOUBLE SWEETGUM	T223	12"	TRIPLE ELM
T56	9"	CHERRY	T140	21"	CHERRY	T224	16"	CHERRY
T57	9"	CHERRY	T141	24"	OAK	T225	12"	ASH
T58	8"	CHERRY	T142	27"	OAK	T226	14"	ELM
T59	8"	HACKBERRY	T143	24"	OAK	T227	16"	ASH
T60	8"	HICKORY	T144	24"	OAK	T228	13"	CHERRY
T61	8"	HICKORY	T145	21"	OAK	T229	16"	CHERRY
T62	8"	OAK	T146	24"	OAK	T230	12"	CEDAR
T63	8"	CHERRY	T147	26"	CHERRY	T231	12"	CEDAR
T64	8"	CHERRY	T148	20"	ELM	T232	16"	CEDAR
T65	10"	CHERRY	T149	24"	ELM	T233	12"	CHERRY
T66	10"	HACKBERRY	T150	24"	CHERRY	T234	20"	ASH
T67	8"	ELM	T151	24"	CHERRY	T235	30"	ELM
T68	9"	CHERRY	T152	36"	OAK	T236	24"	CHERRY
T69	8"	HICKORY	T153	24"	ELM	T237	18"	OAK
T70	8"	HICKORY	T154	32"	OAK	T238	30"	CHERRY
T71	10"	HICKORY	T155	34"	OAK	T239	36"	CHERRY
T72	10"	ELM	T156	24"	CHERRY	T240	18"	LOCUST
T73	–	CLUSTER 3 HICKORY	T157	24"	OAK	T241	27"	LOCUST
T74	10"	OAK	T158	20"	CHERRY	T242	27"	CHERRY
T75	8"	CHERRY	T159	10"	DOUBLE ASH	T243	24"	MAPLE
T76	8"	MULBERRY	T160	8"	HACKBERRY	T244	24"	MAPLE
T77	12"	DOUBLE CHERRY	T161	8"	BRADFORD	T245	28"	CHERRY
T78	16"	CHERRY	T162	10"	CLUSTER OF ASH	T246	36"	TREE
T79	18"	CHERRY	T163	10"	HACKBERRY	T247	24"	CHERRY
T80	17"	OAK	T164	10"	OAK	T248	36"	CHERRY
T81	12"	OAK	T165	10"	BOXELDER	T249	24"	ASH
T82	12"	CHERRY	T166	8"	BOXELDER	T250	20"	ELM
T83	12"	CHERRY	T167	10"	ASH	T251	26"	CHERRY
T84	15"	OAK	T168	8"	ASH	T252	24"	ELM



SURVEY DESCRIPTION:

All of Lot 7, except the East Nine feet (9') of Hinton Acres – Rogers and part of the Southwest Quarter (SW/4) of the Northeast Quarter (NE/4) of Section 11, Township 19 North, Range 30 West all in Rogers, Benton County, Arkansas being more particularly described as follows:

Beginning at an existing rebar on the North right of way line of West Walnut Street and being the Southwest corner of said Lot 7; thence N 02°31'17" E, 400.67 feet along the West line of said Lot 7 to an existing rebar being the Northwest corner of said Lot 7; thence N 87°01'45" W, 350.48 feet along the North line of said Hinton Acres–Rogers to an existing rebar; thence N 02°20'45" E, 384.47 feet to an existing rebar; thence S 86°56'21" E, 812.31 feet to an existing rebar #1005; thence S 02°44'05" W, 384.51 feet to an existing rebar #1005 being on the North line of said Hinton Acres–Rogers; thence N 86°51'46" W, 364.23 feet along said North line to an existing rebar #1005; thence S 02°31'20" W, 401.05 feet to an existing rebar #1156 being on the South line of said Lot 7 and said North right of way line; thence N 86°37'55" W, 95.00 feet along said South line and Right of way to the point of beginning.

LEGEND

TELEPED
FIRE HYDRANT
MANHOLE
EXISTING SAN. SEWER
EXISTING WATER SERVICE
EASEMENT LINE
POWERPOLE
OVERHEAD ELECTRIC
GAS LINE
TELEPHONE LINE
CONCRETE
ASPHALT STREET

EXISTING TREES
19" – 36" TREE
12" – 18" TREE
8" – 11" TREE

SCALE IN FEET
40 0 40 80 120

BASIS OF BEARING: Grid North as determined by City of Rogers Monuments.
PROJECTION: SPCS3–Arkansas (North)
DATUM: NAD83

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Date: 03/25/2016
Drawn By: TMC
Approved: CNB
Job No. 16-0053
Sheet C-2
Filed

EXISTING SURVEY
MULTIFAMILY DEVELOPMENT
1603 WEST WALNUT
ROGERS, BENTON COUNTY, ARKANSAS

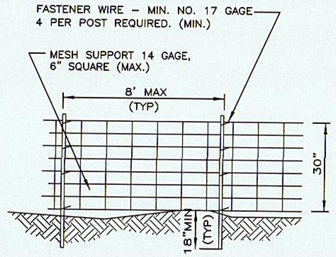
Prepared For: TRI-5, LLC

STATE OF ARKANSAS
CHAD BRIXEY
REGISTERED PROFESSIONAL ENGINEER
NO. 11690
3-25-16

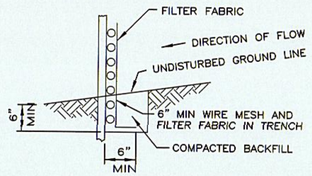
Revisions:

LEGEND
Computed Point
Found 1/2" Iron Pin
Exist. 1/2" Iron Pin
Set 1/2" Iron Pin
Exist. R.R. Spike
Set Nail
Exist. Nail
Exist. Stone
Exist. Monument
Exist. Fence

BRIXEY ENGINEERING & LAND SURVEYING, INC.
CONSULTING ENGINEERS – LAND SURVEYORS
5223 East Highway 45 P.O. Box 6580 Fort Smith, Arkansas 72906 (479) 646-8394



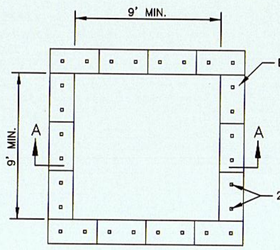
ELEVATION



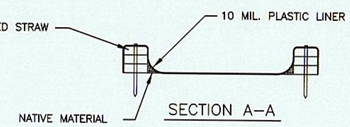
FABRIC ANCHOR DETAIL

N.T.S.

NOTE:
POSTS SHALL BE A MINIMUM OF 48" IN LENGTH. POSTS SHALL BE EITHER 2" x 2" OAK TIMBER, 2.5" DIA. SCH. 40 STEEL PIPE, OR STANDARD STEEL "T" OR "U" POSTS.



BALE CONFIGURATION PLAN



SECTION A–A

ABOVE GRADE CONCRETE WASHOUT AREA

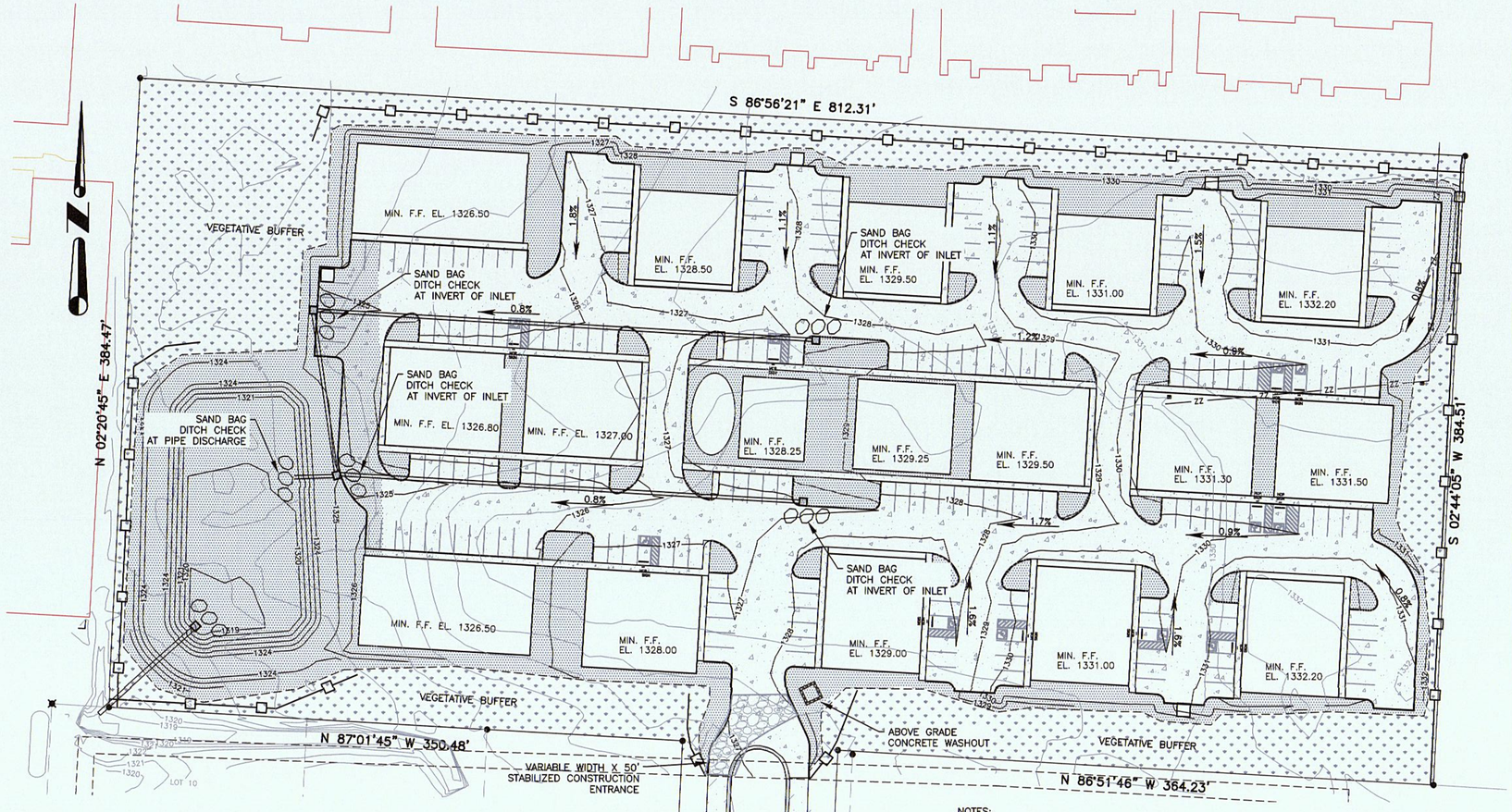
N.T.S.

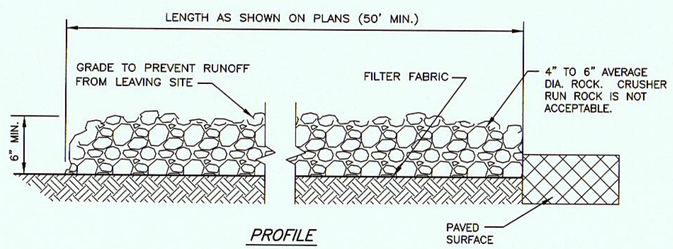
CONCRETE WASHOUT NOTES:

1. ACTUAL LAYOUT TO BE DETERMINED IN THE FIELD. CONCRETE WASHOUT AREA SHALL BE INSTALLED PRIOR TO ANY CONCRETE PLACEMENT ON SITE.
2. STAKES SHALL BE A MINIMUM OF 48" IN LENGTH. STAKES SHALL BE EITHER 2" x 2" OAK TIMBER, 2.5" DIA. SCH. 40 STEEL POSTS, OR STANDARD STEEL "T" OR "U" POSTS.
3. SIGNS SHALL BE PLACED AT THE CONSTRUCTION ENTRANCE, AT THE WASHOUT AREA, AND ELSWHERE AS NECESSARY TO CLEARLY INDICATE THE LOCATION OF THE CONCRETE WASHOUT AREA TO OPERATORS OF CONCRETE TRUCKS.
4. TEMPORARY CONCRETE WASHOUT FACILITIES SHALL BE MAINTAINED TO PROVIDE ADEQUATE HOLDING CAPACITY WITH A MINIMUM FREEBOARD OF FOUR (4) INCHES.
5. WASHOUT FACILITIES MUST BE CLEANED, OR NEW FACILITIES CONSTRUCTED AND READY FOR USE ONCE THE WASHOUT AREA 75% FULL.
6. AT THE END OF CONSTRUCTION, THE CONCRETE WASHOUT AREA AND ALL WASTE CONCRETE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF AT AN ACCEPTED WASTE SITE. WHEN THE WASHOUT AREA IS REMOVED, THE DISTURBED AREA SHALL BE TOPSOILED AND SODDED OR OTHERWISE STABILIZED IN A MANNER ACCEPTED BY THE CITY.
7. CONCRETE TRUCK WASHOUT AREA SHALL BE LIMITED TO THE DESIGNATED ON–SITE AREA.

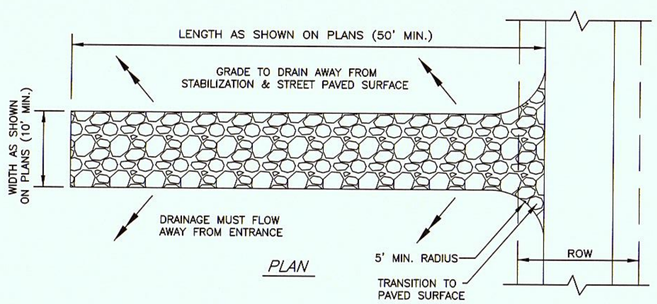
LEGEND

RIP RAP/B STONE		PROP. CURB	
ORIGINAL CONTOURS	500	FINAL CONTOURS	500
LIMITS OF CLEARING AND GRADING			
PROPERTY LINE			
AREA TO BE SEEDED AND MULCHED		ORIGINAL VEGETATION TO REMAIN	
SILT FENCE			
SAND BAG DITCH CHECK			
DIRECTION OF RUNOFF FLOW	2.9%		





PROFILE



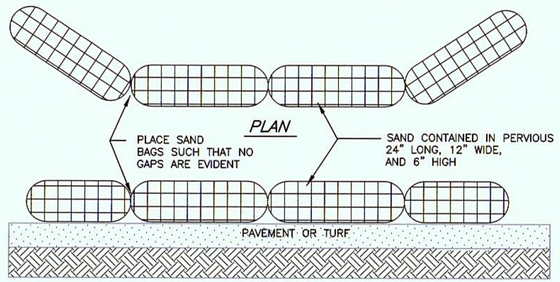
PLAN

STABILIZED CONSTRUCTION ENTRANCE

N.T.S.

NOTES:

1. ALL WASH WATER SHALL BE DISPOSED OF IN A MANNER THAT PREVENTS CONTACT BETWEEN WASH WATER POLLUTANTS AND STORM RUNOFF DISCHARGED FROM THIS SITE.
2. OIL AND GREASE ABSORBING MATERIALS SHALL BE READILY AVAILABLE ON–SITE AND SHALL BE PROMPTLY USED TO CONTAIN AND/OR CLEAN UP ALL FUEL OR CHEMICAL SPILLS OR LEAKS.
3. DUST CONTROL SHALL BE ACCOMPLISHED BY WATERING DRY, EXPOSED AREAS ON A REGULAR BASIS. SPRAYING OF PETROLEUM BASED OR TOXIC LIQUIDS FOR THIS IS PROHIBITED.
4. DISTURBED AREAS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE CEASED FOR AT LEAST FOURTEEN DAYS SHALL BE TEMPORARILY SEEDED AND WATERED.
5. DISTURBED AREAS OF THE SITE WHERE ACTIVITIES HAVE PERMANENTLY CEASED SHALL BE PERMANENTLY SEEDED WITHIN SEVEN DAYS PER LANDSCAPING AND/OR OWNERS REQUIREMENTS.
6. ALL VEHICLES SHALL BE CLEANED AT THE CONSTRUCTION EXIT POINTS ACCORDING TO NOTES SHOWN ON THE DETAIL THEREOF.
7. ALL MATERIALS SPILLED, DROPPED, WASHED OR TRACKED ONTO ADJACENT ROADWAYS BY VEHICLES EXITING THE SITE SHALL BE CLEANED OR REMOVED IMMEDIATELY.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROMPT REMOVAL OF ALL ACCUMULATED SILT IN THE STORM SEWER SYSTEM AND ALONG SILT FENCES.
9. SILT FENCES SHALL BE PLACED AROUND ANY STOCKPILES USED ON THIS SITE.
10. ANY ADDITIONAL EROSION CONTROL MEASURES REQUIRED TO ENSURE COMPLIANCE WITH NPDES, STORMWATER POLLUTION REGULATIONS SHALL BE IMPLEMENTED BY THE CONTRACTOR, AT NO ADDITIONAL EXPENSE TO THE OWNER.
11. ALL TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED AND PROPERLY DISPOSED OF OFF–SITE WITHIN THIRTY DAYS AFTER STABILIZATION OF ALL SURFACES.
12. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING EROSION CONTROL MEASURES UNTIL SITE HAS BEEN STABILIZED.



PROFILE

SAND BAG SEDIMENT BARRIER

N.T.S.

NOTES:

1. SITE AREA = 7.15 ACRES.
2. DISTURBED AREA = 5.73 ACRES
3. SOIL TYPE: BOONE FORMATION Mb MISSISSIPPI PERIOD

CERTIFICATE OF AUTHORIZATION
BRIXEY ENGINEERING & LAND SURVEYING, INCORPORATED
NO. 98
ARKANSAS ENGINEER

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SCALE IN FEET

40 0 40 80 120

File Name: G:\ENGINEERING\16-0053 ROGERS MULTIFAMILY\SWPPP.dwg

Date: 03/18/2016	
Drawn By: TMC	
Approved: CNB	
Job No. 16-0053	
Sheet C-4	
Filed	

SWPPP SITE MAP
MULTIFAMILY DEVELOPMENT
1603 WEST WALNUT
ROGERS, BENTON COUNTY, ARKANSAS
Prepared For: TRI-5, LLC

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
NO. 11160
CHAD BRIXEY
3-25-16

Revisions:

LEGEND
Set: Control Point
Set: 1/2" Iron Pin
Set: 5/8" Iron Pin
Set: R.R. Spike
Exist: R.R. Spike
Set: Nail
Exist: Nail
Exist: Stone
Exist: Monument
Exist: Fence

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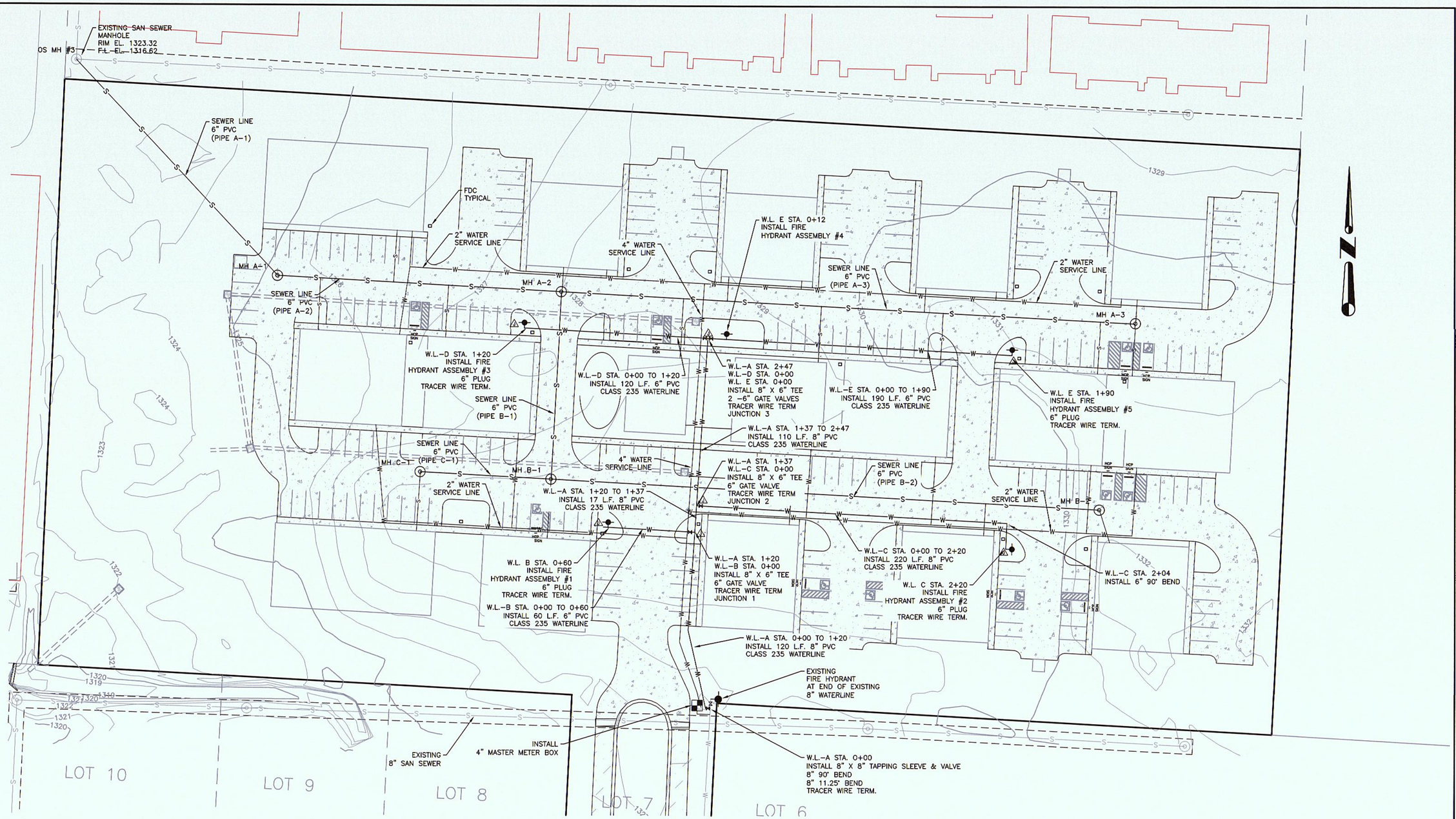
5223 East Highway 45 P.O. Box 6180 Fort Smith, Arkansas 72906 (479) 646-6394



LEGEND

- DEDICATED FIRE LINE
- WATER METER
- FIRE HYDRANT
- MANHOLE
- TRACER WIRE TERMINAL
- SAN. SEWER SERVICE
- SEWERLINE
- WATER SERVICE
- EASEMENT LINE
- STORM SEWER & INLET
- EXISTING SANITARY SEWER
- EXISTING WATERLINE
- PROPERTY LINE
- SIDEWALK
- CONCRETE PARKING
- ASPHALT STREET

SCALE IN FEET

30 0 30 60 90

CONSTRUCTION NOTES

1. Waterline tracer wire test stands to be placed at Fire Hydrant and Intermediate points at spacing not to exceed 500 feet. Wire to be 14 gage, solid, coated.
2. Gate valves to be Mueller Resilient Seated or approved equal.
3. Inverts will be formed for all manhole taps.
4. Fire Hydrant Assemblies include Tee, Valve, Anchor Coupling, and Hydrant. Hydrants to be Mueller A-423, Traffic Model with Anchor Tees and Swivel couplings.
5. All water line fittings to have Mega Lugs and thrust blocking.
6. Water lines 4" and larger to be AWWA Class 235 PVC.
7. Sewer main lines to be gravel wrapped, 6" PVC SDR26.
8. Water service line conduit to be 4" PVC SDR26.
9. Sewer service lines to be 4" PVC SDR26.
10. Rock excavation shall be measured as 24" wide, extending to an elevation 4" below the bottom of the pipe.

OWNER/DEVELOPER:

TRI – 5, LLC.
P.O. BOX 11655
Fort Smith AR 72917

"ALL CONSTRUCTION IS TO CONFORM TO THE CITY OF ROGERS STANDARD DRAWINGS AND SPECIFICATIONS"

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File Name: G:\ENGINEERING\16-0053 ROGERS MULTIFAMILY\BASE.dwg

Date: 03/25/2016
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Approved: CNB
Job No. 16-0053
Sheet C-12
Filed

UTILITY PLAN
MULTIFAMILY DEVELOPMENT
1603 WEST WALNUT
ROGERS, BENTON COUNTY, ARKANSAS

Prepared For: TRI-5, LLC

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER NO. 145 Charles N. Brixey

Revisions:

CERTIFICATE OF AUTHORIZATION BRIXEY ENGINEERING & LAND SURVEYING, INCORPORATED NO. 98 ARKANSAS ENGINEERING

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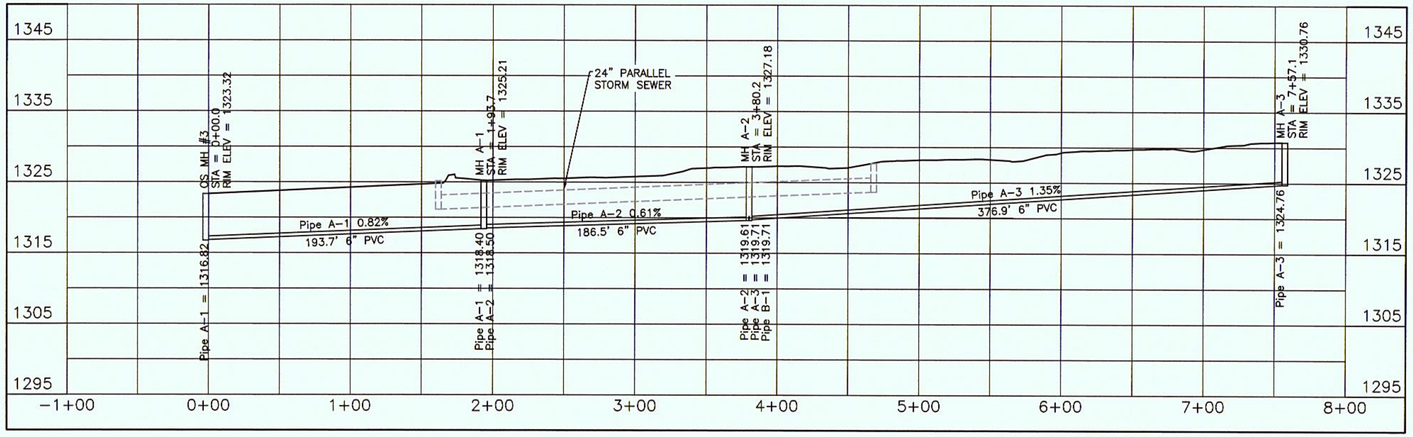
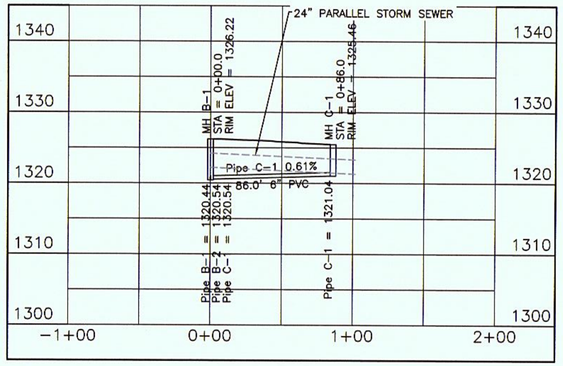
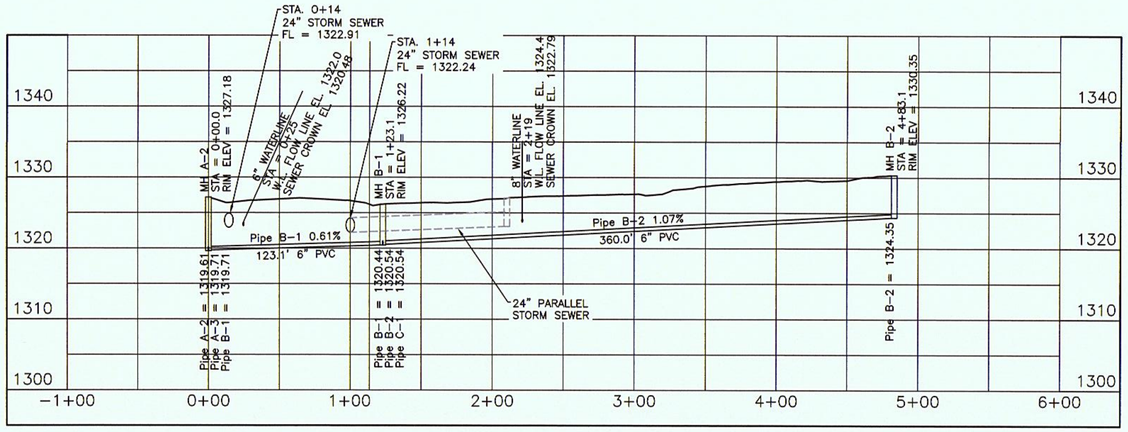
CONSULTING ENGINEERS -- LAND SURVEYORS
5223 East Highway 45 P.O. Box 6180 Fort Smith, Arkansas 72906 (479) 646-5394



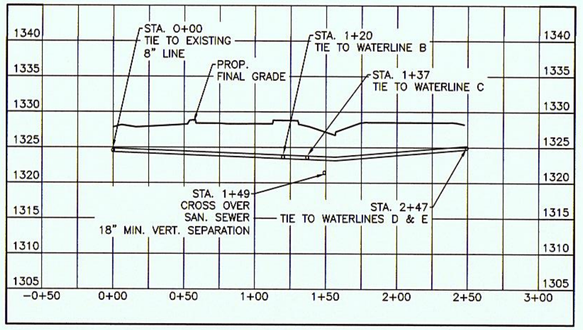
PROFILE SEWER LINE A



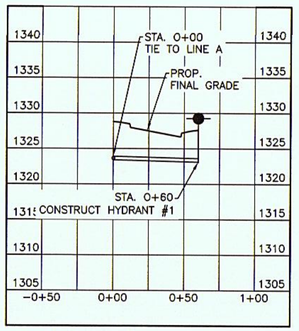
PROFILE SEWER LINE C



PROFILE SEWER LINE B



PROFILE WATER LINE A



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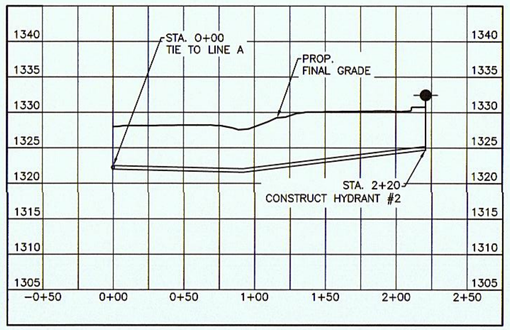
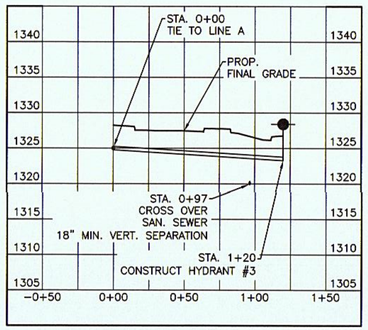
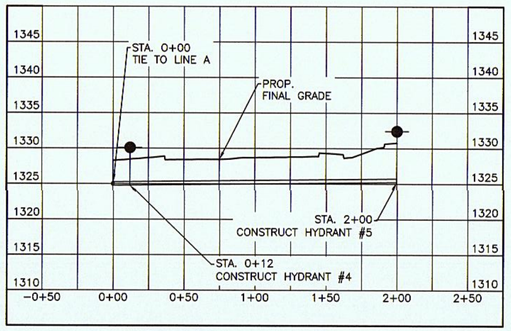


PROFILE WATER LINE C



PROFILE WATER LINE D



PROFILE WATER LINE E

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File Name: C:\13Projects\2013\13-0053 ROGERS MULTIFAMILY.DWG

Date:	03/07/2016
Drawn By:	TMC
Approved:	CNB
Job No.	16-0053
Sheet	C-13
Field	

UTILITY PROFILES
MULTIFAMILY DEVELOPMENT
1603 WEST WALNUT
ROGERS, BENTON COUNTY, ARKANSAS

Prepared For: TRI-S, LLC

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
NO. 456

Revisions:

CERTIFICATE OF AUTHORIZATION
BRIXEY ENGINEERING & LAND SURVEYING, INCORPORATED
NO. 98

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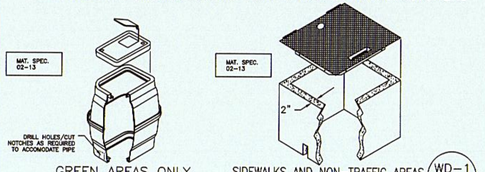
CONSULTING ENGINEERS — LAND SURVEYORS
5223 East Highway 45 P.O. Box 6180 Fort Smith, Arkansas 72906 (479) 646-5394

SEE MATERIAL SPECIFICATIONS FOR APPROVED MANUFACTURERS

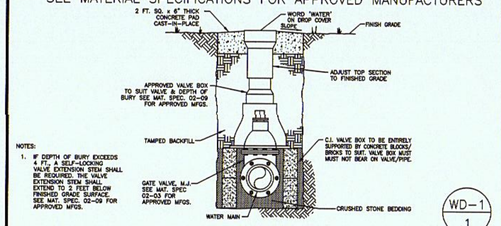


GREEN AREAS ONLY 1½"–2" METER BOX DETAILS
N.T.S.

SIDEWALKS AND NON-TRAFFIC AREAS 1½"–2" METER BOX DETAILS
N.T.S.

WD–1 1A
REV. DEC. 2006

SEE MATERIAL SPECIFICATIONS FOR APPROVED MANUFACTURERS

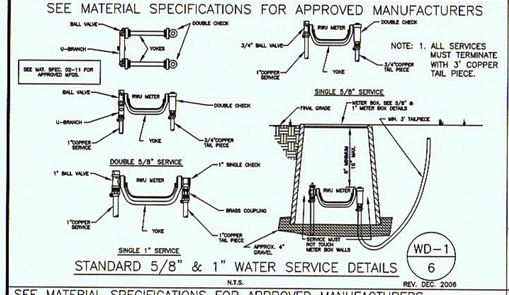


NOTES:
1. IF DEPTH OF BURY EXCEEDS 4 FT., A SELF-LOCKING VALVE EXTENSION STEM SHALL BE REQUIRED. THE VALVE EXTENSION STEM SHALL EXTEND TO 2 FEET BELOW FINISHED GRADE SURFACE. SEE MAT. SPEC. 02-09 FOR APPROVED MFGS.

GATE VALVE DETAIL
N.T.S.

WD–1 1
REV. DEC. 2006

SEE MATERIAL SPECIFICATIONS FOR APPROVED MANUFACTURERS

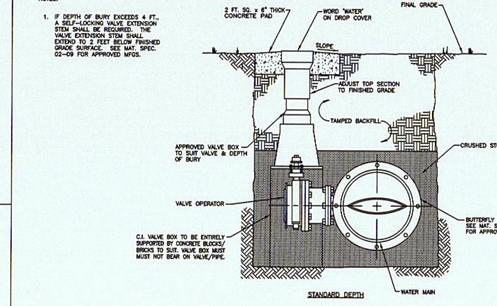


NOTE: 1. ALL SERVICES MUST TERMINATE WITH 3" COPPER TAIL PIECE.

STANDARD 5/8" & 1" WATER SERVICE DETAILS
N.T.S.

WD–1 6
REV. DEC. 2006

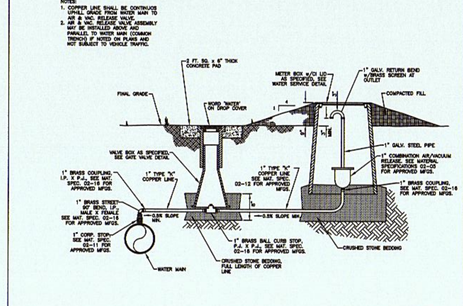
SEE MATERIAL SPECIFICATIONS FOR APPROVED MANUFACTURERS



BUTTERFLY VALVE DETAIL
12-INCH WATER MAINS AND LARGER
N.T.S.

WD–1 2
REV. DEC. 2006

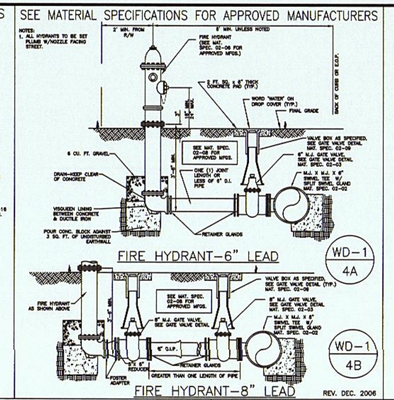
SEE MATERIAL SPECIFICATIONS FOR APPROVED MANUFACTURERS



1" AIR & VACUUM RELEASE VALVE ASSEMBLY
N.T.S.

WD–1 3
REV. DEC. 2006

SEE MATERIAL SPECIFICATIONS FOR APPROVED MANUFACTURERS



FIRE HYDRANT–6" LEAD

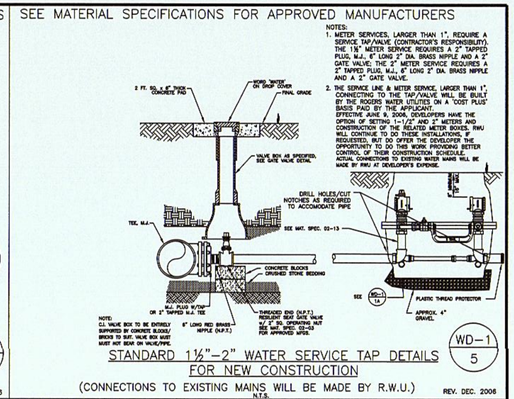
WD–1 4A

FIRE HYDRANT–8" LEAD

WD–1 4B

REV. DEC. 2006

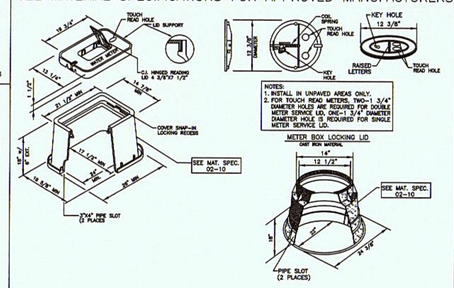
SEE MATERIAL SPECIFICATIONS FOR APPROVED MANUFACTURERS



STANDARD 1½"–2" WATER SERVICE TAP DETAILS FOR NEW CONSTRUCTION
(CONNECTIONS TO EXISTING MAINS WILL BE MADE BY R.W.U.)
N.T.S.

WD–1 5
REV. DEC. 2006

SEE MATERIAL SPECIFICATIONS FOR APPROVED MANUFACTURERS



NOTES:
1. INSTALL IN UNPAVED AREAS ONLY.
2. FOR TOUCH READ METERS, TWO-1 3/4" DIAMETER HOLES ARE REQUIRED FOR DOUBLE METER SERVICE LID. ONE-1 3/4" DIAMETER HOLE IS REQUIRED FOR SINGLE METER SERVICE LID.

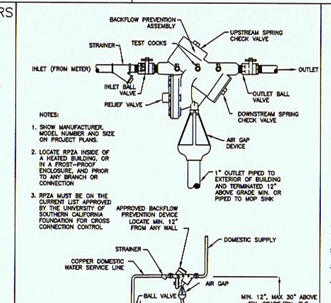
TYPICAL 1" METER BOX DETAIL (SINGLE ONLY)

TYPICAL 5/8" METER BOX DETAIL (SINGLE & DOUBLE)

5/8" & 1" METER BOX DETAILS
N.T.S.

WD–1 7
REV. DEC. 2006

SEE MATERIAL SPECIFICATIONS FOR APPROVED MANUFACTURERS

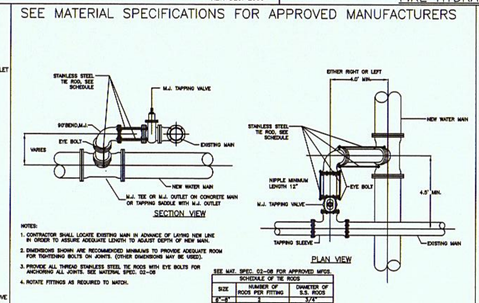


NOTES:
1. SHOW MANUFACTURER, MODEL NUMBER AND SIZE ON PROJECT PLANS.
2. LOCATE RPZA INSIDE OF A HEATED BUILDING, OR IN A FROST-PROOF ENCLOSURE, AND PRIOR TO ANY BRANCH OR CONNECTION
3. RPZA MUST BE ON THE CURRENT LIST APPROVED BY THE UNIVERSITY OF SOUTHERN CALIFORNIA FOUNDATION FOR CROSS CONNECTION CONTROL.

REDUCED PRESSURE ZONE ASSEMBLY (RPZA)
N.T.S.

WD–1 8
REV. DEC. 2006

SEE MATERIAL SPECIFICATIONS FOR APPROVED MANUFACTURERS



NOTES:
1. CONTRACTOR SHALL LOCATE EXISTING MAIN IN ADVANCE OF LAYING NEW LINE IN ORDER TO ASSURE ADEQUATE LENGTH TO ADJUST DEPTH OF NEW MAIN.
2. DIMENSIONS SHOWN ARE RECOMMENDED MINIMUMS TO PROVIDE ADEQUATE ROOM FOR TIGHTENING BOLTS ON JOINTS. (OTHER DIMENSIONS MAY BE USED).
3. PROVIDE ALL THREAD STAINLESS STEEL TIE RODS WITH EYE BOLTS FOR ANCHORING ALL JOINTS. SEE MATERIAL SPEC. 02-08
4. ROTATE FITTINGS AS REQUIRED TO MATCH.

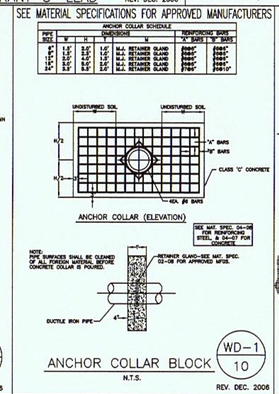
SEE MAT. SPEC. 02-08 FOR APPROVED MFGS.

SIZE	SCHEDULE OF THE RODS	
	NUMBER OF RODS PER FITTING	DIAMETER OF S.S. RODS
12"	4	3/4"

SWING CONNECTION – NEW MAIN TO EXISTING MAIN
N.T.S.

WD–1 9
REV. DEC. 2006

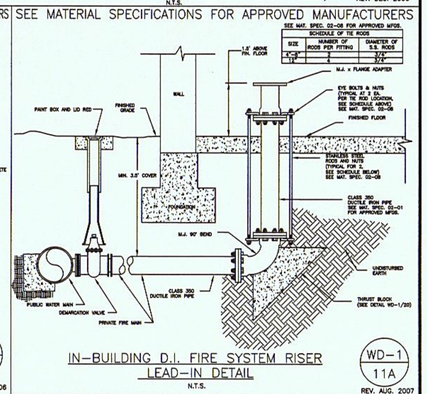
SEE MATERIAL SPECIFICATIONS FOR APPROVED MANUFACTURERS



ANCHOR COLLAR BLOCK
N.T.S.

WD–1 10
REV. DEC. 2006

SEE MATERIAL SPECIFICATIONS FOR APPROVED MANUFACTURERS



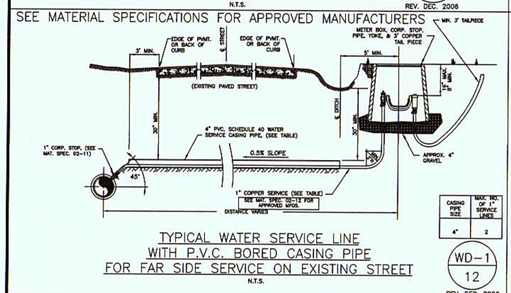
SEE MAT. SPEC. 02-08 FOR APPROVED MFGS.

SIZE	NUMBER OF RODS PER FITTING	DIAMETER OF S.S. RODS
4"-6"	2	3/4"
8"	4	3/4"

IN-BUILDING D.I. FIRE SYSTEM RISER LEAD-IN DETAIL
N.T.S.

WD–1 11A
REV. AUG. 2007

SEE MATERIAL SPECIFICATIONS FOR APPROVED MANUFACTURERS

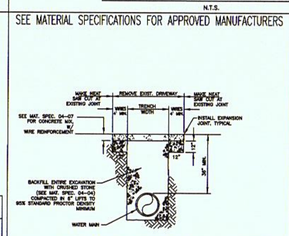


CASING PIPE SIZE	MAX. NO. OF 1" COPPER SERVICE LINES
4"	2

TYPICAL WATER SERVICE LINE WITH P.V.C. BORED CASING PIPE FOR FAR SIDE SERVICE ON EXISTING STREET
N.T.S.

WD–1 12
REV. DEC. 2006

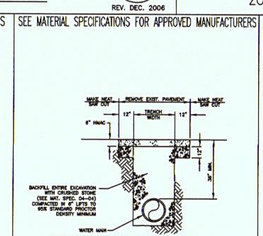
SEE MATERIAL SPECIFICATIONS FOR APPROVED MANUFACTURERS



PERMANENT CONCRETE DRIVEWAY CROSSING REPAIR
N.T.S.

WD–1 15
REV. DEC. 2006

SEE MATERIAL SPECIFICATIONS FOR APPROVED MANUFACTURERS



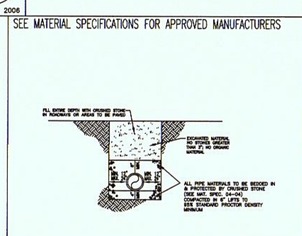
PERMANENT ASPHALT DRIVEWAY/STREET CROSSING REPAIR
N.T.S.

WD–1 16
REV. DEC. 2006

RESERVED

REV. AUG. 2007

SEE MATERIAL SPECIFICATIONS FOR APPROVED MANUFACTURERS



TRENCH/PIPE BEDDING DETAIL FOR WATER MAINS
N.T.S.

WD–1 18
REV. DEC. 2006

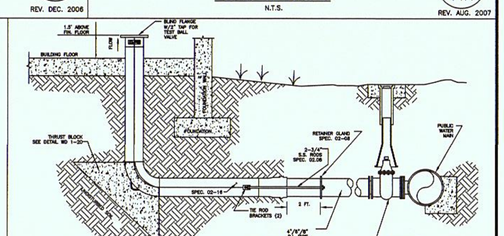
RESERVED

WD–1 13 WD–1 14 WD–1 17

NOT USED

REV. AUG. 2007

SEE MATERIAL SPECIFICATIONS FOR APPROVED MANUFACTURERS



IN-BUILDING STAINLESS STEEL FIRE LINE RISER
N.T.S.

WD–1 11B
REV. AUG. 2007

GENERAL CONSTRUCTION NOTES:

A. The contractor will be held solely responsible for damage occurring to any property during the construction of this project. Said contractor shall take all necessary precautions to prevent property damage.

B. In accordance with generally accepted construction practices, the contractor will be solely and completely responsible for conditions of the job site, including safety of all persons and property during performance of the work. This requirement will apply continuously and not be limited to normal working hours.

The duty of Rogers Water Utilities to conduct construction inspection or review of the contractor's performance is not an inspection or review of the adequacy of the contractor's safety measures in, on, or near the construction site.

C. All water and sewer improvements shall be constructed in accordance with the latest revision to the Rogers Water Utilities Standard Specifications.

D. The contractor is specifically cautioned that the location and/or elevation of existing utilities as shown on these plans is based on records of the various utility companies and, where possible, measurements taken in the field. The information is not to be relied on as being exact or complete. The contractor must call the appropriate utility company at least 48 hours before any excavation to request exact field location of utilities. It shall be the responsibility of the contractor to relocate all existing utilities which conflict with the proposed improvements shown on the plans.

E. Contractor is to remove and dispose of all debris, rubbish and other materials resulting from previous and current demolition operations. Disposal will be in accordance with all local, state and/or federal regulations governing such operations.

F. Prior to installation of any utilities, the contractor is to excavate, verify, and calculate all crossings and inform the Rogers Water Utilities of any conflicts prior to construction.

G. Construction shall not start on any water utility until approval is given by Rogers Water Utilities. Said contractor shall not operate any valve, hydrant, or water utility appurtenance nor shall he attach to or tap any water utility main without approval. The contractor shall bear the cost and consequence of any disruption of utility operation caused by construction.

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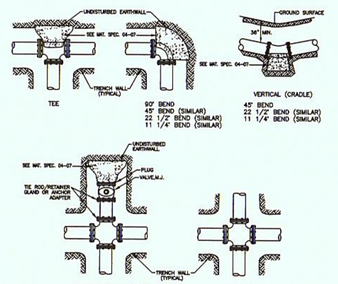
WD-2012WG

SEE MATERIAL SPECIFICATIONS FOR APPROVED MANUFACTURERS



NOTES:
1. All fittings shall be mechanical joint with retainer glands.
2. Do not cover bells or flanges with concrete.
3. Wrap all fittings with visqueen.
4. Block all tees according to size of branch.
5. Blocking future line extensions shall be left in place and removed as needed.
6. All bends where fittings are used both horizontal and vertical, shall be backed.
7. Reaction backing table is based on 150 p.s.i. and soil bearing pressure of 2,500 lb./sq. ft. Additional backing may be required in some areas as directed by engineer.

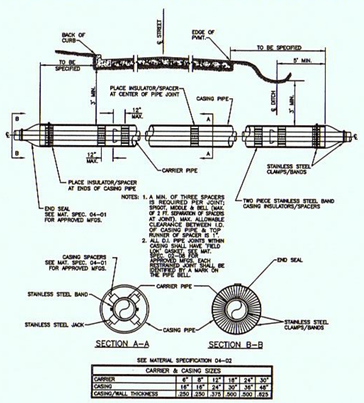
REACTION BACKING TABLE

SIZE	REQUIRED SQ. FT. OF UNDISTURBED EARTHWALL FOR REACTION BACKING				
	TYPE OF FITTINGS				
	90°	45°	22 1/2°	11 1/4°	
4"	3	1			
6"	5	2	1	1	
8"	9	3	2	1	
10"	13	5	2	1	
12"	18	6	3	2	
16"	32	10	5	2	
20"	50	16	8	3	
24"	72	23	12	4	
30"	112	36	18	6	
36"	162	52	26	9	

THRUST BLOCKING DETAIL
N.T.S.

WD–1 20
REV. DEC. 2006

SEE MATERIAL SPECIFICATIONS FOR APPROVED MANUFACTURERS



NOTES:
1. A MIN. OF THREE SPACERS IS REQUIRED PER JOINT. SPACERS SHALL BE A MAX. OF 2 FT. SEPARATION OF SPACERS AT JOINT). MAX. ALLOWABLE CLEARANCE BETWEEN I.D. OF CASING PIPE & TOP OF CARRIER PIPE IS 1".
2. ALL STEEL PIPE JOINTS WITHIN CASING SHALL HAVE FIELD WELD, VERTICAL BEVEL, PER AWWA C206 APPROVED WELD. EACH WELDED JOINT SHALL BE TESTED AT A MARK ON THE PIPE BY A

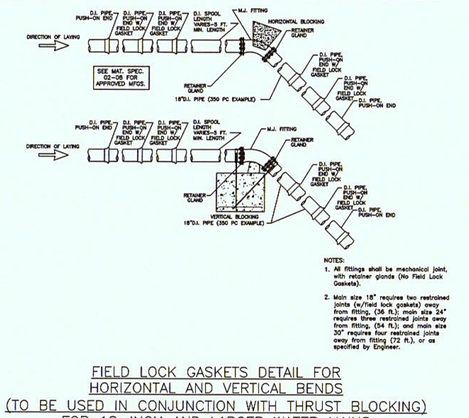
SEE MATERIAL SPECIFICATION 04-02

CARRIER & CASING SIZES						
CARRIER	6"	8"	12"	18"	24"	30"
CASING	16"	18"	24"	30"	36"	48"
CASING/WALL THICKNESS	.250	.250	.375	.500	.500	.625

JACK & BORE UNDER ROADWAY DETAIL
N.T.S.

WD–1 21
REV. DEC. 2006

SEE MATERIAL SPECIFICATIONS FOR APPROVED MANUFACTURERS



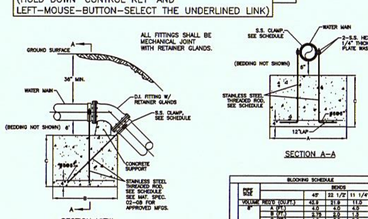
NOTES:
1. All fittings shall be mechanical joint, with retainer glands (No Field Lock Gaskets).
2. Main size 18" requires two restrained joints (w/field lock gaskets) away from fitting. (36 ft.); main size 24" requires three restrained joints away from fitting. (54 ft.); and main size 30" requires four restrained joints away from fitting (72 ft.), or as specified by Engineer.

FIELD LOCK GASKETS DETAIL FOR HORIZONTAL AND VERTICAL BENDS (TO BE USED IN CONJUNCTION WITH THRUST BLOCKING) FOR 18-INCH AND LARGER WATER MAINS
N.T.S.

WD–1 22
REV. DEC. 2006

SEE MATERIAL SPECIFICATIONS FOR APPROVED MANUFACTURERS
HTTP://WWW.RWU.ORG/ENGINEERING.HTM

HYPERLINK TO RWU WEBSITE FROM ACTIVE .DWG FILE (HOLD DOWN 'CONTROL KEY' AND LEFT-MOUSE-BUTTON-SELECT THE UNDERLINED LINK)



NOTES:
1. All fittings shall be mechanical joint with retainer glands.
2. Do not cover bells or flanges with concrete.
3. Wrap all fittings with visqueen.
4. Gulf State Hanger's 2-Bolt S.S. pipe clamp, medium-Fig. 80 or approved equal.

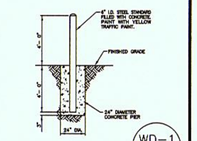
BLOCKING SCHEDULE					
		BENDS			
		45°	22 1/2°	11 1/4°	ROD DIA.
VOLUME	(CU.FT.)	42.0	21.0	11.0	
4"	C.FT.	4.0	2.0	1.0	
	D.FT.	8.0	4.0	2.0	3/4 IN.
	CLAMP	3/8 IN.	3/8 IN.	3/8 IN.	
VOLUME	(CU.FT.)	84.7	42.3	21.1	
6"	C.FT.	6.0	3.0	1.5	
	D.FT.	9.0	4.5	2.3	7/8 IN.
	CLAMP	3/8 IN.	3/8 IN.	3/8 IN.	
VOLUME	(CU.FT.)	152	76	38	
8"	C.FT.	8.0	4.0	2.0	
	D.FT.	9.5	4.8	2.3	1 IN.
	CLAMP	3/8 IN.	3/8 IN.	3/8 IN.	
VOLUME	(CU.FT.)	242	121	60.5	
10"	C.FT.	10.0	5.0	2.5	
	D.FT.	9.5	4.8	2.3	1 1/8 IN.
	CLAMP	3/8 IN.	3/8 IN.	3/8 IN.	
VOLUME	(CU.FT.)	348	174	87.0	
12"	C.FT.	12.0	6.0	3.0	
	D.FT.	9.5	4.8	2.3	1 1/8 IN.
	CLAMP	3/8 IN.	3/8 IN.	3/8 IN.	

VOLUME CALCULATION ON THE BASIS OF CONCRETE REACTING AGAINST ON THE UNDISTURBED SOIL(SEE ABOVE FOR ATTENUATED VOLUME IF ANY) WITH THE WEIGHT OF CONCRETE IS 150 POUNDS PER CU. FT.

VERTICAL TIE-DOWN BLOCKING DETAIL
N.T.S.

WD–1 23
REV. DEC. 2006

SEE MATERIAL SPECIFICATIONS FOR APPROVED MANUFACTURERS



GUARDPOST DETAIL
N.T.S.

WD–1 24
REV. DEC. 2006

WATER DETAILS
UPDATED DRAWING 07/12/2011

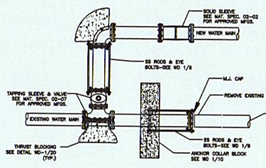
RWU ROGERS WATER UTILITIES
P.O. DRAWER 338
OFFICE - 601 SOUTH 2ND ROGERS, ARKANSAS
72757-0338

DRAWN BY:	DATE:	SHEET NO.
DDS	REV. AUG./07	WD–1
CHECKED BY: EB	PROJECT NUMBER: STANDARD WATER DETAILS	

RESERVED

WD-2 / 1A

SEE MATERIAL SPECIFICATIONS FOR APPROVED MANUFACTURERS



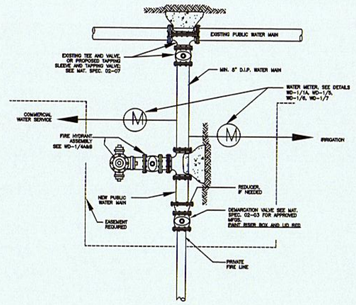
CUT AND CAP DETAIL #1

N.T.S.

WD-2 / 1

REV. DEC. 2006

SEE MATERIAL SPECIFICATIONS FOR APPROVED MANUFACTURERS



COMMERCIAL, IRRIGATION AND FIRE LINE CONNECTION DETAIL

N.T.S.

WD-2 / 2

REV. DEC. 2006

SEE MATERIAL SPECIFICATIONS FOR APPROVED MANUFACTURERS

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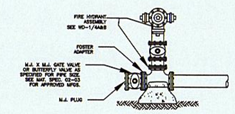
WD-2 / 3

REV. MAR. 2009

SEE MATERIAL SPECIFICATIONS FOR APPROVED MANUFACTURERS



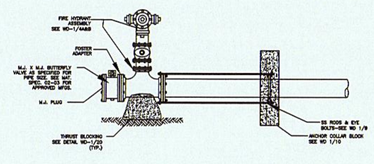
END-OF-LINE/PHASE LINE FIRE HYDRANT DETAIL 8" & 12" MAINS

N.T.S.

WD-2 / 4

REV. DEC. 2006

SEE MATERIAL SPECIFICATIONS FOR APPROVED MANUFACTURERS



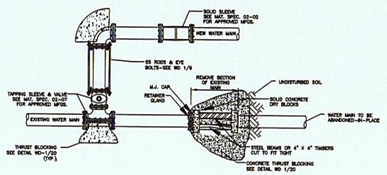
END-OF-LINE/PHASE LINE FIRE HYDRANT DETAIL MAINS LARGER THAN 12"

N.T.S.

WD-2 / 5

REV. DEC. 2006

SEE MATERIAL SPECIFICATIONS FOR APPROVED MANUFACTURERS



CUT AND CAP DETAIL #2 "HOT-BLOCK"

N.T.S.

WD-2 / 7

REV. DEC. 2006

RESERVED

WD-2 / 8

SEE MATERIAL SPECIFICATIONS FOR APPROVED MANUFACTURERS

RESERVED

WD-2 / 9

REV. NOV. 2006

RESERVED

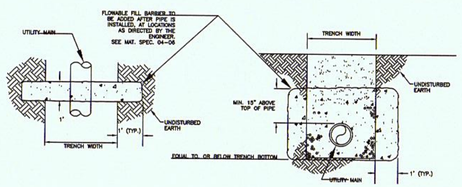
WD-2 / 10

SEE MATERIAL SPECIFICATIONS FOR APPROVED MANUFACTURERS

RESERVED

WD-2 / 11

SEE MATERIAL SPECIFICATIONS FOR APPROVED MANUFACTURERS

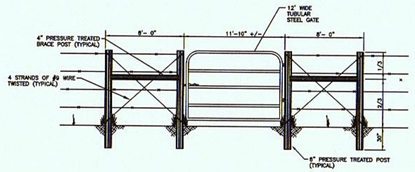


ANTI-SEEPAGE BARRIER COLUMN

N.T.S.

WD-2 / 12

REV. DEC. 2006



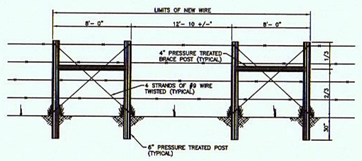
NOTES: 1. H-brace units shall be installed prior to cutting existing fence
2. Height of post to match existing posts.
3. New wire shall be the same type as existing fence.

FARM GATE INSTALLATION DETAIL

N.T.S.

WD-2 / 13

REV. AUG. 2007



NOTES: 1. H-brace units shall be installed prior to cutting existing fence
2. Height of post to match existing posts.
3. New wire shall be the same type as existing fence.

BARBED WIRE FENCE CROSSING REPAIR DETAIL

N.T.S.

WD-2 / 14

REV. AUG. 2007

SEE MATERIAL SPECIFICATIONS FOR APPROVED MANUFACTURERS

RESERVED

WD-2 / 15

SEE MATERIAL SPECIFICATIONS FOR APPROVED MANUFACTURERS

RESERVED

WD-2 / 16

RESERVED

WD-2 / 17

SEE MATERIAL SPECIFICATIONS FOR APPROVED MANUFACTURERS

RESERVED

WD-2 / 18

METER SIZING AND MAIN CONNECTION DATA

METER SIZE	FLOW RANGE	CONNECTION TO MAIN		METER BOX APPROX. SIZE		SOURCE
		NEW MAIN	EXISTING MAIN	SIDEWALK	GREEN AREAS	
5/8" (SINGLE OR DOUBLE)	1-20 GPM	1" CORP. STOP	1" CORP. STOP		~22" DIA. BASE	SEE STANDARD SPEC. 02-10
1"	3-50 GPM	1" CORP. STOP	1" CORP. STOP		~18"X24"BASE	SEE STANDARD SPEC. 02-10
1 1/2"	4-120 GPM	SEE WD 1/5	2" TAPPING SADDLE AND VALVE	32" x 42" (PRECAST BOX)	2~24"x37" METER BOXES	SEE STANDARD SPEC. 02-13
2"	4-160 GPM	SEE WD 1/5	2" TAPPING SADDLE AND VALVE	32" x 42" (PRECAST BOX)	2~24"x37" METER BOXES	SEE STANDARD SPEC. 02-13
3"	5-350 GPM	SEE WD 1/5	2" TAPPING SADDLE AND VALVE	8' L. x 5.5' W. x 4' D.		PRECAST BY PILE CONCRETE, LOWELL , AR
4"	15-1000 GPM	MAIN x 4" TEE AND VALVE	MAIN x 4" TAPPING SADDLE AND VALVE	6'x10'		(CAST-IN-PLACE BOX) BY CONTRACTOR-SEE RWU FOR LID DETAIL
6"	30-2,000 GPM	MAIN x 6" TEE AND VALVE	MAIN x 6" TAPPING SADDLE AND VALVE	6'x10'		(CAST-IN-PLACE BOX) BY CONTRACTOR-SEE RWU FOR LID DETAIL
8"	35-3,500 GPM	MAIN x 8" TEE AND VALVE	MAIN x 8" TAPPING SADDLE AND VALVE	6'x10'		(CAST-IN-PLACE BOX) BY CONTRACTOR-SEE RWU FOR LID DETAIL

NOTE: CONECTIONS TO NEW MAINS ARE CONSTRUCTED BY THE CONTRACTOR. CONNECTIONS TO EXISTING MAINS ARE CONSTRUCTED BY RWU ON A COST PLUS BASIS

WD-2 / 19

WD-2 / 20

SEE MATERIAL SPECIFICATIONS FOR APPROVED MANUFACTURERS

RESERVED

WD-2 / 21

SEE MATERIAL SPECIFICATIONS FOR APPROVED MANUFACTURERS

RESERVED

WD-2 / 22

RESERVED

WD-2 / 23

WATER DETAILS

UPDATED DRAWING 07/12/2011

RWU ROGERS WATER UTILITIES

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DRAWN BY: DDS	DATE: REV. JAN./08	SHEET NO. WD-2
CHECKED BY: EB	PROJECT NUMBER: STANDARD WATER DETAILS	

WD-2-20.DWG