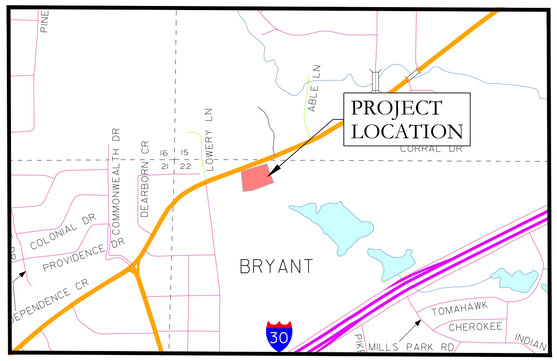
CONSTRUCTION PLANS
MARKET PLACE II
6128 HIGHWAY 5, BRYANT, SALINE COUNTY, AR



VICINITY MAP

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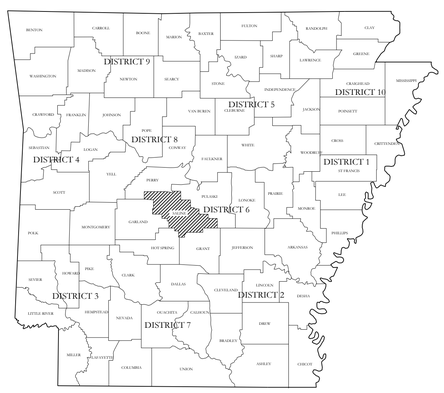
PREPARED BY:

HOPE CONSULTING
ENGINEERS - SURVEYORS

129 N. Main Street,
Benton, Arkansas 72015
PH. (501)315-2626
FAX (501) 315-0024
www.hopeconsulting.com

DRAWING INDEX

SHEET NO.	TITLE
C-1.0	SITE PLAN
C-2.0	GRADING PLAN
C-3.0	UTILITY PLAN
C-3.1-3.6	SEWER DETAILS
C-3.7-3.11	WATER DETAILS
C-4.1-4.2	PRE & POST DEV. CALCULATION
C-4.3	DRAINAGE CALCULATION
C-4.4	DRAINAGE PATH
C-5.0	EROSION CONTROL PLAN
C-6.0	LANDSCAPE PLAN



CIVIL ENGINEER

HOPE CONSULTING INC
129 N. MAIN STREET
BENTON, AR 72015

ARCHITECH

N/A

STRUCTURAL ENGINEER

N/A

GEOTECHNICAL ENGINEER

N/A

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
NO. 20878
TAMZIDUL ISLAM
11-19-2025

CERTIFICATE OF AUTHORIZATION
HOPE CONSULTING, INC.
No. 1931
ARKANSAS

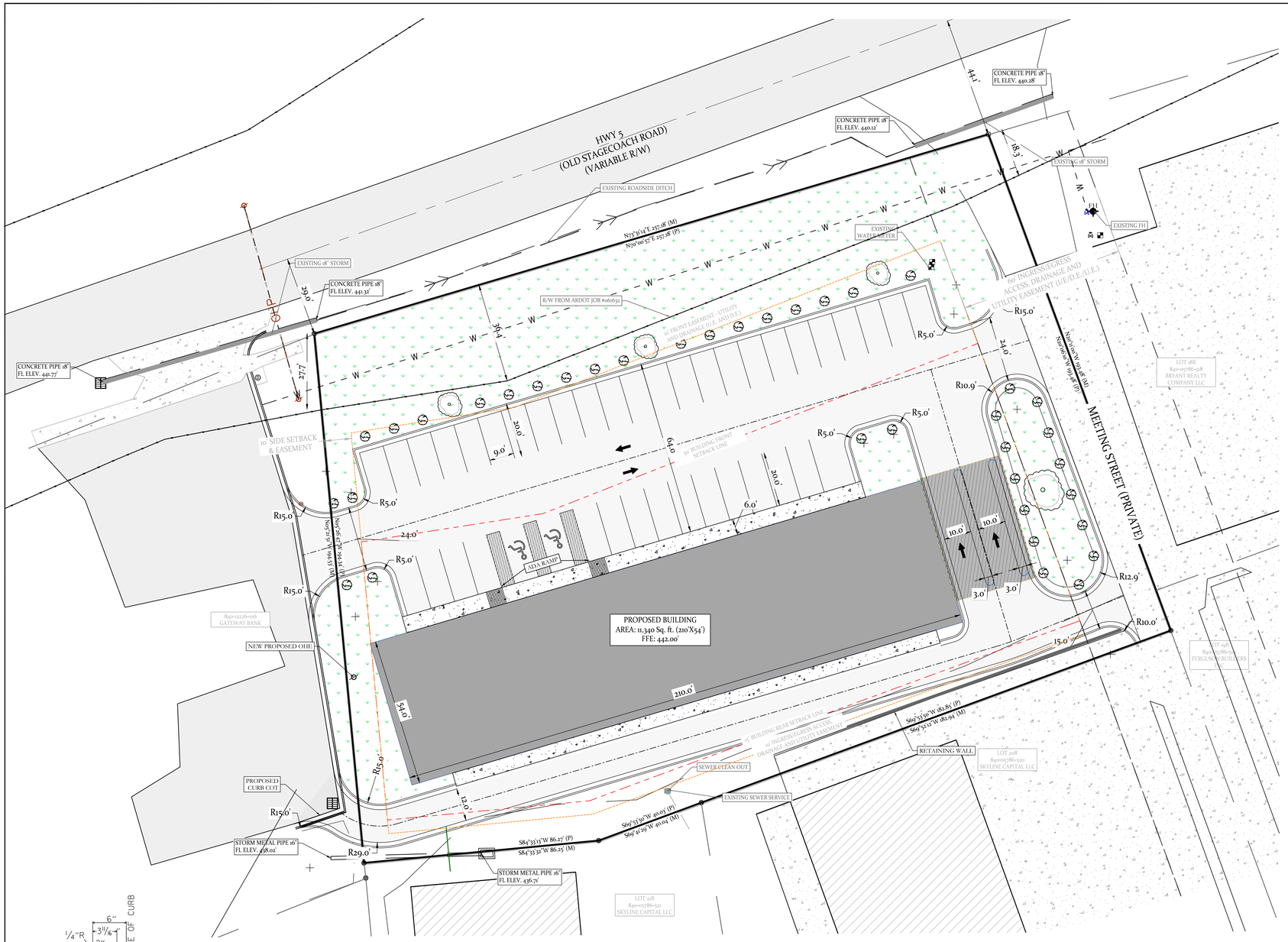
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129 N. Main Street,
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FAX (501) 315-0024
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FOR USE AND BENEFIT OF:
RYE GENERAL CONTRACTORS

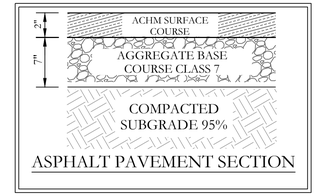
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COVER SHEET

DATE:	11/11/2025	C.A.D. BY:				DRAWING NUMBER:	
REVISED:	date	CHECKED BY:				25-0608	
SHEET:	C-0.0	SCALE:					
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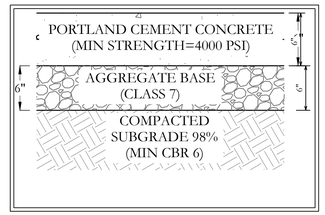
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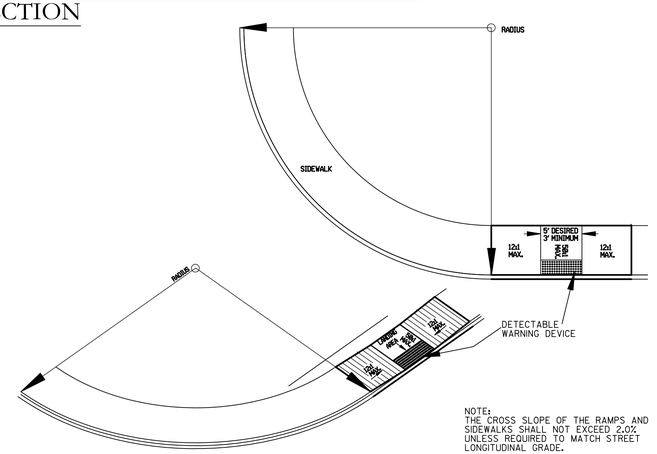
CURB DETAILS



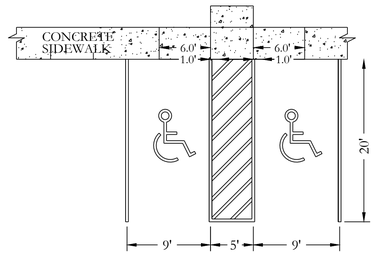
ASPHALT PAVEMENT SECTION

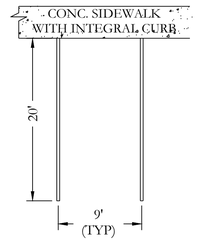


HEAVY DUTY CONCRETE PAVEMENT SECTION



NOTE:
THE CROSS SLOPE OF THE RAMPS AND SIDEWALKS SHALL NOT EXCEED 2.0% UNLESS REQUIRED TO MATCH STREET LONGITUDINAL GRADE.



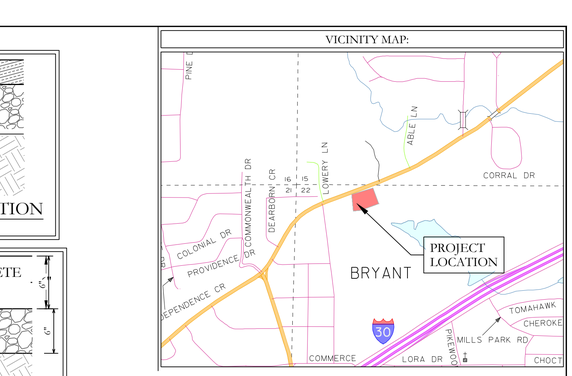


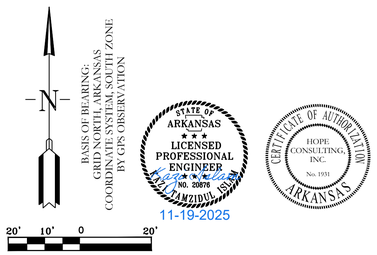
USE DIMENSIONS ABOVE UNLESS OTHERWISE NOTED

10' FOR END STALLS

PARKING STALL & SIDEWALK DETAIL

NOT TO SCALE





STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
JAMES W. HOPE
NO. 20878
11-19-2025

CERTIFICATE OF AUTHORIZATION
HOPE CONSULTING, INC.
No. 1931
ARKANSAS

OWNER:	DEVELOPER:
Name: PHILLIP RYE	Name: RYE GENERAL CONTRACTORS
Address: 7416 PALM BEACH, BENTON	Address: 6128 HIGHWAY 5 NORTH
AR 72019	AR 72022
Phone: 501-317-9883	Phone:
Email: philliprye@philliprye.com	Email:

SITE DATA	
TOTAL SITE AREA	*1.30 ACRES*
TOTAL DEVELOPMENT AREA	*1.30 ACRES*
GROSS BUILDING AREA	*BUILDING 11340 SQ. FT.*
BUILDING SETBACKS	*FRONT SETBACK LINE: 50' RIGHT SIDE SETBACK LINE: AS SHOWN REAR SETBACK LINE: 15' LEFT SIDE SETBACK LINE: 10'*
BUILDING HEIGHTS	*1 STORY*
BUSINESS TYPE	*RETAIL*
PARKING CALCULATION (PROVIDED)	*PROVIDED PARKING SPACES 41 (2 ADA SPACES)*

ZONING INFORMATION	
CURRENT ZONING	*C-2 HIGHWAY COMMERCIAL*

LEGEND

- PLSS Aliquot Corner
- Fnd. Corner Monument
- Set 1/2" Rebar/Cap (1664)
- Computed Point
- (M)- As Measured
- (P)- Per Deed or Plat Records
- ESMT - Easement
- B.S.L. - Building Setback Lines
- Clean Out
- Water Meter
- Power Pole
- Sewer Manhole
- Light Pole
- Telephone Pedestal
- Drainage Manhole
- Gas Meter
- Fence
- Overhead Power
- Sewer Line
- Water Line
- Telephone Line
- Electric Line
- Gas Line
- Existing Access Agreement
- Public Right-of-Way Dedication

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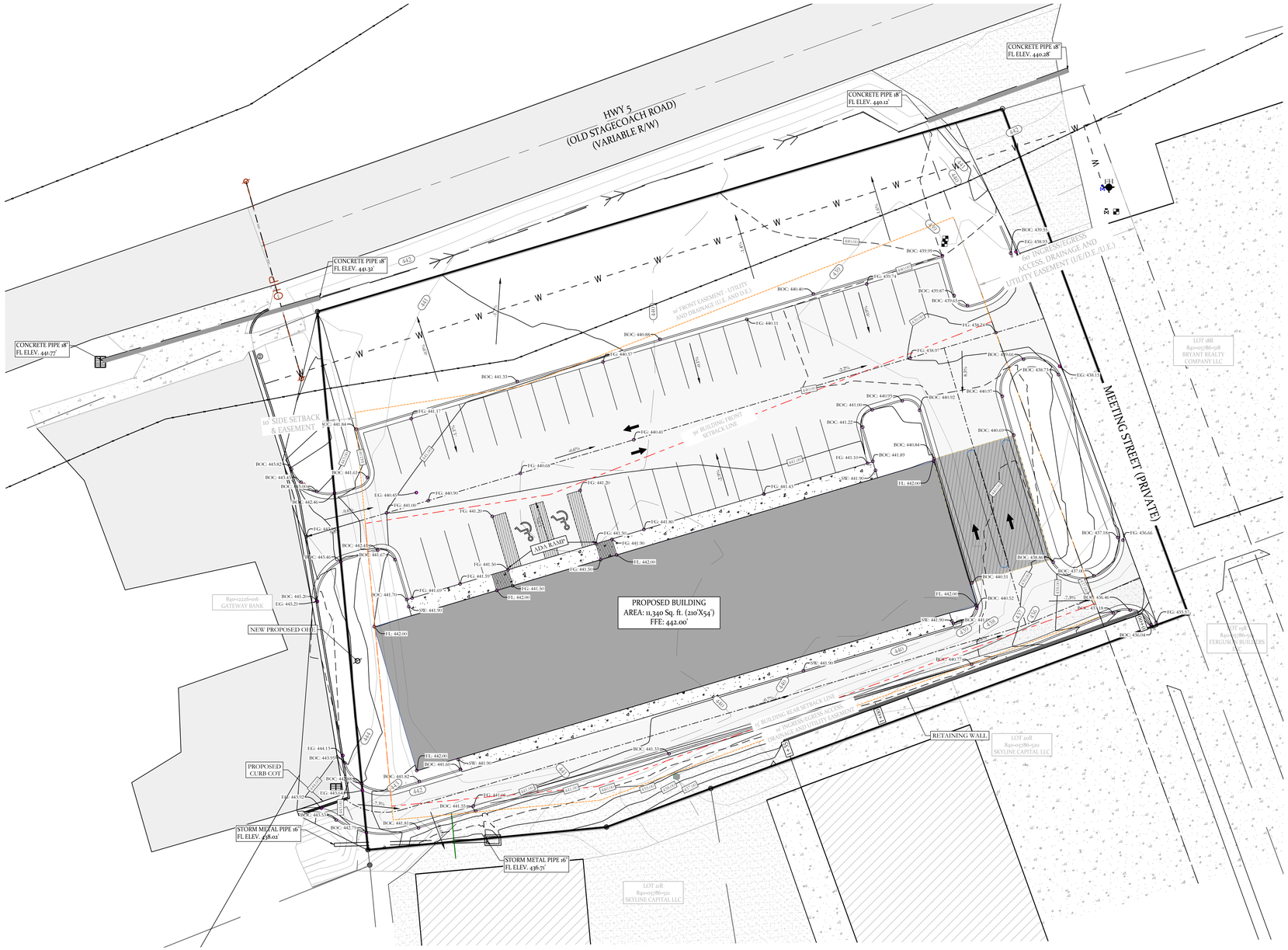
FOR USE AND BENEFIT OF:
RYE GENERAL CONTRACTORS

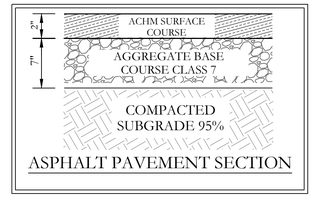
MARKET PLACE II
PRELIMINARY SITE PLAN
6128 HIGHWAY 5, BRYANT, SALINE COUNTY, ARKANSAS

DATE:	11.11.25	C.A.D. BY:	DRAWING NUMBER:
REVISED:		CHECKED BY:	25-0608
SHEET:	C-1.0	SCALE:	

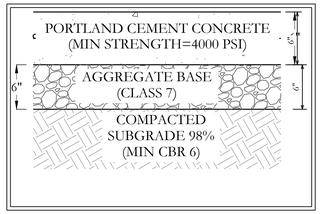
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E:\2 HOPE CONSULTING\1. PROJECTS FILES\9. 25-0608 LOT 22R MARKET PLACE-II PID\CIVIL\DWG\25-0608 LOT 22R MARKET PLACE-II PID 11.05.25.DWG

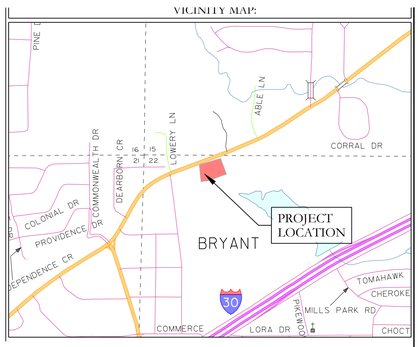




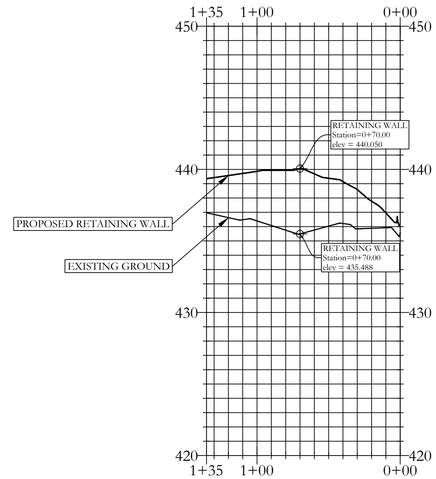
ASPHALT PAVEMENT SECTION



HEAVY DUTY CONCRETE PAVEMENT SECTION



RETAINING WALL PROFILE

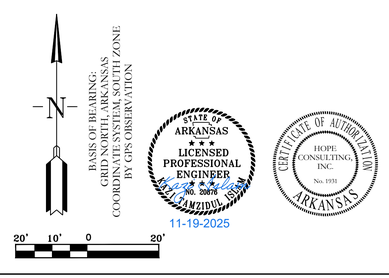


MARKET PLACE-II PHASE 3

PRELIMINARY SITE PLAN

GRADING PLAN NOTES

1. DESIGN CONTOURS SHOWN ARE FINISHED GRADE.
2. SPOT ELEVATIONS SHOWN ARE FINISHED ASPHALT, GROUND OR CONCRETE ELEVATIONS.
3. CLEAR AND GRUB AREAS OF THE SITE WHERE CUT OR FILL IS TO OCCUR.
4. FILL SHALL BE COMPACTED AT LEAST 98% OF THE MATERIALS MAXIMUM STANDARD PROCTOR DRY DENSITY.
5. THE MOISTURE CONTENT OF 1% BELOW TO 3% ABOVE THE OPTIMUM MOISTURE CONTENT.
6. SUB-GRADES SHALL BE PROOF-ROLLED WITH A LOADED DUMP TRUCK TO DETECT ZONES OF UNSUITABLE AND/OR EXCESSIVELY WET SOILS. IF PUMPING BEGINS, COMPACTION SHALL BE STOPPED IMMEDIATELY AND RESUMED ONLY WHEN THE MATERIAL IS SUFFICIENTLY DRY THAT PUMPING DOES NOT OCCUR.
7. ALL UNUSABLE SOILS SHALL BE USED ON SITE FOR FILL PURPOSES OUTSIDE THE AREAS OF BUILDING AND PAVEMENT CONSTRUCTION.
8. PROPER DRAINAGE SHALL BE MAINTAINED THROUGHOUT THE PROJECT SITE TO PREVENT THE INCREASE OF THE IN-SITU SOILS MOISTURE CONTENT.



LEGEND
BOC = TOP OF BACK OF CURB
FG = FINISHED GRADE
EG = EXISTING GRADE
SW = TOP OF SIDEWALK

SITE DATA	
TOTAL SITE AREA	*1.30 ACRES*
TOTAL DEVELOPMENT AREA	*1.30 ACRES*
GROSS BUILDING AREA	*BUILDING 10476 SQ. FT.*
BUILDING SETBACKS	*FRONT SETBACK LINE: 50' RIGHT SIDE SETBACK LINE: AS SHOWN REAR SETBACK LINE: 15' LEFT SIDE SETBACK LINE: 15'*
BUILDING HEIGHTS	*1 STORY*
BUSINESS TYPE	*RETAIL*
PARKING CALCULATION (PROVIDED)	*PROVIDED PARKING SPACES 51 (3 ADA SPACES)*

OWNER:
Name: PHILLIP RYE
Address: 7416 PALM BEACH, BENTON
AR 72019
Phone: 501-317-9883
Email: philliprye@philliprye.com

DEVELOPER:
Name: RYE GENERAL CONTRACTORS
Address: 6128 HIGHWAY 5 NORTH
AR 72022
Phone:
Email:

LEGEND

- PLSS Aliquot Corner
- Fnd. Corner Monument
- Set 1/2" Rebar/Cap (1664)
- Computed Point
(M)- As Measured
(P)- Per Deed or Plat Records
ESMT - Easement
B.S.L. - Building Setback Lines
- Clean Out
- Water Meter
- Power Pole
- Sewer Manhole
- Light Pole
- Telephone Pedestal
- Drainage Manhole
- Gas Meter
- Fence
- Overhead Power
- Sewer Line
- Water Line
- Telephone Line
- Electric Line
- Gas Line
- Existing Access Agreement
- Public Right-of-Way Dedication

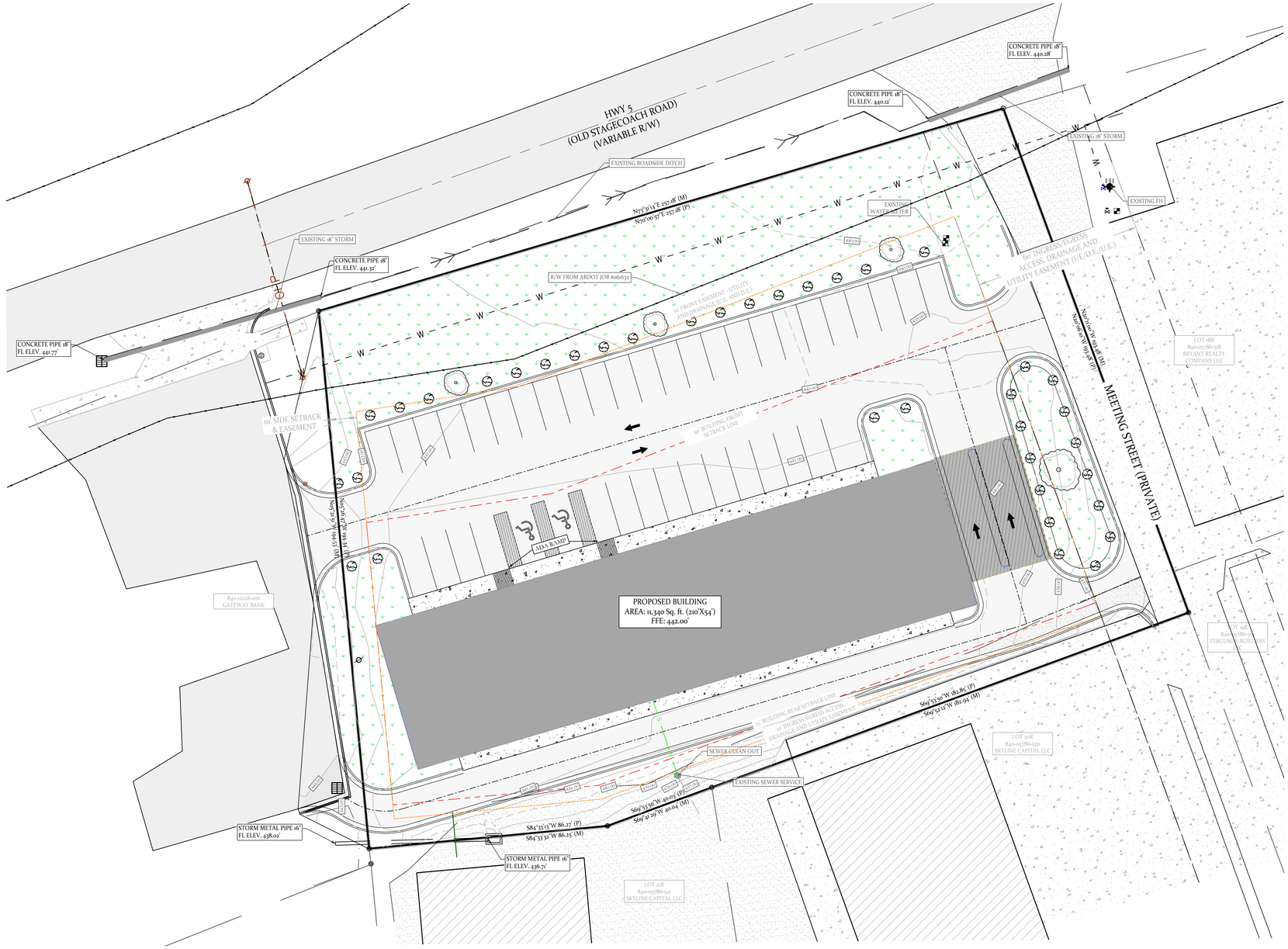
HOPE CONSULTING ENGINEERS - SURVEYORS
129 N. Main Street,
Benton, Arkansas 72015
PH. (501)315-2626
FAX (501) 315-0024
www.hopeconsulting.com

FOR USE AND BENEFIT OF:
RYE GENERAL CONTRACTORS

MARKET PLACE II
GRADING PLAN
6128 HIGHWAY 5, BRYANT, SALINE COUNTY, ARKANSAS

DATE:	11.11.25	C.A.D. BY:	DRAWING NUMBER:
REVISED:		CHECKED BY:	25-0608
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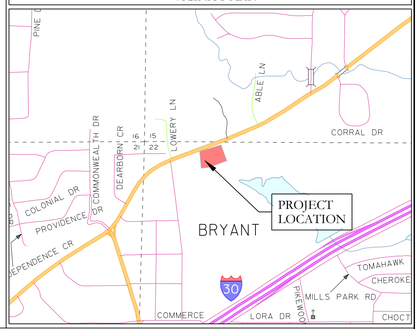
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MARKET PLACE-II PHASE 3

UTILITY PLAN

VICINITY MAP:



SEWER CONSTRUCTION NOTES:

1. ALL SEWER CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH CITY OF BRYANT "STANDARD SPECIFICATIONS FOR DESIGN AND CONSTRUCTION FOR WATER LINES AND SEWER LINES" 2015 EDITION.

WATER CONSTRUCTION NOTES:

1. ALL WATER INSTALLATION SHALL BE DONE IN ACCORDANCE WITH CITY OF BRYANT "STANDARD SPECIFICATIONS FOR DESIGN AND CONSTRUCTION FOR WATER LINES AND SEWER LINES" 2015 EDITION.

ADH NOTES:

ADH RULES PERTAINING TO PUBLIC WATER SYSTEMS, SECTION XIV . DISTRIBUTION SYSTEM, PART A SANITARY AND SAFETY HAZARDS. A MINIMUM HORIZONTAL DISTANCE OF TEN FEET SHOULD BE MAINTAINED BETWEEN WATER LINES AND SEWER LINES OR OTHER SOURCES OF CONTAMINATION. WATER LINES AND SEWERS SHALL NOT BE LAID IN THE SAME TRENCH EXCEPT ON THE WRITTEN APPROVAL OF THE ARKANSAS DEPARTMENT OF HEALTH. WATER MAINS NECESSARILY IN CLOSE PROXIMITY TO SEWERS MUST BE PLACED SO THAT THE BOTTOM OF THE WATER LINE WILL BE AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER LINE AT ITS HIGHEST POINT. IF THIS DISTANCE MUST UNAVOIDABLY BE REDUCED, THE WATER LINE OR THE SEWER LINE MUST BE ENCASED IN WATERTIGHT PIPE WITH SEALED WATERTIGHT ENDS.

EXTENDING AT LEAST TEN FEET EITHER SIDE OF THE CROSSING. ANY JOINT IN THE ENCASEMENT PIPE IS TO BE MECHANICALLY RESTRAINED. THE ENCASEMENT PIPE MAY BE VENTED TO THE SURFACE IF CARRYING WATER OR SEWER UNDER PRESSURE. WHERE A WATER LINE MUST UNAVOIDABLY PASS BENEATH THE SEWER LINE, AT LEAST 18 INCHES OF SEPARATION MUST BE MAINTAINED BETWEEN THE OUTSIDE OF THE TWO PIPES IN ADDITION TO THE PRECEDING ENCASEMENT REQUIREMENT.

A MINIMUM HORIZONTAL DISTANCE OF THREE FEET SHALL BE MAINTAINED BETWEEN WATER LINES AND OTHER UNDERGROUND UTILITIES OF A NON SANITARY NATURE (GAS, ELECTRIC, ETC.).

SEWER LEGEND:	WATER LEGEND:
SEWER SERVICE SEWER MAIN — S — S — (S) SEWER MANHOLE NOTE: USE SDR-26 PVC SEWER PIPE EXCEPT WHERE DUCTILE IRON PIPE REQUIRED FOR COVER. USE DUCTILE IRON PIPE WHERE 3' MINIMUM COVE CANNOT BE MAINTAINED. CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL BURIED UTILITIES PRIOR TO CONSTRUCTION.	DUAL WATER METERS SINGLE WATER METER GATE VALVE 45° FITTING 90° FITTING TEE FITTING CROSS FITTING FH FIRE HYDRANT

N

BASIS OF BEARING:
GRID NORTH, ARKANSAS
COORDINATE SYSTEM, NAD83 ZONE
BY GPS OBSERVATION

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
NO. 20876
AMZIDU
11-19-2025

CERTIFICATE OF AUTHORIZATION
HOPE CONSULTING, INC.
No. 1931
ARKANSAS

20' 10' 0 20'

HOPE CONSULTING
ENGINEERS - SURVEYORS
129 N. Main Street,
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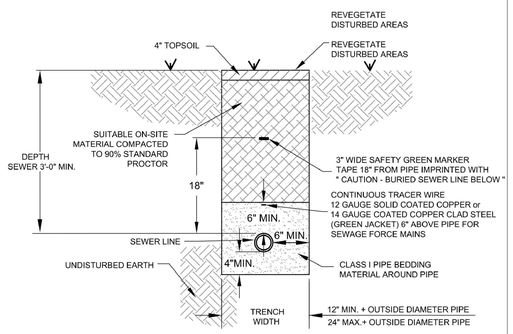
FOR USE AND BENEFIT OF:
RYE GENERAL CONTRACTORS

MARKET PLACE II
UTILITY PLAN
6128 HIGHWAY 5, BRYANT, SALINE COUNTY, ARKANSAS

DATE:	11.11.25	C.A.D. BY:	DRAWING NUMBER: 25-0608
REVISED:		CHECKED BY:	
SHEET:	C-3.0	SCALE:	

500	01S	14W	0	22	440	62	1762

E:\2. HOPE CONSULTING\1. PROJECTS FILES\9. 25-0608 LOT 22R MARKET PLACE-II PH3\CIVIL\DWG\25-0608 LOT 22R MARKET PLACE-II PH3 11.05.25.DWG



NOTES:

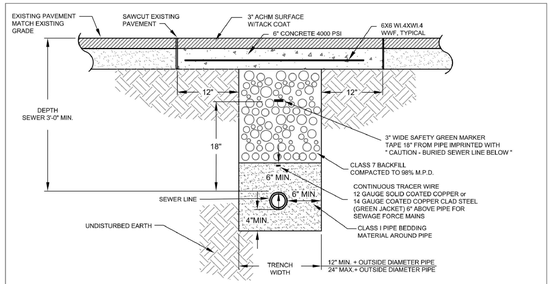
1. THE CONTRACTOR SHALL PROVIDE ALL ITEMS NECESSARY TO CONNECT WITH ANY PART OF THE EXISTING SEWER SYSTEM THAT WILL REMAIN IN ORDER TO ESTABLISH A SATISFACTORY AND ACCEPTABLE SEWER SYSTEM.
2. CONTRACTOR TO CONSTRUCT ALL TRENCH EXCAVATION IN ACCORDANCE WITH ALL OSHA REGULATIONS (29 CFR CH.XVII, SUBPART B)
3. TRENCH SHALL BE EXCAVATED BELOW GRADE REQUIRED TO PROVIDE A MINIMUM 36" OF PIPE COVER.

SEWER TRENCH

(NON-PAVED AREA)

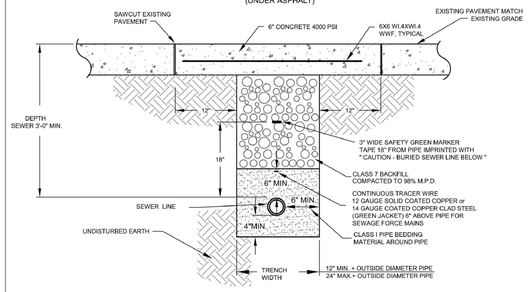
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CITY OF BRYANT, AR WATER UTILITIES 210 S.W. 3rd. STREET BRYANT, AR PHONE: (501) 943-0468	TITLE: **SEWER DETAILS**	DATE: APRIL 2015	SHEET:
	DESCRIPTION: **SEWER TRENCH (NON-PAVED AREA)**	REVISED ----- ----- ----- ----- -----	**S1**
	DRAWN BY: / CHECKED BY: / FILE: S1-Sewer Trench (Non-Paved Area).dwg	-----	



SEWER TRENCH

(UNDER ASPHALT)



SEWER TRENCH

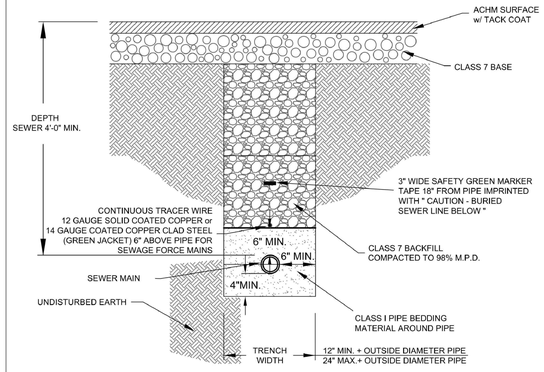
(UNDER CONCRETE)

NOTES:

1. THE CONTRACTOR SHALL PROVIDE ALL ITEMS NECESSARY TO CONNECT WITH ANY PART OF THE EXISTING SEWER SYSTEM THAT WILL REMAIN IN ORDER TO ESTABLISH A SATISFACTORY AND ACCEPTABLE SEWER SYSTEM.
2. CONTRACTOR TO CONSTRUCT ALL TRENCH EXCAVATION IN ACCORDANCE WITH ALL OSHA REGULATIONS (29 CFR CH.XVII, SUBPART B)
3. TRENCH SHALL BE EXCAVATED BELOW GRADE REQUIRED TO PROVIDE A MINIMUM 36" OF PIPE COVER.

4/16/2015 10:56:31 AM

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	DESCRIPTION: **SEWER TRENCH (UNDER PAVEMENT)**	REVISED ----- ----- ----- ----- -----	**S2**
	DRAWN BY: / CHECKED BY: / FILE: S2-Sewer Trench (Under Pavement).dwg	-----	



SEWER MAIN INSTALLATION
PRIOR TO ROADWAY CONSTRUCTION

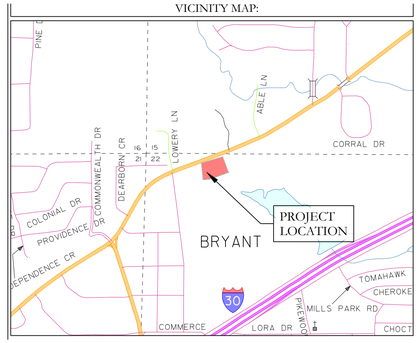
NOTES:

1. THE CONTRACTOR SHALL PROVIDE ALL ITEMS NECESSARY TO CONNECT WITH ANY PART OF THE EXISTING SEWER SYSTEM THAT WILL REMAIN IN ORDER TO ESTABLISH A SATISFACTORY AND ACCEPTABLE SEWER SYSTEM.
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3. TRENCH SHALL BE EXCAVATED BELOW GRADE REQUIRED TO PROVIDE A MINIMUM 36" OF PIPE COVER.

4/16/2015 10:56:55 AM

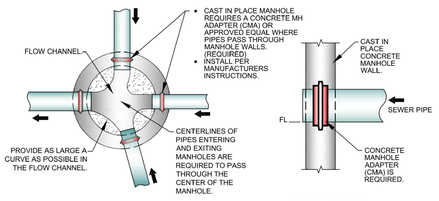
CITY OF BRYANT, AR WATER UTILITIES 210 S.W. 3rd. STREET BRYANT, AR PHONE: (501) 943-0468	TITLE: **SEWER DETAILS**	DATE: APRIL 2015	SHEET:
	DESCRIPTION: **SEWER MAIN INSTALLATION PRIOR TO ROADWAY CONSTRUCTION**	REVISED ----- ----- ----- ----- -----	**S3**
	DRAWN BY: / CHECKED BY: / FILE: S3-Sewer Main Installation Prior to Roadway Const.dwg	-----	

VICINITY MAP:



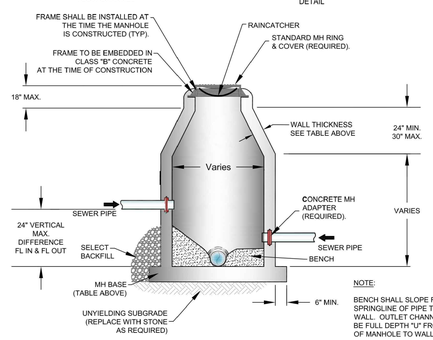
Inside Diameter of Manhole	Minimum Wall Thickness	Base Thickness	Minimum Ring & Cover Size
4' DIA	6"	6"	24" (< or Equal to 24" Pipes)
5' DIA	8"	8"	36" (> 24" Pipes)
6' DIA	8"	12"	

MANHOLE INFORMATION TABLE



MANHOLE FLOW CHANNEL

CONCRETE MANHOLE ADAPTER (CMA) DETAIL



NOTE:

BENCH SHALL SLOPE FROM SPRINGLINE OF PIPE TO MANHOLE WALL. OUTLET CHANNEL SHALL BE FULL DEPTH "U" FROM CENTER OF MANHOLE TO WALL.

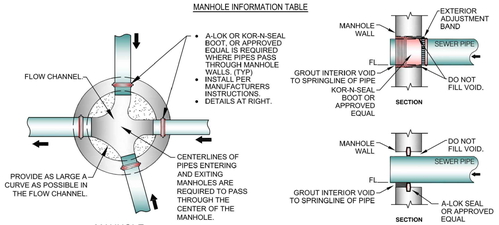
CAST-IN-PLACE MANHOLE

4/16/2015 10:56:47 AM

CITY OF BRYANT, AR WATER UTILITIES 210 S.W. 3rd. STREET BRYANT, AR PHONE: (501) 943-0468	TITLE: **SEWER DETAILS**	DATE: APRIL 2015	SHEET:
	DESCRIPTION: **CAST-IN-PLACE MANHOLE**	REVISED ----- ----- ----- ----- -----	**S4**
	DRAWN BY: / CHECKED BY: / FILE: S4-Cast In Place Manhole.dwg	-----	

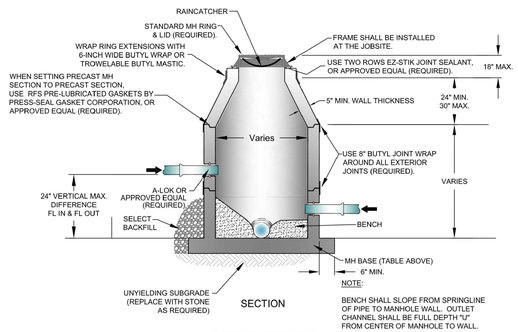
Inside Diameter of Manhole	Minimum Wall Thickness	Base Thickness	Minimum Ring & Cover Size
4' DIA	5'	6'	24" (< or Equal to 24" Pipes)
5' DIA	7"	8'	36" (> 24" Pipes)
6' DIA	7"	8'	

MANHOLE INFORMATION TABLE



MANHOLE FLOW CHANNEL

CONNECTION DETAILS



SECTION

NOTE:

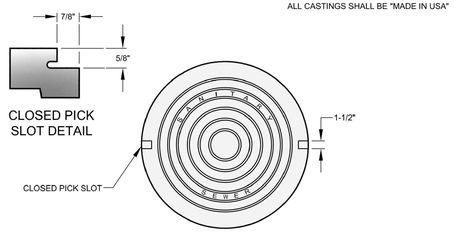
BENCH SHALL SLOPE FROM SPRINGLINE OF PIPE TO MANHOLE WALL. OUTLET CHANNEL SHALL BE FULL DEPTH "U" FROM CENTER OF MANHOLE TO WALL.

PRECAST MANHOLE

4/16/2015 10:56:51 AM

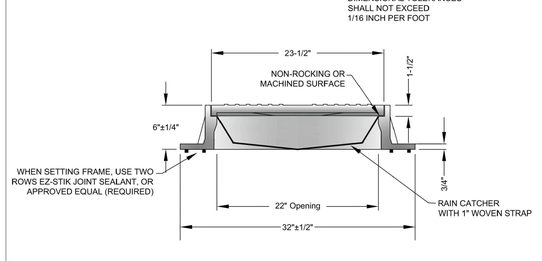
CITY OF BRYANT, AR WATER UTILITIES 210 S.W. 3rd. STREET BRYANT, AR PHONE: (501) 943-0468	TITLE: **SEWER DETAILS**	DATE: APRIL 2015	SHEET:
	DESCRIPTION: **PRECAST MANHOLE**	REVISED ----- ----- ----- ----- -----	**S5**
	DRAWN BY: / CHECKED BY: / FILE: S5-Precast Manhole.dwg	-----	

ALL CASTINGS SHALL BE "MADE IN USA"



COVER DETAIL

1. MINIMUM WEIGHT OF RING: 100 POUNDS
2. MINIMUM WEIGHT OF COVER: 110 POUNDS
3. COVERS ARE FURNISHED WITH TWO CLOSED PICK SLOTS.
4. CASTINGS SHALL BE "MADE IN USA"



FRAME AND COVER DETAIL

4/16/2015 10:56:59 AM

CITY OF BRYANT, AR WATER UTILITIES 210 S.W. 3rd. STREET BRYANT, AR PHONE: (501) 943-0468	TITLE: **SEWER DETAILS**	DATE: APRIL 2015	SHEET:
	DESCRIPTION: **MANHOLE FRAME AND COVER**	REVISED ----- ----- ----- ----- -----	**S6**
	DRAWN BY: / CHECKED BY: / FILE: S6-Manhole Frame and Cover.dwg	-----	

STATE OF ARKANSAS LICENSED PROFESSIONAL ENGINEER JAMIL ALI HAMZIDUL ISLAM NO. 20876

11-19-2025

CERTIFICATE OF AUTHORIZATION HOPE CONSULTING, INC. No. 1931 ARKANSAS

HOPE CONSULTING ENGINEERS - SURVEYORS

129 N. Main Street,
Benton, Arkansas 72015
PH. (501)315-2626
FAX (501) 315-0024
www.hopeconsulting.com

FOR USE AND BENEFIT OF:

RYE GENERAL CONTRACTORS

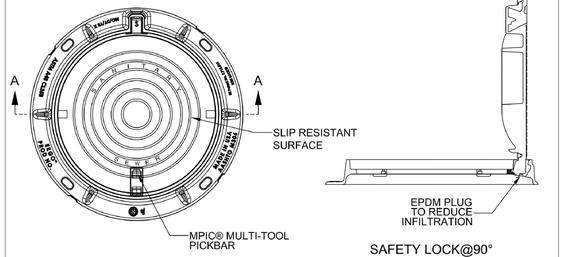
MARKET PLACE II

SEWER DETAILS 1

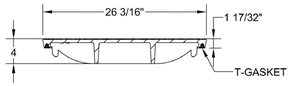
6128 HIGHWAY 5, BRYANT, SALINE COUNTY, ARKANSAS

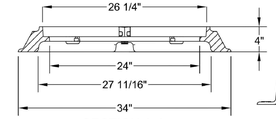
DATE:	11.11.25	C.A.D. BY:		DRAWING NUMBER:
REVISED:		CHECKED BY:		25-0608
SHEET:	C-3.1	SCALE:		

500	01S	14W	0	22	440	62	1762

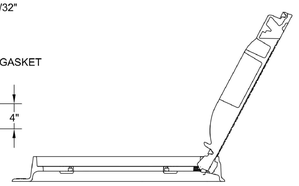


SAFETY LOCK@90°





SECTION A-A

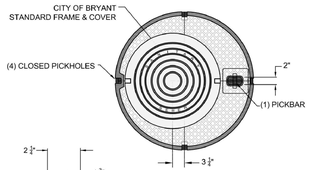


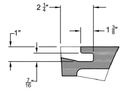
FULLY OPENED@120°

HINGED FRAME AND COVER DETAIL

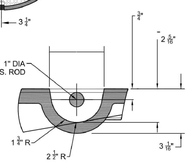
CITY OF BRYANT, AR WATER UTILITIES 210 S.W. 3rd. STREET BRYANT, AR PHONE: (501) 943-0468	TITLE:		DATE: APRIL 2015 REVISED ----- ----- ----- -----	SHEET:
	DESCRIPTION: HINGED MANHOLE FRAME AND COVER			S7
	DRAWN BY:	CHECKED BY:	FILE: S7--Hinged Manhole Frame and Cover-OLD.dwg	

4/24/2015 10:04:04 AM

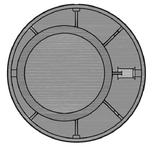




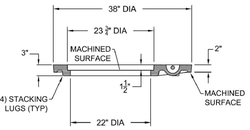
PICKHOLE DETAIL



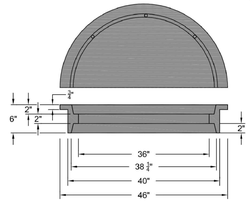
PICKBAR DETAIL



COVER BACK



COVER SECTION



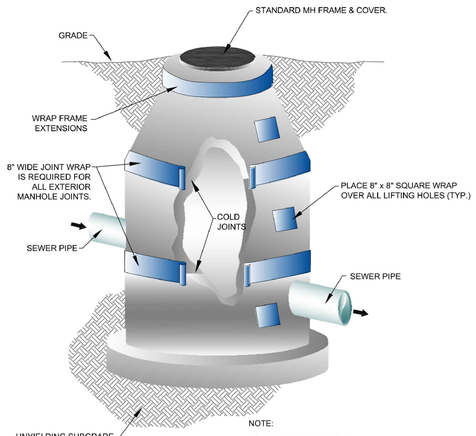
REVERSIBLE FRAME
EST WEIGHT 360 POUNDS

NOTE:

ALL CASTINGS SHALL BE "MADE IN USA"

CITY OF BRYANT, AR WATER UTILITIES 210 S.W. 3rd. STREET BRYANT, AR PHONE: (501) 943-0468	TITLE: SEWER DETAILS		DATE: APRIL 2015 REVISED ----- ----- ----- -----	SHEET:
	DESCRIPTION: 36-INCH MANHOLE FRAME AND COVER			S8
	DRAWN BY:	CHECKED BY:	FILE: S8--36 Inch Manhole Frame and Cover.dwg	

4/24/2015 10:57:06 AM



NOTE:

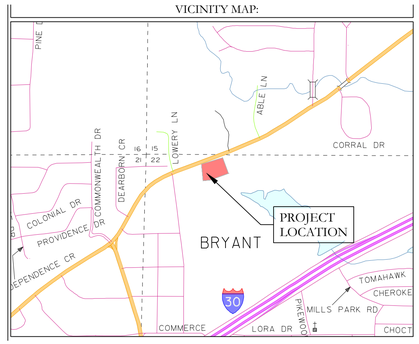
JOINT WRAP TO BE USED:
- ON OUTSIDE OF COLD JOINTS
- ON EXTERIOR OF ALL PRECAST MANHOLE JOINTS
- ON LIFT HOLES / SOCKETS

MANHOLE JOINT WRAP

CITY OF BRYANT, AR WATER UTILITIES 210 S.W. 3rd. STREET BRYANT, AR PHONE: (501) 943-0468	TITLE: SEWER DETAILS		DATE: APRIL 2015 REVISED ----- ----- ----- -----	SHEET:
	DESCRIPTION: MANHOLE JOINT WRAP			S9
	DRAWN BY:	CHECKED BY:	FILE: S9--Manhole Joint Wrap.dwg	

4/24/2015 10:57:09 AM

VICINITY MAP:



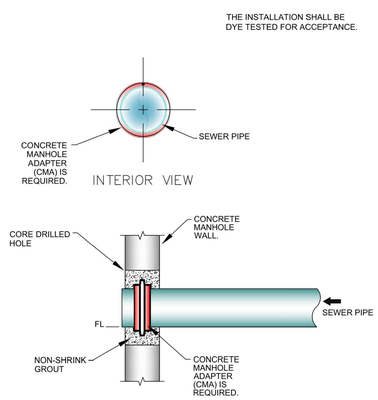


★ THE CONNECTIONS TO EXISTING MANHOLES ARE TO BE CORE-DRILLED WITH THE USE OF A WATER-STOP AND NON-SHRINK GROUT.

DROP MANHOLE

CITY OF BRYANT, AR WATER UTILITIES 210 S.W. 3rd. STREET BRYANT, AR PHONE: (501) 943-0468	TITLE: SEWER DETAILS		DATE: APRIL 2015 REVISED ----- ----- ----- -----	SHEET:
	DESCRIPTION: DROP MANHOLE			S10
	DRAWN BY:	CHECKED BY:	FILE: S10--Drop Manhole.dwg	

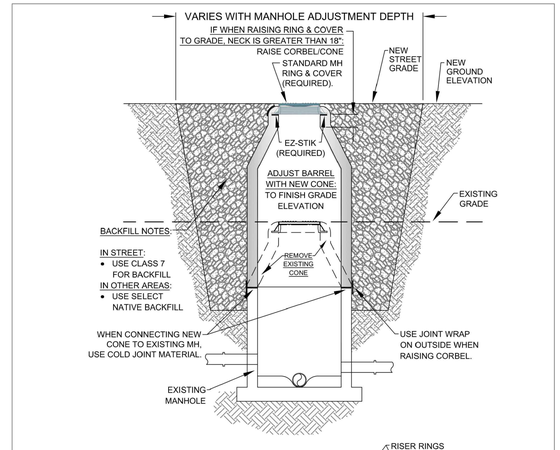
4/24/2015 10:57:14 AM

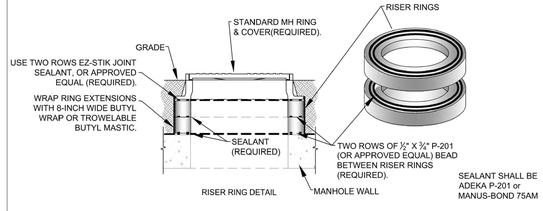


MANHOLE CORING DETAILS

CITY OF BRYANT, AR WATER UTILITIES 210 S.W. 3rd. STREET BRYANT, AR PHONE: (501) 943-0468	TITLE: SEWER DETAILS		DATE: APRIL 2015 REVISED ----- ----- ----- -----	SHEET:
	DESCRIPTION: MANHOLE CORING			S11
	DRAWN BY:	CHECKED BY:	FILE: S11--Manhole Coring.dwg	

4/24/2015 10:57:19 AM





TYPICAL MANHOLE ADJUST TO GRADE DETAIL

CITY OF BRYANT, AR WATER UTILITIES 210 S.W. 3rd. STREET BRYANT, AR PHONE: (501) 943-0468	TITLE: SEWER DETAILS		DATE: APRIL 2015 REVISED ----- ----- ----- -----	SHEET:
	DESCRIPTION: MANHOLE ADJUST TO GRADE			S12
	DRAWN BY:	CHECKED BY:	FILE: S12--Manhole Adjust to Grade.dwg	

STATE OF ARKANSAS ★★★ LICENSED PROFESSIONAL ENGINEER ★★★ No. 20076 JAMZIDUL ISLAM
11-19-2025

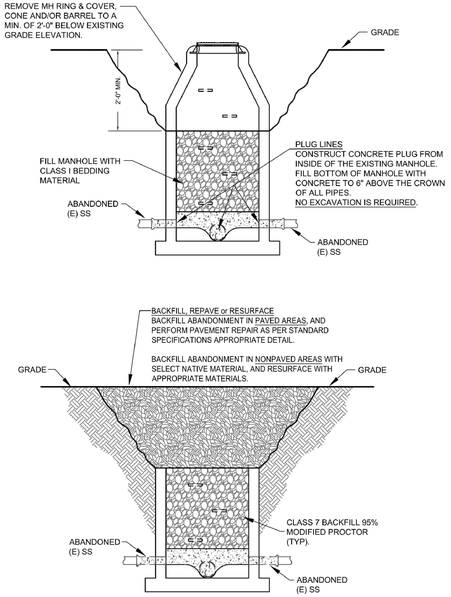
CERTIFICATE OF AUTHORIZATION HOPE CONSULTING, INC. No. 1931 ARKANSAS

HOPE CONSULTING
ENGINEERS - SURVEYORS
129 N. Main Street,
Benton, Arkansas 72015
PH. (501)315-2626
FAX (501) 315-0024
www.hopeconsulting.com

FOR USE AND BENEFIT OF:
RYE GENERAL CONTRACTORS

MARKET PLACE II
SEWER DETAILS 2
6128 HIGHWAY 5, BRYANT, SALINE COUNTY, ARKANSAS

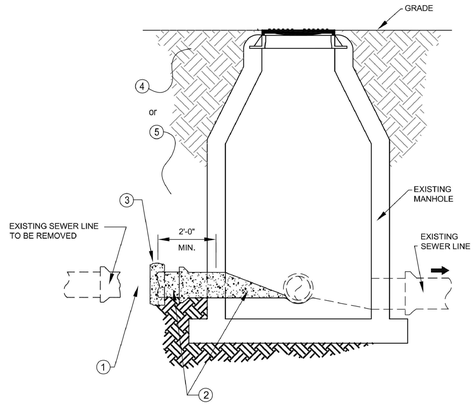
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REVISED:		CHECKED BY:		25-0608				
SHEET:	C-3.2	SCALE:						
500	01S	14W	0	22	440	62	1762	



EXISTING MANHOLE
ABANDONMENT DETAIL

CITY OF BRYANT, AR	TITLE: SEWER DETAILS	DATE: APRIL 2015	SHEET:
WATER UTILITIES 210 S.W. 3rd. STREET BRYANT, AR PHONE: (501) 943-0468	DESCRIPTION: MANHOLE ABANDONMENT	REVISED	S13
	DRAWN BY: CHECKED BY: FILE: S13-Manhole Abandonment.dwg		

4/16/2015 10:57:55 AM



1. EXPOSE EXISTING LINE AND PHYSICALLY DISCONNECT THE LINE SEGMENT TO BE REMOVED. (REQUIRED)
2. FILL REMAINING SEWER PIPE TO BE SEALED WITH CONCRETE AND REINFORCEMENT. (REQUIRED)
3. CONSTRUCT A CONCRETE CAP AROUND PIPE CONNECTED TO EXISTING MANHOLE. (REQUIRED)
4. IF THE MANHOLE IS LOCATED IN A PAVED AREA, BACKFILL THE EXCAVATED AREA AND PERFORM PAVEMENT REPAIR. (REQUIRED)
5. IF THE MANHOLE IS LOCATED IN A NON-PAVED AREA, BACKFILL THE EXCAVATED AREA WITH SELECT NATIVE MATERIAL, AND RESURFACE WITH THE APPROPRIATE MATERIALS. (REQUIRED)

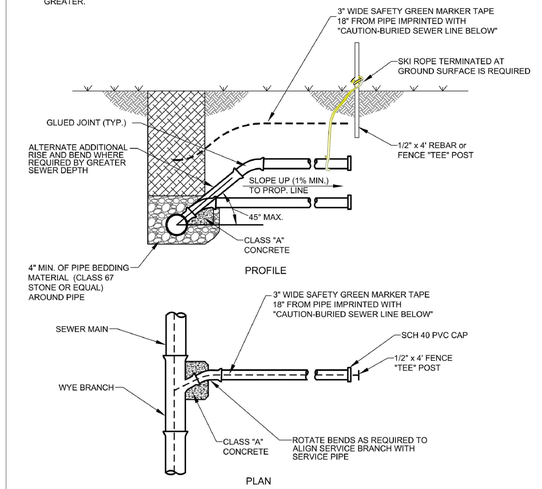
SEWER LINE
DISCONNECT & SEAL DETAIL

CITY OF BRYANT, AR	TITLE: SEWER DETAILS	DATE: APRIL 2015	SHEET:
WATER UTILITIES 210 S.W. 3rd. STREET BRYANT, AR PHONE: (501) 943-0468	DESCRIPTION: SEWER LINE DISCONNECT AND SEAL	REVISED	S14
	DRAWN BY: CHECKED BY: FILE: S14-Sewer Line Disconnect and Seal.dwg		

4/16/2015 10:58:01 AM

NOTES:

1. MODIFIED RISER LATERAL SHALL BE USED WHEN DEPTH OF COVER EXCEEDS 7'-0"
2. PLACE CLASS "A" CONCRETE UNDER EACH WYE BRANCH TO PREVENT CRACKING OR TWISTING UNDER EARTH LOADS.
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 SANITARY SEWER MAIN.
4. BURY A 1/2" x 4' STEEL TEE FENCE POST AT END OF SERVICE LATERAL STUB AND BACKFILL TO FINISHED GRADE OF PROPERTY.
5. 4" DUCTILE IRON PIPE, LINED FOR SANITARY SEWER AND 4" DUCTILE IRON M.J. FITTINGS, LINED FOR SANITARY SEWER, SHALL BE INSTALLED FOR SERVICES BURIED AT DEPTHS OF 14 FEET AND GREATER.

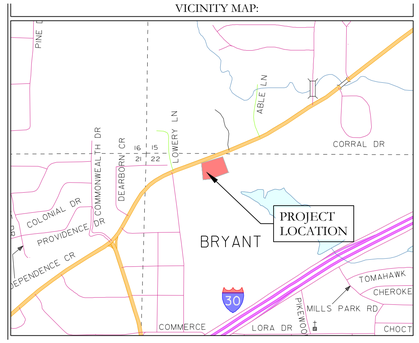


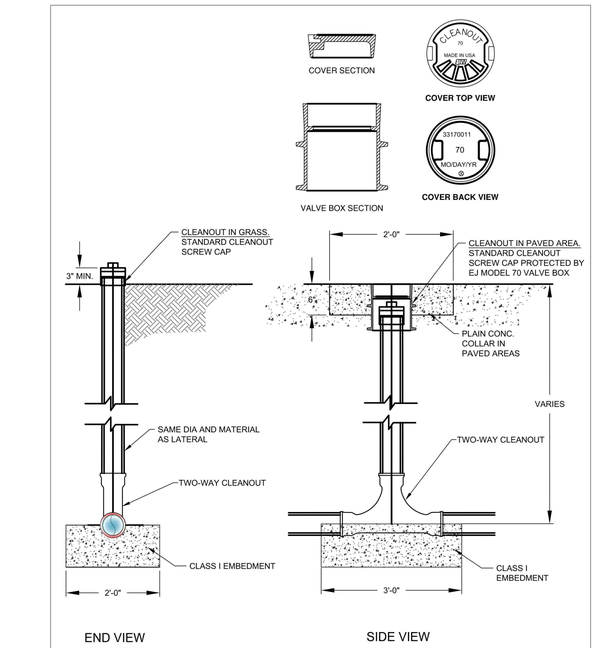
SEWER SERVICE LATERAL

CITY OF BRYANT, AR	TITLE: SEWER DETAILS	DATE: APRIL 2015	SHEET:
WATER UTILITIES 210 S.W. 3rd. STREET BRYANT, AR PHONE: (501) 943-0468	DESCRIPTION: SEWER SERVICE LATERAL	REVISED	S15
	DRAWN BY: CHECKED BY: FILE: S15-Sewer Service Lateral.dwg		

4/16/2015 10:58:04 AM

VICINITY MAP:

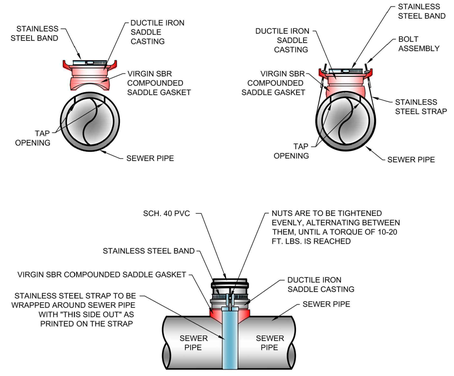




TYPICAL CLEANOUT

CITY OF BRYANT, AR	TITLE: SEWER DETAILS	DATE: APRIL 2015	SHEET:
WATER UTILITIES 210 S.W. 3rd. STREET BRYANT, AR PHONE: (501) 943-0468	DESCRIPTION: SEWER SERVICE CLEANOUT	REVISED	S16
	DRAWN BY: CHECKED BY: FILE: S16-Sewer Service Cleanout.dwg		

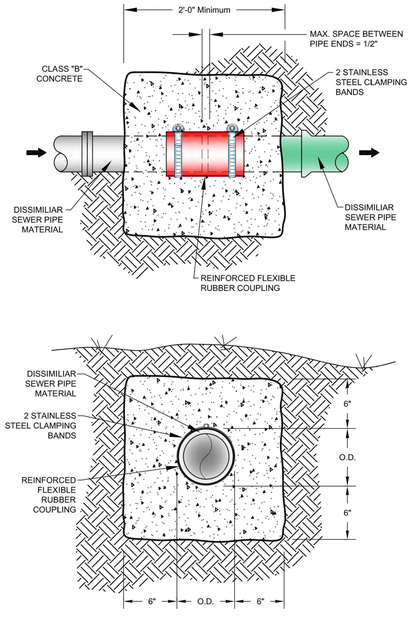
4/16/2015 10:58:13 AM



SEWER SERVICE SADDLE

CITY OF BRYANT, AR	TITLE: SEWER DETAILS	DATE: APRIL 2015	SHEET:
WATER UTILITIES 210 S.W. 3rd. STREET BRYANT, AR PHONE: (501) 943-0468	DESCRIPTION: SEWER SERVICE SADDLE	REVISED	S17
	DRAWN BY: CHECKED BY: FILE: S17-Sewer Service Saddle.dwg		

4/16/2015 10:58:39 AM



REINFORCE FLEXIBLE COUPLING

CITY OF BRYANT, AR	TITLE: SEWER DETAILS	DATE: APRIL 2015	SHEET:
WATER UTILITIES 210 S.W. 3rd. STREET BRYANT, AR PHONE: (501) 943-0468	DESCRIPTION: REINFORCED FLEXIBLE COUPLING	REVISED	S18
	DRAWN BY: CHECKED BY: FILE: S18-Reinforced Flexible Coupling.dwg		

STATE OF ARKANSAS LICENSED PROFESSIONAL ENGINEER No. 20676 — 11-19-2025

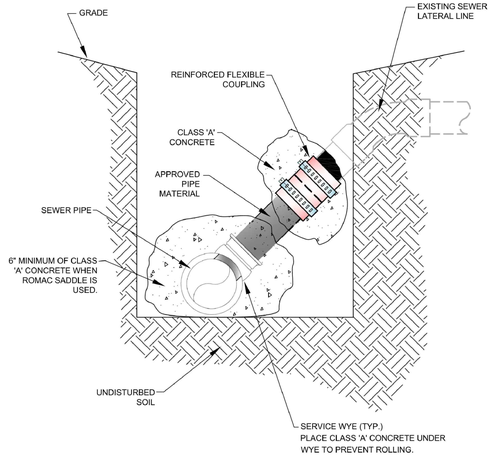
CERTIFICATE OF AUTHORIZATION — HOPE CONSULTING, INC. No. 1931 — ARKANSAS

HOPE CONSULTING
ENGINEERS - SURVEYORS
129 N. Main Street,
Benton, Arkansas 72015
PH. (501)315-2626
FAX (501) 315-0024
www.hopeconsulting.com

FOR USE AND BENEFIT OF:
RYE GENERAL CONTRACTORS

MARKET PLACE II
SEWER DETAILS 3
6128 HIGHWAY 5, BRYANT, SALINE COUNTY, ARKANSAS

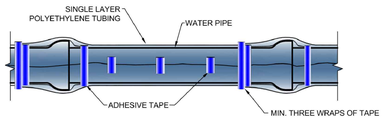
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REVISED:		CHECKED BY:		25-0608			
SHEET:	C-3.3	SCALE:					
500	01S	14W	0	22	440	62	1762



CITY OF BRYANT, AR
WATER UTILITIES
210 S.W. 3rd. STREET
BRYANT, AR
PHONE: (501) 943-0468

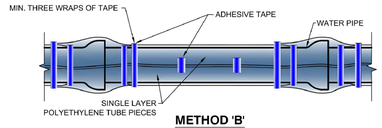
TITLE: **SEWER DETAILS**
DESCRIPTION: **CONNECT TO EXISTING SEWER SERVICE**
DRAWN BY: | CHECKED BY: | FILE: S19-Connect to Existing Sewer Service.dwg
DATE: APRIL 2015 | REVISED: ----- | ----- | ----- | ----- | -----
SHEET: **S19**

4/16/2015 10:58:18 AM



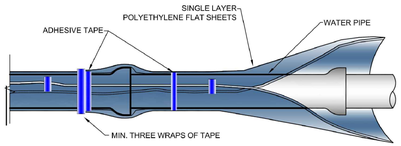
METHOD 'A'

METHOD 'A' USES ONE LENGTH OF POLYETHYLENE TUBE, OVERLAPPED AT THE JOINTS A MINIMUM OF 2 FEET.



METHOD 'B'

METHOD 'B' USES SEPARATE PIECES OF POLYETHYLENE TUBE FOR THE BARREL OF THE PIPE AND THE JOINTS. SHORT PIECES SHALL BE APPROXIMATELY 6' LONG AND OVERLAP BARREL SECTION BY A MINIMUM OF 2 FEET.



METHOD 'C'

METHOD 'C' - USED FOR PIPE-SHAPED AND ODD- SHAPED APPURTENANCES SUCH AS BENDS, REDUCERS, OFFSETS, VALVES, TEES, ETC.

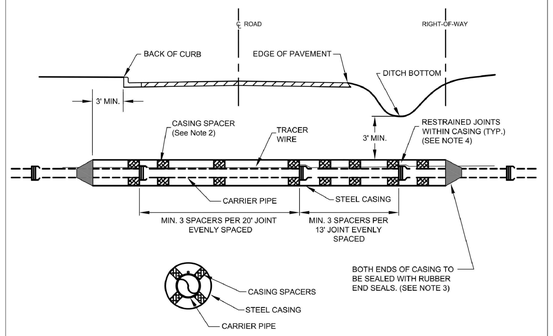
ALL DUCTILE IRON PIPE AND FITTINGS SHALL BE POLY WRAPPED.

THE ANSI/AWWA C105/A21.5 STANDARD OUTLINES THREE METHODS OF INSTALLING POLYETHYLENE ENCASEMENT/ SLEEVING.

CITY OF BRYANT, AR
WATER UTILITIES
210 S.W. 3rd. STREET
BRYANT, AR
PHONE: (501) 943-0468

TITLE: **SEWER DETAILS**
DESCRIPTION: **POLYETHYLENE PROTECTION MATERIAL**
DRAWN BY: | CHECKED BY: | FILE: S20-Poly Wrap.dwg
DATE: APRIL 2015 | REVISED: ----- | ----- | ----- | ----- | -----
SHEET: **S20**

4/16/2015 10:58:46 AM



NOTES:

1. STEEL CASING SHALL BE CONSTRUCTED OF SPIRAL OR STRAIGHT WELDED STEEL WITH A MINIMUM DIAMETER AND THICKNESS AS SHOWN BELOW (SEE TABLE).
2. PROVIDE CASING SPACERS BY CASCADE MODEL CCS AS MANUFACTURED BY CASCADE WATERWORKS MFG. CO., OR APPROVED EQUAL, MINIMUM 12-INCHES WIDE..
3. PROVIDE END SEALS BY CASCADE MODEL CCES AS MANUFACTURED BY CASCADE WATERWORKS MFG. CO., OR APPROVED EQUAL.
4. ONE CASING SPACER SHALL BE PLACED AT THE INSERTION STOP LINE TO RESIST OVER INSERTION.
5. ALL FORCE MAINS SHALL BE FULLY RESTRAINED WHERE ENCASEMENTS ARE GREATER THAN 25 FEET IN LENGTH. SELF-RESTRAINING GASKETS OR BELL RESTRAINTS SHALL BE USED FOR ALL JOINTS INSIDE THE ENCASEMENT PIPE AND FOR THE FIRST JOINT IN EACH DIRECTION OUTSIDE THE ENCASEMENT PIPE.
6. DIRECT BURY STEEL ENCASEMENT SHALL BE POLY WRAPPED.

CARRIER AND CASING SIZES							
CARRIER (ID)	2"	3"	4"	6"	8	10"	12"
CASING (ID)	5"	6"	8"	12"	16"	20"	24"
CASING WALL THICKNESS	0.250	0.250	0.250	0.250	0.250	0.250	0.375
CARRIER (ID)	14" - 16"	18" - 20"	24"	30"	36"	42"	48"
CASING (ID)	30"	36"	42"	48"	54"	60"	72"
CASING WALL THICKNESS	0.375	0.500	0.625	0.625	0.625	0.625	0.750

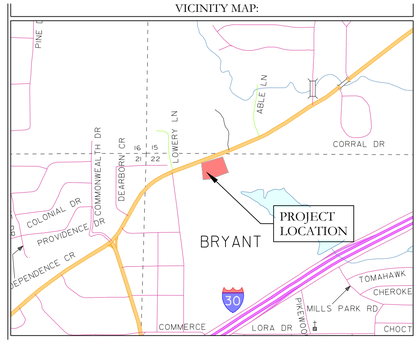
STEEL ENCASEMENT

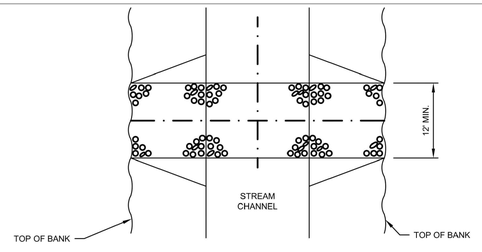
CITY OF BRYANT, AR
WATER UTILITIES
210 S.W. 3rd. STREET
BRYANT, AR
PHONE: (501) 943-0468

TITLE: **SEWER DETAILS**
DESCRIPTION: **STEEL ENCASEMENT**
DRAWN BY: | CHECKED BY: | FILE: S21-Steel Encasement.dwg
DATE: APRIL 2015 | REVISED: ----- | ----- | ----- | ----- | -----
SHEET: **S21**

4/16/2015 10:59:14 AM

VICINITY MAP:





NOTES:

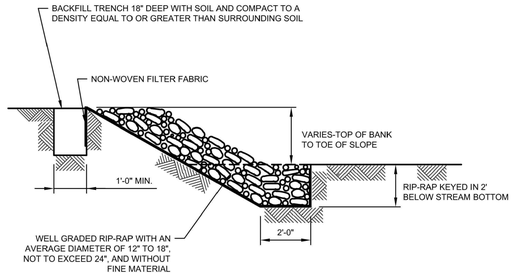
1. DETAIL SHOWN IS FOR 16" ENCASEMENT WITH 8" SEWER PIPE AT 0.50% GRADE. OTHER SIZES WILL REQUIRE A DETAILED DESIGN WITH A MAXIMUM DEFLECTION OF L/360.
2. REFER TO STEEL ENCASEMENT DETAIL FOR ADDITIONAL INSTALLATION REQUIREMENTS.
3. STEEL CASING SHALL BE CONSTRUCTED OF SPIRAL OR STRAIGHT WELDED STEEL.
4. PROVIDE CASING SPACERS BY CASCADE MODEL CCS AS MANUFACTURED BY CASCADE WATERWORKS MFG. CO., OR APPROVED EQUAL, MINIMUM 12-INCHES WIDE.
5. PROVIDE END SEALS BY CASCADE MODEL CCES AS MANUFACTURED BY CASCADE WATERWORKS MFG. CO., OR APPROVED EQUAL.
6. ONE CASING SPACER SHALL BE PLACED AT THE INSERTION STOP LINE TO RESIST OVER INSERTION.
7. ALL FORCE MAINS SHALL BE FULLY RESTRAINED WHERE ENCASEMENTS ARE GREATER THAN 25 FEET IN LENGTH. SELF-RESTRAINING GASKETS OR BELL RESTRAINTS SHALL BE USED FOR ALL JOINTS INSIDE THE ENCASEMENT PIPE AND FOR THE FIRST JOINT IN EACH DIRECTION OUTSIDE THE ENCASEMENT PIPE.
8. BELL RESTRAINTS FOR PVC SHALL BE SERIES1900 RESTRAINT HARNESS AND BELL RESTRAINTS FOR DIP SHALL BE SERIES 1700 RESTRAINT HARNESS BY EBAA IRON INC., OR APPROVED EQUAL.
9. DIRECT BURY STEEL ENCASEMENT SHALL BE POLY WRAPPED.

CITY OF BRYANT, AR
WATER UTILITIES
210 S.W. 3rd. STREET
BRYANT, AR
PHONE: (501) 943-0468

TITLE: **SEWER DETAILS**
DESCRIPTION: **STEEL ENCASEMENT AERIAL CROSSING**
DRAWN BY: | CHECKED BY: | FILE: S22-Steel Encasement-Aerial Crossing.dwg
DATE: APRIL 2015 | REVISED: ----- | ----- | ----- | ----- | -----
SHEET: **S22**

4/16/2015 10:59:20 AM

PLAN VIEW



SECTION

NOTE:

1. ALL DISTURBED STREAMBANKS SHALL BE STABILIZED AS SHOWN AND RESTORED TO PRE-CONSTRUCTION GRADES.
2. MINIMUM WIDTH OF RESTORATION SHALL BE 12 FEET.

BANK STABILIZATION

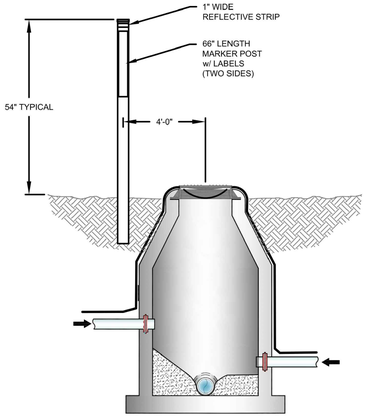
CITY OF BRYANT, AR
WATER UTILITIES
210 S.W. 3rd. STREET
BRYANT, AR
PHONE: (501) 943-0468

TITLE: **SEWER DETAILS**
DESCRIPTION: **BANK STABILIZATION**
DRAWN BY: | CHECKED BY: | FILE: S23-Bank Stabilization.dwg
DATE: APRIL 2015 | REVISED: ----- | ----- | ----- | ----- | -----
SHEET: **S23**

4/16/2015 10:59:23 AM

NOTES:

1. SEWER LINE MARKERS SHALL BE TRI-VIEW MARKING SYSTEM BY RHINO MARKING AND PROTECTION SYSTEMS OR CARSONITE INTERNATIONAL DUAL-SIDED UTILITY MARKER (CIB-380).
2. THE UPPERMOST PORTION OF THE CARSONITE MARKER SHALL BE MADE OF VISIBILITY ENHANCER (CVE-360).
3. TRI-VIEW MARKERS DO NOT REQUIRE VISIBILITY ENHANCERS.
4. AN ADDITIONAL WHITE 1" WIDE REFLECTIVE TAPE (3M OR EQUAL) SHALL BE PLACED AROUND THE FULL CIRCUMFERENCE OF THE TOP OF THE MARKER.



SEWER MARKER

CITY OF BRYANT, AR
WATER UTILITIES
210 S.W. 3rd. STREET
BRYANT, AR
PHONE: (501) 943-0468

TITLE: **SEWER DETAILS**
DESCRIPTION: **SEWER MARKER**
DRAWN BY: | CHECKED BY: | FILE: S24-Sewer Marker.dwg
DATE: APRIL 2015 | REVISED: ----- | ----- | ----- | ----- | -----
SHEET: **S24**

4/16/2015 10:59:31 AM

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
JAMES SHANE TAMZIDUL
11-19-2025

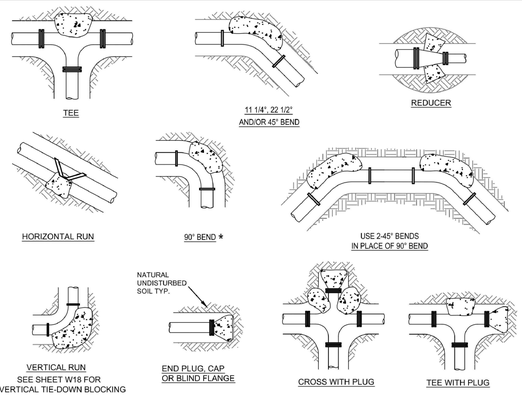
CERTIFICATE OF AUTHORIZATION
HOPE CONSULTING, INC.
No. 1931
ARKANSAS

HOPE CONSULTING
ENGINEERS - SURVEYORS
129 N. Main Street,
Benton, Arkansas 72015
PH. (501)315-2626
FAX (501) 315-0024
www.hopeconsulting.com

FOR USE AND BENEFIT OF:
RYE GENERAL CONTRACTORS

MARKET PLACE II
SEWER DETAILS 4
6128 HIGHWAY 5, BRYANT, SALINE COUNTY, ARKANSAS

DATE:	11.11.25	C.A.D. BY:		DRAWING NUMBER:			
REVISED:		CHECKED BY:		25-0608			
SHEET:	C-3.4	SCALE:					
500	01S	14W	0	22	440	62	1762



THRUST BLOCK SCHEDULE

(2000 PSF SOIL, 200 PSI WATER PRESSURE, 100 PSI WATER HAMMER)

BEARING AREA OF THRUST BLOCKS IN SQ. FT. (HORIZONTAL BENDS)						VOLUME OF THRUST BLOCK IN CU. FEET (VERTICAL BENDS)							
FITTING SIZE	PLUG TEE OR CAP	BEND ANGLE 90° *	45°	22 1/2°	11 5/4°	FITTING SIZE	BEND ANGLE 90° *	45°	22 1/2°	11 5/4°	ROD DIAM.	EMBED MENT
2, 3, & 4	1.9	2.7	1.4	0.7	0.4	2, 3, & 4	35.5	19.2	9.8	4.9	.50"	30"
6	5.6	7.9	4.3	2.2	1.1	6	105.8	57.2	29.2	14.7	.75"	30"
8	9.6	13.8	7.4	3.8	1.9	8	181.9	98.5	50.2	25.2	.75"	30"
12	20.8	29.0	15.7	8.0	4.0	12	397.1	209.5	106.8	53.7	1.0"	30"
16	35.7	50.4	27.3	13.9	7.0	16	672.6	354.0	185.6	93.2	1.0"	36"
18	44.8	63.4	34.3	17.5	18.8	18	844.7	457.2	233.1	117.1	1.0"	36"
24	78.4	110.9	60.0	30.8	15.4	24	1478.7	800.3	408.6	205.0	1.5"	36"

* 90 DEGREE BENDS SHALL ONLY BE USED ON A BY-EXCEPTION BASIS, AND MUST EACH BE SPECIFICALLY APPROVED BY CITY.

THRUST BLOCK NOTES:

1. CONCRETE FOR THRUST BLOCKS - CLASS A CONCRETE SHALL DEVELOP NOT LESS THAN 3000 P.S.I. COMPRESSIVE STRENGTH AT 28 DAYS AND BE PLACED AGAINST UNDISTURBED SOIL.
2. ALL BENDS, BOTH HORIZONTAL AND VERTICAL, SHALL BE BACKED WITH CONCRETE. VERTICAL BENDS SHALL BE PLACED ON CONCRETE PADS WHERE BENDS TURN UP, OR LOADED WHERE BENDS TURN DOWN.
3. WRAP PIPE JOINTS IN 8 MIL "POLYETHLENE" BEFORE PLACING CONCRETE.
4. BEARING AREA SHOWN IN TABLE, IS BASED UPON A 2000 LB/SF. SOIL BEARING, AND UPON A PIPELINE PRESSURE OF 200 psi. PLUS 100 psi. WATER HAMMER. AREAS SHOWN SHALL BE ADJUSTED, SHOULD FIELD CONDITIONS VARY.
5. MJ RESTRAINTS ARE REQUIRED FOR ALL FITTINGS.
6. USE LONG-RADIUS FITTINGS WHEREVER POSSIBLE
7. ALL BOLTS FOR FITTINGS SHALL BE 316 STAINLESS STEEL.
8. ALL DUCTILE IRON FITTINGS SHALL BE FUSION-BONDED EPOXY COATED INSIDE AND OUTSIDE IN ACCORDANCE WITH ANSI/AWWA C115/A21.16.
9. UNIT WEIGHT OF CONCRETE FOR VERTICAL THRUST BLOCKS IS 150 LBS/CU. FT.

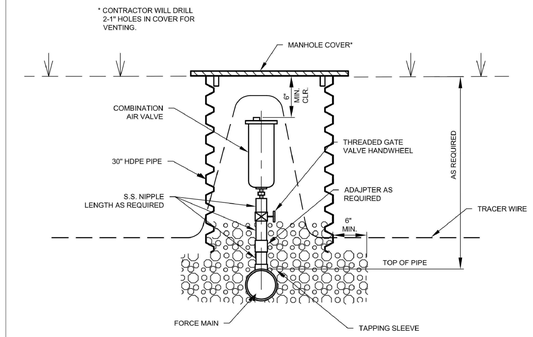
THRUST BLOCKING

CITY OF BRYANT, AR WATER UTILITIES 210 S.W. 3rd. STREET BRYANT, AR PHONE: (501) 943-0488	TITLE: SEWER DETAILS	DESCRIPTION: FORCE MAIN THRUST BLOCKING	DRAWN BY:	CHECKED BY:	FILE: S25-Thrust Blocking.dwg

DATE: APRIL 2015 REVISED ----- ----- ----- -----

SHEET: S25

4/16/2015 10:59:46 AM



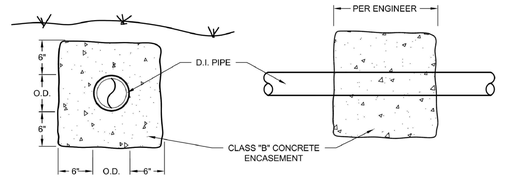
AIR RELEASE VALVE

CITY OF BRYANT, AR WATER UTILITIES 210 S.W. 3rd. STREET BRYANT, AR PHONE: (501) 943-0488	TITLE: SEWER DETAILS	DESCRIPTION: AIR RELEASE VALVE	DRAWN BY:	CHECKED BY:	FILE: S26-Air Release Valve.dwg

DATE: APRIL 2015 REVISED ----- ----- ----- -----

SHEET: S26

4/16/2015 10:59:53 AM



CONCRETE ENCASEMENT

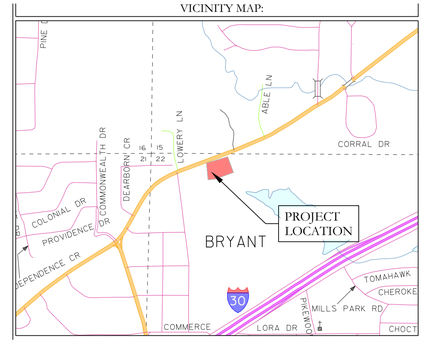
CITY OF BRYANT, AR WATER UTILITIES 210 S.W. 3rd. STREET BRYANT, AR PHONE: (501) 943-0488	TITLE: SEWER DETAILS	DESCRIPTION: CONCRETE ENCASEMENT DETAIL	DRAWN BY:	CHECKED BY:	FILE: S27-Concrete Encasement.dwg

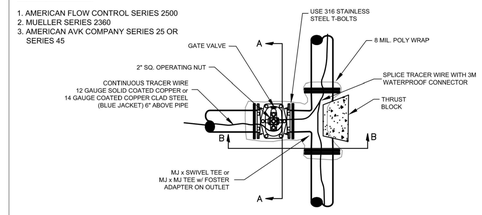
DATE: APRIL 2015 REVISED ----- ----- ----- -----

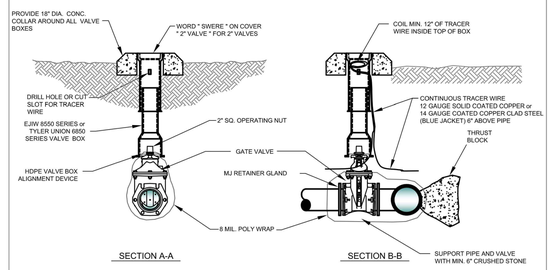
SHEET: S27

4/16/2015 10:59:58 AM

VICINITY MAP:







NOTES:

1. ALL VALVES SHALL BE SECURELY ANCHORED TO THE TEE.
2. ALL HARDWARE SHALL BE 316 STAINLESS STEEL.
3. IF DEPTH OF BURY EXCEEDS 4 FT., A VALVE STEM EXTENSION SHALL BE REQUIRED. THE VALVE STEM EXTENSION NUT SHALL BE WITHIN 24-INCHES TO 12-INCHES OF THE FINISHED SURFACE.

GATE VALVE DETAIL

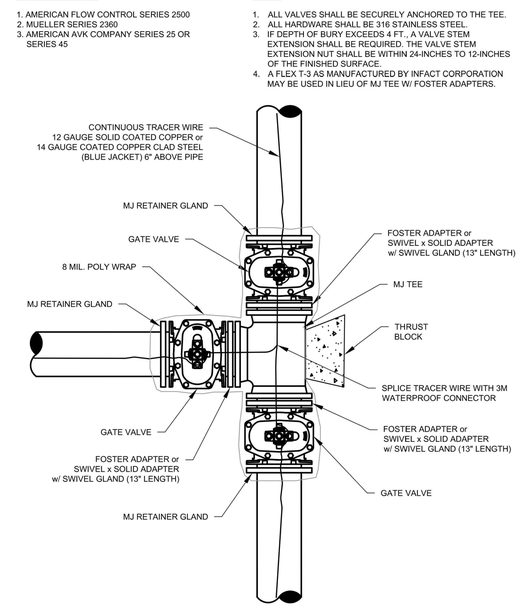
2" - 12"

CITY OF BRYANT, AR WATER UTILITIES 210 S.W. 3rd. STREET BRYANT, AR PHONE: (501) 943-0488	TITLE: SEWER DETAILS	DESCRIPTION: GATE VALVE	DRAWN BY:	CHECKED BY:	FILE: S29-Gate Valve.dwg

DATE: APRIL 2015 REVISED ----- ----- ----- -----

SHEET: S29

4/16/2015 11:00:08 AM



3-WAY GATE VALVE DETAIL

CITY OF BRYANT, AR WATER UTILITIES 210 S.W. 3rd. STREET BRYANT, AR PHONE: (501) 943-0488	TITLE: SEWER DETAILS	DESCRIPTION: 3-WAY GATE VALVES	DRAWN BY:	CHECKED BY:	FILE: S30-3-Way Gate Valves.dwg

DATE: APRIL 2015 REVISED ----- ----- ----- -----

SHEET: S30

4/16/2015 11:00:14 AM



11-19-2025



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ENGINEERS - SURVEYORS
129 N. Main Street,
Benton, Arkansas 72015
PH. (501)315-2626
FAX (501) 315-0024
www.hopeconsulting.com

FOR USE AND BENEFIT OF:

RYE GENERAL CONTRACTORS

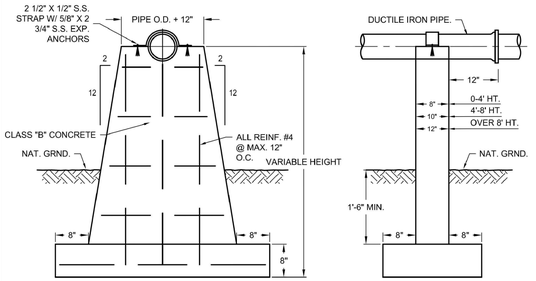
MARKET PLACE II

SEWER DETAILS 5

6128 HIGHWAY 5, BRYANT, SALINE COUNTY, ARKANSAS

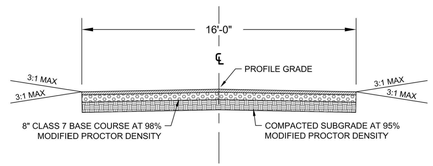
DATE:	11.11.25	C.A.D. BY:		DRAWING NUMBER:	25-0608
REVISED:		CHECKED BY:			
SHEET:	C-3.5	SCALE:			

500	01S	14W	0	22	440	62	1762



CONCRETE PIER

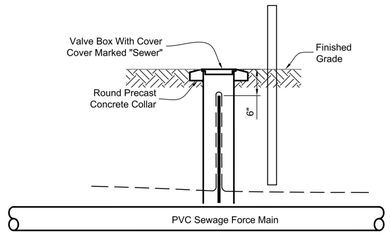
CITY OF BRYANT, AR WATER UTILITIES 210 S.W. 3rd. STREET BRYANT, AR PHONE: (501) 943-0468	TITLE: SEWER DETAILS			DATE: APRIL 2015	SHEET:
	DESCRIPTION: CONCRETE PIER			REVISED ----- ----- ----- ----- -----	S31
	DRAWN BY:	CHECKED BY:	FILE: S31-Concrete Pier.dwg		



GRAVEL DRIVE FOR SEWAGE PUMP STATION

GENERAL NOTES
1. CRUSHED STONE - MATERIAL IN EACH COURSE SHALL BE COMPACTED TO A DENSITY OF 98% MAXIMUM MODIFIED DENSITY.

CITY OF BRYANT, AR WATER UTILITIES 210 S.W. 3rd. STREET BRYANT, AR PHONE: (501) 943-0468	TITLE: SEWER DETAILS			DATE: APRIL 2015	SHEET:
	DESCRIPTION: GRAVEL DRIVE FOR SEWAGE PUMP STATION			REVISED ----- ----- ----- ----- -----	S32
	DRAWN BY:	CHECKED BY:	FILE: S32-Gravel Drive For Sewage Pump Station.dwg		

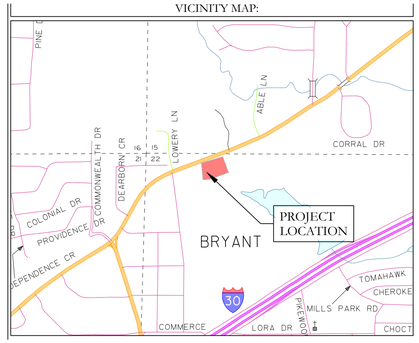


Notes:
1. Tracer Wire Test Station Shall Be Installed Every 1,000 Ft. Minimum And At Every Fiberglass Post Utility Marker.
2. Do Not Install Test Stations At Posts Located At Valves, Clean-out Stations Or Air Release Valves That Have Ground Rod Inside Access Vault

TRACER WIRE TEST STATION

CITY OF BRYANT, AR WATER UTILITIES 210 S.W. 3rd. STREET BRYANT, AR PHONE: (501) 943-0468	TITLE: SEWER DETAILS			DATE: APRIL 2015	SHEET:
	DESCRIPTION: TRACER WIRE TEST STATION			REVISED ----- ----- ----- ----- -----	S33
	DRAWN BY:	CHECKED BY:	FILE: S33-Tracer Wire Test Station.dwg		

VICINITY MAP:



STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 20870
HAMZIDUL ISLAM

HOPE CONSULTING, INC.
CERTIFICATE OF AUTHORIZATION
No. 1931
ARKANSAS

11-19-2025

HOPE CONSULTING
ENGINEERS - SURVEYORS
129 N. Main Street,
Benton, Arkansas 72015
PH. (501)315-2626
FAX (501) 315-0024
www.hopeconsulting.com

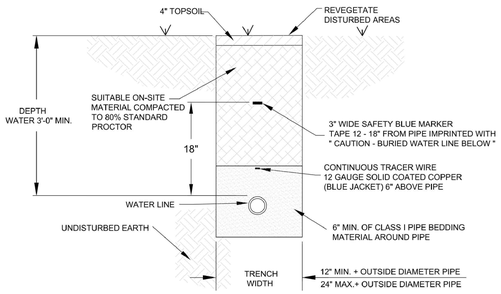
FOR USE AND BENEFIT OF:
RYE GENERAL CONTRACTORS

MARKET PLACE II
SEWER DETAILS 6
6128 HIGHWAY 5, BRYANT, SALINE COUNTY, ARKANSAS

DATE:	11.11.25	C.A.D. BY:	DRAWING NUMBER:
REVISED:		CHECKED BY:	25-0608
SHEET:	C-3.6	SCALE:	

500	01S	14W	0	22	440	62	1762

4/15/2015 11:00:20 AM



NOTES:

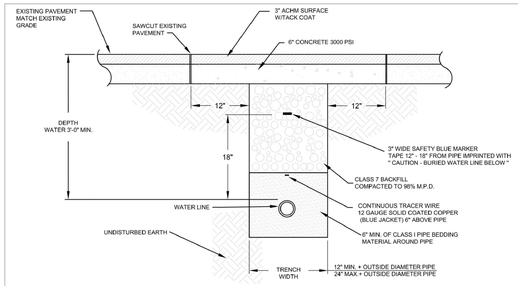
1. ALL VALVES, BENDS, ETC. SHALL BE RESTRAINED.
2. THE CONTRACTOR SHALL PROVIDE ALL ITEMS NECESSARY TO CONNECT WITH ANY PART OF THE EXISTING WATER SYSTEM THAT WILL REMAIN IN ORDER TO ESTABLISH A SATISFACTORY AND ACCEPTABLE WATER SYSTEM.
3. CONTRACTOR TO CONSTRUCT ALL TRENCH EXCAVATION IN ACCORDANCE WITH ALL OSHA REGULATIONS (29 CFR CH.XVII, SUBPART B)
4. TRENCH SHALL BE EXCAVATED BELOW GRADE REQUIRED TO PROVIDE A MINIMUM 36" OF PIPE COVER.
5. MAXIMUM PIPE COVER SHALL BE 60" UNDER NORMAL CONDITIONS. COVER GREATER THAN 60" MAY BE ALLOWED FOR SHORT DISTANCES WHERE REQUIRED BY FIELD CONDITIONS. NO HYDRANT SHALL BE ALLOWED WHERE LINES ARE GREATER THAN 60" DEEP.

WATER MAIN TRENCH

(NON-PAVED AREA)

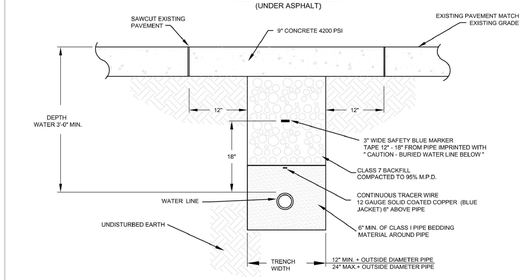
CITY OF BRYANT, AR	TITLE: WATER DETAILS	DATE: APRIL 2015	SHEET:
WATER UTILITIES 210 S.W. 3rd. STREET BRYANT, AR PHONE: (501) 943-0468	DESCRIPTION: WATER MAIN TRENCH (NON-PAVED AREA)	REVISED	W1
	DRAWN BY: CHECKED BY: FILE: W1-Water Trench (Non-Paved Area).dwg		

4/16/2015 11:45:13 AM



WATER MAIN TRENCH

(UNDER ASPHALT)



WATER MAIN TRENCH

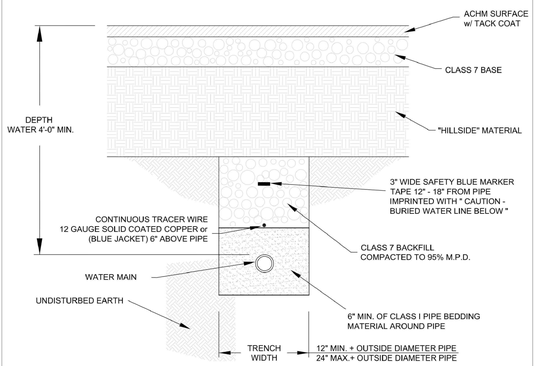
(UNDER CONCRETE)

NOTES:

1. ALL VALVES, BENDS, ETC. SHALL BE RESTRAINED.
2. THE CONTRACTOR SHALL PROVIDE ALL ITEMS NECESSARY TO CONNECT WITH ANY PART OF THE EXISTING WATER SYSTEM THAT WILL REMAIN IN ORDER TO ESTABLISH A SATISFACTORY AND ACCEPTABLE WATER SYSTEM.
3. CONTRACTOR TO CONSTRUCT ALL TRENCH EXCAVATION IN ACCORDANCE WITH ALL OSHA REGULATIONS (29 CFR CH.XVII, SUBPART B)
4. TRENCH SHALL BE EXCAVATED BELOW GRADE REQUIRED TO PROVIDE A MINIMUM 36" OF PIPE COVER.
5. MAXIMUM PIPE COVER SHALL BE 60" UNDER NORMAL CONDITIONS. COVER GREATER THAN 60" MAY BE ALLOWED FOR SHORT DISTANCES WHERE REQUIRED BY FIELD CONDITIONS. NO HYDRANT SHALL BE ALLOWED WHERE LINES ARE GREATER THAN 60" DEEP.

CITY OF BRYANT, AR	TITLE: WATER DETAILS	DATE: APRIL 2015	SHEET:
WATER UTILITIES 210 S.W. 3rd. STREET BRYANT, AR PHONE: (501) 943-0468	DESCRIPTION: WATER MAIN TRENCH (UNDER PAVEMENT)	REVISED	W2
	DRAWN BY: CHECKED BY: FILE: W2-Water Trench (Under Pavement).dwg		

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WATER MAIN INSTALLATION
PRIOR TO ROADWAY CONSTRUCTION

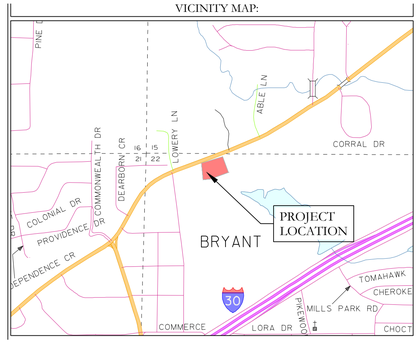
NOTES:

1. ALL VALVES, BENDS, ETC. SHALL BE RESTRAINED.
2. THE CONTRACTOR SHALL PROVIDE ALL ITEMS NECESSARY TO CONNECT WITH ANY PART OF THE EXISTING WATER SYSTEM THAT WILL REMAIN IN ORDER TO ESTABLISH A SATISFACTORY AND ACCEPTABLE WATER SYSTEM.
3. CONTRACTOR TO CONSTRUCT ALL TRENCH EXCAVATION IN ACCORDANCE WITH ALL OSHA REGULATIONS (29 CFR CH.XVII, SUBPART B)
4. TRENCH SHALL BE EXCAVATED BELOW GRADE REQUIRED TO PROVIDE A MINIMUM 36" OF PIPE COVER.
5. MAXIMUM PIPE COVER SHALL BE 60" UNDER NORMAL CONDITIONS. COVER GREATER THAN 60" MAY BE ALLOWED FOR SHORT DISTANCES WHERE REQUIRED BY FIELD CONDITIONS. NO HYDRANT SHALL BE ALLOWED WHERE LINES ARE GREATER THAN 60" DEEP.

CITY OF BRYANT, AR	TITLE: WATER DETAILS	DATE: APRIL 2015	SHEET:
WATER UTILITIES 210 S.W. 3rd. STREET BRYANT, AR PHONE: (501) 943-0468	DESCRIPTION: WATER MAIN INSTALLATION PRIOR TO ROADWAY CONSTRUCTION	REVISED	W3
	DRAWN BY: CHECKED BY: FILE: W3-Water Main Installation Prior to Roadway Const.dwg		

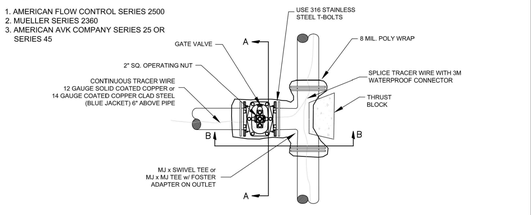
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VICINITY MAP:

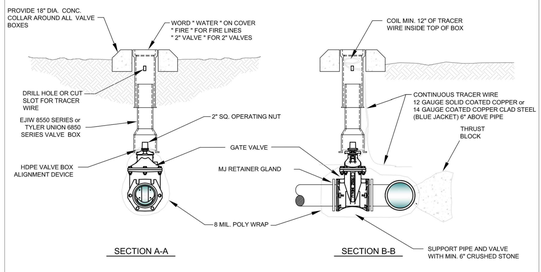


PERMITTED VALVES

1. AMERICAN FLOW CONTROL SERIES 2500
2. MUELLER SERIES 2360
3. AMERICAN AVK COMPANY SERIES 25 OR SERIES 45



PLAN



NOTES:

1. ALL VALVES SHALL BE SECURELY ANCHORED TO THE TEE.
2. ALL HARDWARE SHALL BE 316 STAINLESS STEEL.
3. IF DEPTH OF BURY EXCEEDS 4 FT., A VALVE STEM EXTENSION SHALL BE REQUIRED. THE VALVE STEM EXTENSION NUT SHALL BE WITHIN 24-INCHES TO 12-INCHES OF THE FINISHED SURFACE.

GATE VALVE DETAIL

2" - 12"

CITY OF BRYANT, AR	TITLE: WATER DETAILS	DATE: APRIL 2015	SHEET:
WATER UTILITIES 210 S.W. 3rd. STREET BRYANT, AR PHONE: (501) 943-0468	DESCRIPTION: GATE VALVE	REVISED	W4
	DRAWN BY: CHECKED BY: FILE: W4-Gate Valve.dwg		

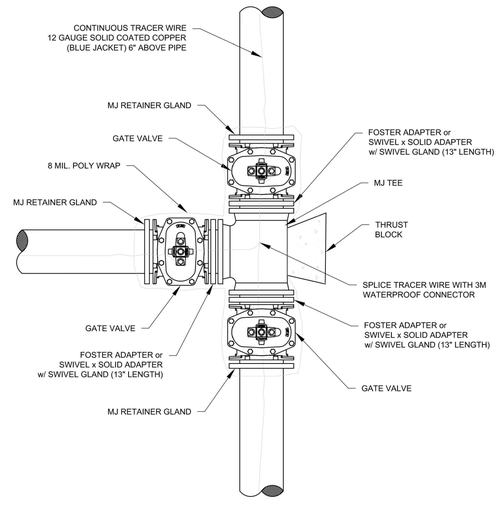
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PERMITTED VALVES

1. AMERICAN FLOW CONTROL SERIES 2500
2. MUELLER SERIES 2360
3. AMERICAN AVK COMPANY SERIES 25 OR SERIES 45

NOTES:

1. ALL VALVES SHALL BE SECURELY ANCHORED TO THE TEE.
2. ALL HARDWARE SHALL BE 316 STAINLESS STEEL.
3. IF DEPTH OF BURY EXCEEDS 4 FT., A VALVE STEM EXTENSION SHALL BE REQUIRED. THE VALVE STEM EXTENSION NUT SHALL BE WITHIN 24-INCHES TO 12-INCHES OF THE FINISHED SURFACE.



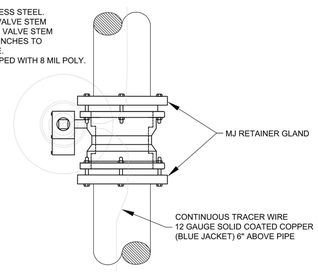
3-WAY GATE VALVE DETAIL

CITY OF BRYANT, AR	TITLE: WATER DETAILS	DATE: APRIL 2015	SHEET:
WATER UTILITIES 210 S.W. 3rd. STREET BRYANT, AR PHONE: (501) 943-0468	DESCRIPTION: 3-WAY GATE VALVES	REVISED	W5
	DRAWN BY: CHECKED BY: FILE: W5-3-Way Gate Valves.dwg		

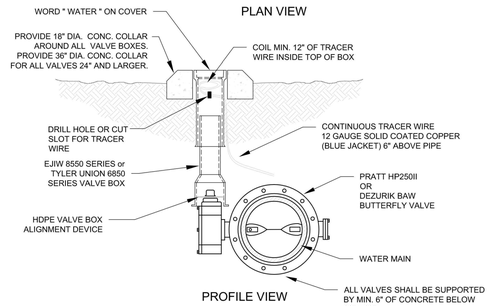
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NOTES:

1. ALL HARDWARE SHALL BE 316 STAINLESS STEEL.
2. IF DEPTH OF BURY EXCEEDS 4 FT., A VALVE STEM EXTENSION SHALL BE REQUIRED. THE VALVE STEM EXTENSION NUT SHALL BE WITHIN 24-INCHES TO 12-INCHES OF THE FINISHED SURFACE.
3. ALL VALVES SHALL BE DOUBLE WRAPPED WITH 8 MIL POLY.



PLAN VIEW



PROFILE VIEW

BUTTERFLY VALVE DETAIL

14-INCH WATER MAINS AND LARGER

CITY OF BRYANT, AR	TITLE: WATER DETAILS	DATE: APRIL 2015	SHEET:
WATER UTILITIES 210 S.W. 3rd. STREET BRYANT, AR PHONE: (501) 943-0468	DESCRIPTION: BUTTERFLY VALVE	REVISED	W6
	DRAWN BY: CHECKED BY: FILE: W6-Butterfly Valve.dwg		

4/16/2015 11:45:03 AM

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 20816
KAMZIDOU-SOSSA
11-19-2025

CERTIFICATE OF AUTHORIZATION
HOPE CONSULTING, INC
No. 1931
ARKANSAS

HOPE CONSULTING
ENGINEERS - SURVEYORS
129 N. Main Street,
Benton, Arkansas 72015
PH. (501)315-2626
FAX (501) 315-0024
www.hopeconsulting.com

FOR USE AND BENEFIT OF:
RYE GENERAL CONTRACTORS

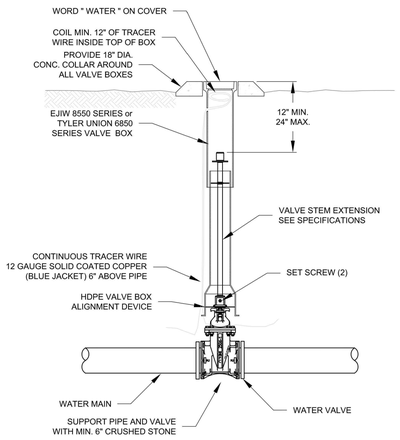
MARKET PLACE II
WATER DETAILS 1

6128 HIGHWAY 5, BRYANT, SALINE COUNTY, ARKANSAS

DATE:	11.11.25	C.A.D. BY:		DRAWING NUMBER:				
REVISED:		CHECKED BY:		25-0608				
SHEET:	C-3.7	SCALE:						
500	01S	14W	0	22	440	62	1762	

NOTES:

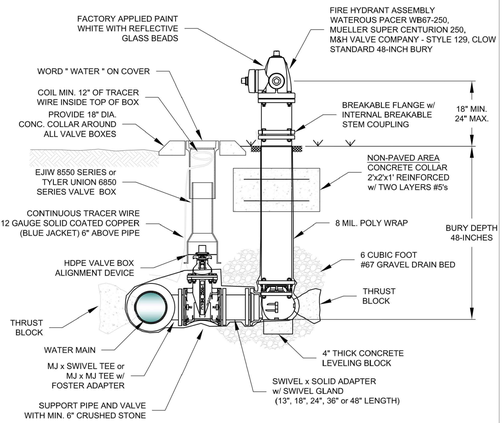
1. OPERATING NUT EXTENSIONS SHALL BE USED WHEN THE TOP OF THE OPERATING NUT IS GREATER THAN 4 FEET FROM THE TOP OF FINISHED SURFACE.
2. THE STEM EXTENSION SHALL BE OF ADEQUATE LENGTH TO REACH FROM THE VALVE OPERATING NUT TO A POINT WITHIN 24-INCHES TO 12-INCHES OF THE FINISHED SURFACE.



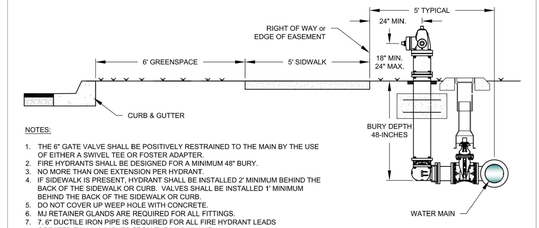
VALVE WITH STEM EXTENSION

NOTES:

1. THE 6" GATE VALVE SHALL BE POSITIVELY RESTRAINED TO THE MAIN BY THE USE OF EITHER A SWIVEL TEE OR FOSTER ADAPTER.
2. FIRE HYDRANTS SHALL BE DESIGNED FOR A MINIMUM 48" BURY.
3. BURY LINE OF HYDRANT SHALL BE NO LESS THAN THE PROPOSED FINISHED ELEVATION OF BACK OF CURB, OR SIDEWALK, WHICHEVER IS GREATER.
4. NO MORE THAN ONE EXTENSION PER HYDRANT.
5. IF SIDEWALK IS PRESENT, HYDRANT SHALL BE INSTALLED 2' MINIMUM BEHIND THE BACK OF THE SIDEWALK OR CURB. VALVES SHALL BE INSTALLED 1' MINIMUM BEHIND THE BACK OF THE SIDEWALK OR CURB.
6. DO NOT COVER UP WEEP HOLE WITH CONCRETE.
7. MJ RETAINER GLANDS ARE REQUIRED FOR ALL FITTINGS.
8. 7. 6" DUCTILE IRON PIPE IS REQUIRED FOR ALL FIRE HYDRANT LEADS GREATER THAN 48-INCHES FROM THE MAIN VALVE.
9. AN ADDITIONAL GUARDIAN VALVE IS REQUIRED FOR ALL FIRE HYDRANT LEADS GREATER THAN 30 FEET IN LENGTH.

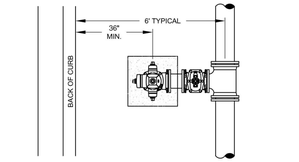


FIRE HYDRANT & VALVE CONNECTION

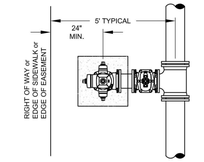


NOTES:

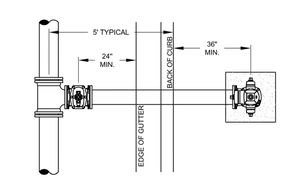
1. THE 6" GATE VALVE SHALL BE POSITIVELY RESTRAINED TO THE MAIN BY THE USE OF EITHER A SWIVEL TEE OR FOSTER ADAPTER.
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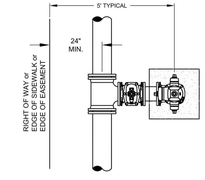
WATER LINE BEHIND CURB
INSIDE ROW



WATER LINE IN EASEMENT
OUTSIDE ROW

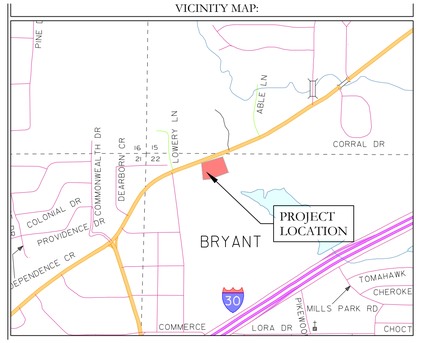


WATER LINE IN STREET
INSIDE ROW



WATER LINE IN EASEMENT
OUTSIDE ROW

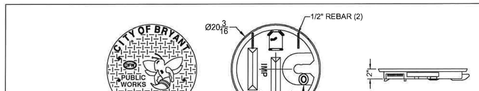
VICINITY MAP:



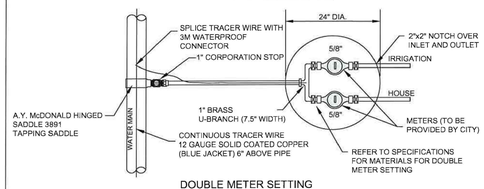
CITY OF BRYANT, AR WATER UTILITIES 210 S.W. 3rd. STREET BRYANT, AR PHONE: (501) 943-0468	TITLE: **WATER DETAILS**	DATE: APRIL 2015 REVISED ----- ----- ----- -----	SHEET: **W7**
	DESCRIPTION: **VALVE STEM EXTENSION**		
	DRAWN BY: CHECKED BY: FILE: W7-Valve Stem Extension.dwg		

CITY OF BRYANT, AR WATER UTILITIES 210 S.W. 3rd. STREET BRYANT, AR PHONE: (501) 943-0468	TITLE: **WATER DETAILS**	DATE: APRIL 2015 REVISED ----- ----- ----- -----	SHEET: **W8**
	DESCRIPTION: **FIRE HYDRANT AND VALVE CONNECTION**		
	DRAWN BY: CHECKED BY: FILE: W8-Fire Hydrant and Valve.dwg		

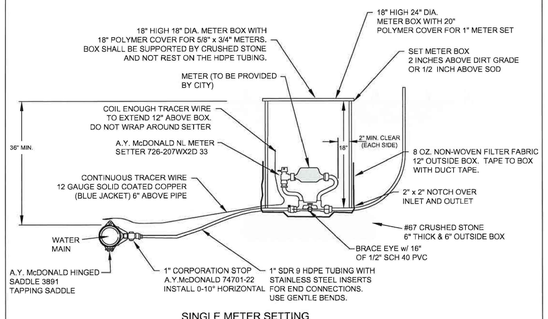
CITY OF BRYANT, AR WATER UTILITIES 210 S.W. 3rd. STREET BRYANT, AR PHONE: (501) 943-0468	TITLE: **WATER DETAILS**	DATE: APRIL 2015 REVISED ----- ----- ----- -----	SHEET: **W9**
	DESCRIPTION: **FIRE HYDRANT PLACEMENT**		
	DRAWN BY: CHECKED BY: FILE: W9-Fire Hydrant Placement.dwg		



WATER METER LID

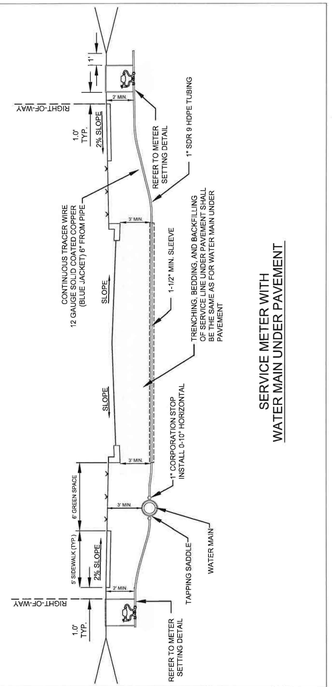


DOUBLE METER SETTING
ONLY FOR 1 LOT



SINGLE METER SETTING

CITY OF BRYANT, AR WATER UTILITIES 210 S.W. 3rd. STREET BRYANT, AR PHONE: (501) 943-0468	TITLE: **WATER DETAILS**	DATE: APRIL 2015 REVISED ----- ----- ----- -----	SHEET: **W10**
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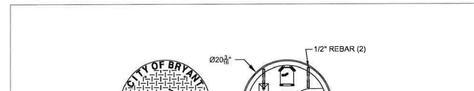


SERVICE METER WITH WATER MAIN UNDER PAVEMENT

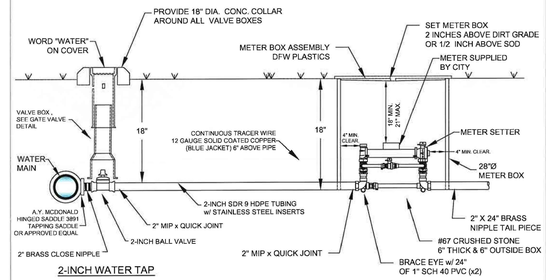
NOTES:

1. ALL WATER & SANITARY SEWER TRENCHES WHICH ARE UNDER THE PROPOSED STREETS MUST BE BACKFILLED AS SHOWN ON THE TRENCHING, BEDDING, AND BACKFILL STANDARD DETAIL.
2. WATER AND SEWER LINES SHALL MAINTAIN A MINIMUM OF HORIZONTAL SEPARATION DISTANCE OF 10 FEET AT ALL TIMES.
3. WATER LINES SHALL MAINTAIN A MINIMUM VERTICAL SEPARATION OF 18 INCHES WITH THE WATER LINE CROSSING ABOVE THE SEWER LINE.
4. ALL CORP. STOPS SHALL BE INSTALLED AT 0-10° ANGLE FROM HORIZONTAL.
5. ALL METER BOXES SHALL BE INSTALLED ON THE CUSTOMER SIDE OF THE WATER MAIN.
6. ALL METER BOXES SHALL BE INSTALLED IN NON-PAVED AREAS. ANY METER BOX THAT GETS PLACED IN A PAVED AREA SHALL BE RELOCATED AT THE OWNER'S EXPENSE BEFORE A WATER METER WILL BE INSTALLED.

CITY OF BRYANT, AR WATER UTILITIES 210 S.W. 3rd. STREET BRYANT, AR PHONE: (501) 943-0468	TITLE: **WATER DETAILS**	DATE: APRIL 2015 REVISED ----- ----- ----- -----	SHEET: **W11**
	DESCRIPTION: **METER SERVICE LINE UNDER PAVEMENT**		
	DRAWN BY: CHECKED BY: FILE: W11-Water Service Line Under Pavement.dwg		



WATER METER LID



2-INCH WATER TAP

2-INCH METER SETTER

NOTES:

1. COORDINATE INSTALLATION AND CONFIGURATIONOF ALL 1-1/2" AND LARGER METER SETTINGS WITH THE CITY.
2. ALL METER BOXES SHALL BE INSTALLED IN NON-PAVED AREAS. ANY METER BOX THAT GETS PLACED IN A PAVED AREA SHALL BE RELOCATED AT THE OWNER'S EXPENSE BEFORE A WATER METER WILL BE INSTALLED.
3. SUPPORT METER INSTALLATION WITH 1"x24" SCH40 PVC THROUGH EACH BRACE EYE.

2" WATER SERVICE AND WATER METER

CITY OF BRYANT, AR WATER UTILITIES 210 S.W. 3rd. STREET BRYANT, AR PHONE: (501) 943-0468	TITLE: **WATER DETAILS**	DATE: APRIL 2015 REVISED ----- ----- ----- -----	SHEET: **W12**
	DESCRIPTION: **2" WATER METER**		
	DRAWN BY: CHECKED BY: FILE: W12-2 Inch Water Meter.dwg		

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
TAMZIDUL HOQUE
No. 23076
11-19-2025

CERTIFICATE OF AUTHORIZATION
HOPE CONSULTING, INC.
No. 1931
ARKANSAS

HOPE CONSULTING
ENGINEERS - SURVEYORS
129 N. Main Street,
Benton, Arkansas 72015
PH. (501)315-2626
FAX (501) 315-0024
www.hopeconsulting.com

FOR USE AND BENEFIT OF:
RYE GENERAL CONTRACTORS

MARKET PLACE II
WATER DETAILS 2
6128 HIGHWAY 5, BRYANT, SALINE COUNTY, ARKANSAS

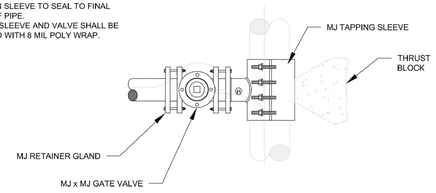
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REVISED:		CHECKED BY:		25-0608
SHEET:	C-3.8	SCALE:		

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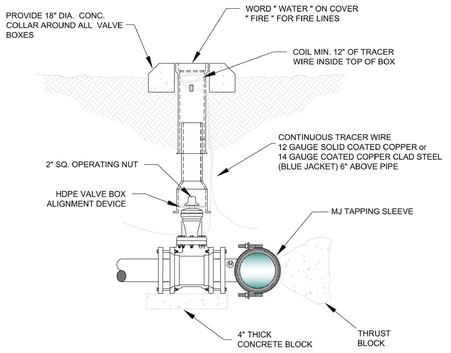
4/14/2025 11:45:48 AM

NOTES:

1. TAPPING SLEEVE SHALL BE SMITH-BLAIR 662 OR FORD FAST.
2. AFTER THE TAP IS MADE, RE-TORQUE BOLTS ON SLEEVE TO SEAL TO FINAL SHAPE OF PIPE.
3. TAPPING SLEEVE AND VALVE SHALL BE WRAPPED WITH 8 MIL POLY WRAP.



PLAN VIEW

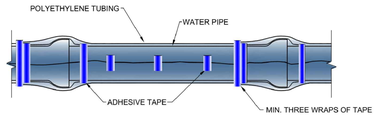


PROFILE VIEW

CITY OF BRYANT, AR
WATER UTILITIES
210 S.W. 3rd. STREET
BRYANT, AR
PHONE: (501) 943-0468

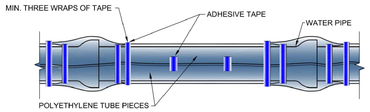
TITLE:	**WATER DETAILS**	DATE: APRIL 2015	SHEET:
DESCRIPTION:	**TAPPING SLEEVE AND VALVE**	REVISED	**W13**
DRAWN BY:	CHECKED BY:	FILE: W13-Tapping Sleeve and Valve.dwg	

4/24/2015 11:46:24 AM



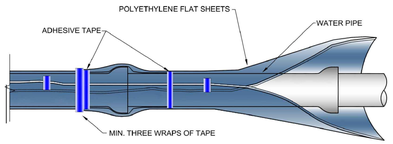
METHOD 'A'

METHOD 'A' USES ONE LENGTH OF POLYETHYLENE TUBE, OVERLAPPED AT THE JOINTS A MINIMUM OF 2 FEET.



METHOD 'B'

METHOD 'B' USES SEPARATE PIECES OF POLYETHYLENE TUBE FOR THE BARREL OF THE PIPE AND THE JOINTS. SHORT PIECES SHALL BE APPROXIMATELY 6' LONG AND OVERLAP BARREL SECTION BY A MINIMUM OF 2 FEET.



METHOD 'C'

METHOD 'C' - USED FOR PIPE-SHAPED AND ODD- SHAPED APPURTENANCES SUCH AS BENDS, REDUCERS, OFFSETS, VALVES, TEES, ETC.

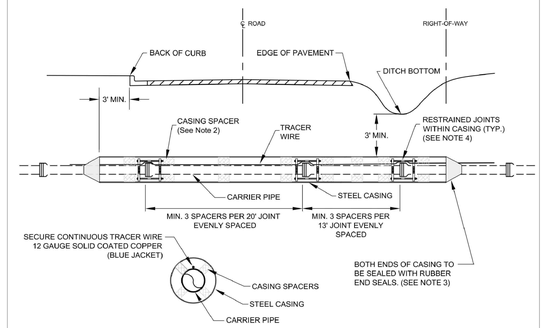
ALL DUCTILE IRON PIPE AND FITTINGS SHALL BE POLY WRAPPED.

THE ANSI/AWWA C105/A21.5 STANDARD OUTLINES THREE METHODS OF INSTALLING POLYETHYLENE ENCASEMENT/ SLEEVING.

CITY OF BRYANT, AR
WATER UTILITIES
210 S.W. 3rd. STREET
BRYANT, AR
PHONE: (501) 943-0468

TITLE:	**WATER DETAILS**	DATE: APRIL 2015	SHEET:
DESCRIPTION:	**POLYETHYLENE PROTECTION MATERIAL**	REVISED	**W14**
DRAWN BY:	CHECKED BY:	FILE: W14-Poly Wrap.dwg	

4/24/2015 11:46:29 AM



NOTES:

1. STEEL CASING SHALL BE CONSTRUCTED OF SPIRAL OR STRAIGHT WELDED STEEL WITH A MINIMUM DIAMETER AND THICKNESS AS SHOWN BELOW (SEE TABLE).
2. PROVIDE CASING SPACERS BY CASCADE MODEL CCS AS MANUFACTURED BY CASCADE WATERWORKS MFG. CO., OR APPROVED EQUAL.
3. PROVIDE END SEALS BY CASCADE MODEL CCES AS MANUFACTURED BY CASCADE WATERWORKS MFG. CO., OR APPROVED EQUAL.
4. WHERE ENCASEMENTS ARE GREATER THAN 25 FEET IN LENGTH, SELF-RESTRAINING GASKETS OR BELL RESTRAINTS SHALL BE USED FOR ALL JOINTS INSIDE THE ENCASEMENT PIPE AND FOR THE FIRST JOINT IN EACH DIRECTION OUTSIDE THE ENCASEMENT PIPE.
5. BELL RESTRAINTS FOR PVC SHALL BE SERIES1900 RESTRAINT HARNESS AND BELL RESTRAINTS FOR DIP SHALL BE SERIES 1700 RESTRAINT HARNESS BY EBAA IRON INC., OR APPROVED EQUAL.
6. DIRECT BURY STEEL ENCASEMENT SHALL BE POLY WRAPPED.
7. JACK AND BORE STEEL ENCASEMENT SHALL HAVE 17# HP MAGNESIUM ANODES CAD WELDED TO THE END OF THE ENCASEMENT PIPE.

CARRIER AND CASING SIZES

CARRIER (ID)	2"	3"	4"	6"	8	10"	12"	
CASING (ID)	5"	6"	8"	12"	16"	20"	24"	
CASING WALL THICKNESS	0.250	0.250	0.250	0.250	0.250	0.250	0.375	
CARRIER (ID)	14" - 16"	18" - 20"	24"	30"	36"	42"	48"	
CASING (ID)	30"	36"	42"	48"	54"	60"	72"	
CASING WALL THICKNESS	0.375	0.500	0.625	0.625	0.625	0.625	0.750	

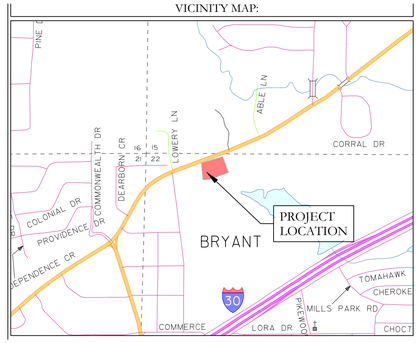
STEEL ENCASEMENT

CITY OF BRYANT, AR
WATER UTILITIES
210 S.W. 3rd. STREET
BRYANT, AR
PHONE: (501) 943-0468

TITLE:	**WATER DETAILS**	DATE: APRIL 2015	SHEET:
DESCRIPTION:	**STEEL ENCASEMENT**	REVISED	**W15**
DRAWN BY:	CHECKED BY:	FILE: W15-Steel Encasement.dwg	

4/24/2015 11:45:51 AM

VICINITY MAP:



THRUST BLOCK SCHEDULE

(2000 PSF SOIL, 200 PSI WATER PRESSURE, 100 PSI WATER HAMMER)

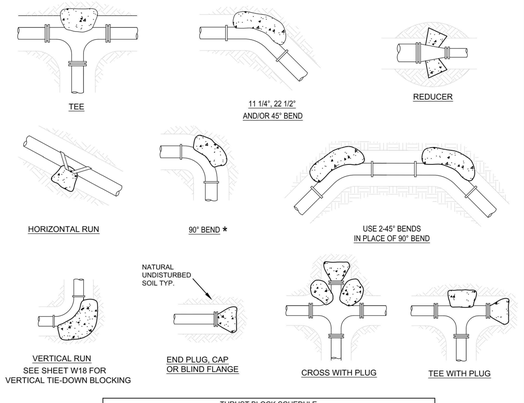
BEARING AREA OF THRUST BLOCKS IN SQ. FT. (HORIZONTAL BENDS)						VOLUME OF THRUST BLOCK IN CU. FEET (VERTICAL BENDS)					
FITTING SIZE	PLUG TEE OR CAP	BEND ANGLE 90° *	45°	22 1/2°	11 1/4°	FITTING SIZE	BEND ANGLE 90° *	45°	22 1/2°	11 1/4°	ROD DIAM.	EMBED-MENT
2, 3, & 4	1.9	2.7	1.4	0.7	0.4	2, 3, & 4	35.5	19.2	9.8	4.9	.50"	30"
6	5.6	7.9	4.3	2.2	1.1	6	105.8	57.2	29.2	14.7	.75"	30"
8	9.6	13.6	7.4	3.8	1.9	8	181.9	98.5	50.2	25.2	.75"	30"
12	20.5	29.0	15.7	8.0	4.0	12	387.1	209.5	106.8	53.7	1.0"	30"
16	35.7	50.4	27.3	13.9	7.0	16	672.6	364.0	185.6	93.2	1.0"	30"
18	44.8	63.4	34.3	17.5	18.8	18	844.7	457.2	233.1	117.1	1.0"	36"
24	78.4	110.9	60.0	30.6	15.4	24	1478.7	800.3	408.0	205.0	1.5"	30"

* 90 DEGREE BENDS SHALL ONLY BE USED ON A BY-EXCEPTION BASIS, AND MUST EACH BE SPECIFICALLY APPROVED BY CITY.

THRUST BLOCK NOTES:

1. CONCRETE FOR THRUST BLOCKS - CLASS A CONCRETE SHALL DEVELOP NOT LESS THAN 3000 P.S.I. COMPRESSIVE STRENGTH AT 28 DAYS AND BE PLACED AGAINST UNDISTURBED SOIL.
2. ALL BENDS, BOTH HORIZONTAL AND VERTICAL, SHALL BE BACKED WITH CONCRETE. VERTICAL BENDS SHALL BE PLACED ON CONCRETE PADS WHERE BENDS TURN UP, OR LOADED WHERE BENDS TURN DOWN.
3. WRAP PIPE JOINTS IN 8 MIL "POLYETHLENE" BEFORE PLACING CONCRETE.
4. BEARING AREA SHOWN IN TABLE, IS BASED UPON A 2000 LB/SF. SOIL BEARING, AND UPON A PIPELINE PRESSURE OF 200 psi. PLUS 100 psi. WATER HAMMER. AREAS SHOWN SHALL BE ADJUSTED, SHOULD FIELD CONDITIONS VARY.
5. MJ RESTRAINTS ARE REQUIRED FOR ALL FITTINGS.
6. USE LONG-RADIUS FITTINGS WHEREVER POSSIBLE.
7. ALL BOLTS FOR FITTINGS SHALL BE 316 STAINLESS STEEL.
8. ALL DUCTILE IRON FITTINGS SHALL BE FUSION-BONDED EPOXY COATED INSIDE AND OUTSIDE IN ACCORDANCE WITH ANSI/AWWA C116/A21.16.
9. UNIT WEIGHT OF CONCRETE FOR VERTICAL THRUST BLOCKS IS 150 LBS/CU. FT.

THRUST BLOCKING



CITY OF BRYANT, AR
WATER UTILITIES
210 S.W. 3rd. STREET
BRYANT, AR
PHONE: (501) 943-0468

TITLE:	**WATER DETAILS**	DATE: APRIL 2015	SHEET:
DESCRIPTION:	**THRUST BLOCKING**	REVISED	**W16**
DRAWN BY:	CHECKED BY:	FILE: W16-Thrust Blocking.dwg	

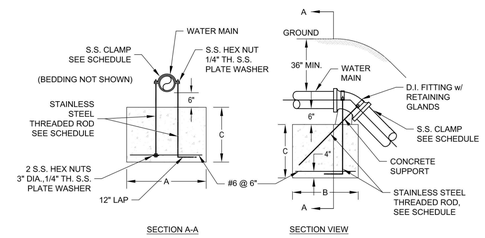
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BLOCKING SCHEDULE

PIPE SIZE		BENDS 45°	22 1/2°	11 1/4°	ROD DIA.
8"	VOLUME REQ'D (CU. FT.)	98.5	50.2	25.2	3/4 IN.
	A (FT.)	5.00'	4.00'	3.00'	
	B (FT.)	4.00'	3.20'	2.80'	
	C (FT.)	5.00'	4.00'	3.00'	
	MIN. CLAMP (2 EA.)	3/8 IN. x 2 IN.			
12"	VOLUME REQ'D (CU. FT.)	209.5	106.8	53.7	3/4 IN.
	A (FT.)	6.00'	5.00'	4.00'	
	B (FT.)	6.00'	4.25'	3.50'	
	C (FT.)	6.00'	5.00'	4.00'	
	MIN. CLAMP (2 EA.)	1/2 IN. x 2 IN.			
18"	VOLUME REQ'D (CU. FT.)	457.2	233.1	117.1	1 IN.
	A (FT.)	8.00'	6.50'	5.00'	
	B (FT.)	7.25'	5.50'	4.75'	
	C (FT.)	8.00'	6.50'	5.00'	
	MIN. CLAMP (2 EA.)	5/8 IN. x 3 IN.			
24"	VOLUME REQ'D (CU. FT.)	800.3	408.0	205.0	1 1/4 IN.
	A (FT.)	9.50'	7.50'	6.00'	
	B (FT.)	9.00'	7.25'	5.75'	
	C (FT.)	9.50'	7.50'	6.00'	
	MIN. CLAMP (2 EA.)	5/8 IN. x 3 IN.			

VOLUME CALCULATED ON THE BASIS OF CONCRETE REACTING THRUST ON THE RESPECTIVE BENDS UNDER AN INTERNAL PRESSURE OF 250 PSI, 50 PSI SURGE AND THE WEIGHT OF CONCRETE IS 150 POUNDS PER CU. FT.

ALL FITTINGS SHALL BE MECHANICAL JOINTS WITH RETAINING GLANDS. BEDDING NOT SHOWN



VERTICAL TIE-DOWN BLOCKING

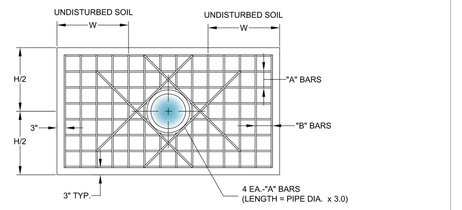
CITY OF BRYANT, AR
WATER UTILITIES
210 S.W. 3rd. STREET
BRYANT, AR
PHONE: (501) 943-0468

TITLE:	**WATER DETAILS**	DATE: APRIL 2015	SHEET:
DESCRIPTION:	**VERTICAL TIE-DOWN BLOCKING**	REVISED	**W17**
DRAWN BY:	CHECKED BY:	FILE: W17-Vertical Tie-Down Blocking.dwg	

4/24/2015 11:47:09 AM

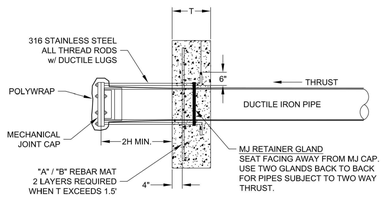
ANCHOR COLLAR SCHEDULE

PIPE SIZE	★ MINIMUM DIMENSIONS ★ W	H	T	REINFORCING BARS "A" BARS	"B" BARS
6"	1.5'	2.0'	1.0'	#6 @ 6"	#6 @ 6"
8"	2.0'	2.5'	1.0'	#6 @ 6"	#6 @ 6"
12"	2.5'	4.0'	1.5'	#6 @ 6"	#6 @ 6"
16"	3.5'	5.0'	1.5'	#6 @ 6"	#6 @ 6"
20"	5.0'	5.5'	2.0'	#6 @ 6"	#6 @ 6"
24"	6.5'	6.0'	2.0'	#7 @ 6"	#7 @ 10"



NOTES:

1. DESIGN PRESSURE IS 200 PSI PLUS 100 PSI SURGE AND 2,000 PSI SOIL BEARING.
2. ALL DIMENSIONS ARE MINIMUM REQUIREMENTS. ACTUAL FIELD CONDITIONS MAY REQUIRE LARGER DIMENSIONS.
3. ALL RETAINER GLANDS SHALL BE MEGA-LUG BY EBAA IRON.



ANCHOR COLLAR

CITY OF BRYANT, AR
WATER UTILITIES
210 S.W. 3rd. STREET
BRYANT, AR
PHONE: (501) 943-0468

TITLE:	**WATER DETAILS**	DATE: APRIL 2015	SHEET:
DESCRIPTION:	**ANCHOR COLLAR**	REVISED	**W18**
DRAWN BY:	CHECKED BY:	FILE: W18-Anchor Collar.dwg	

4/24/2015 11:47:20 AM

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
JAMES M. HOPE
NO. 20870
11-19-2025

CERTIFICATE OF AUTHORIZATION
HOPE CONSULTING, INC.
No. 1931
ARKANSAS

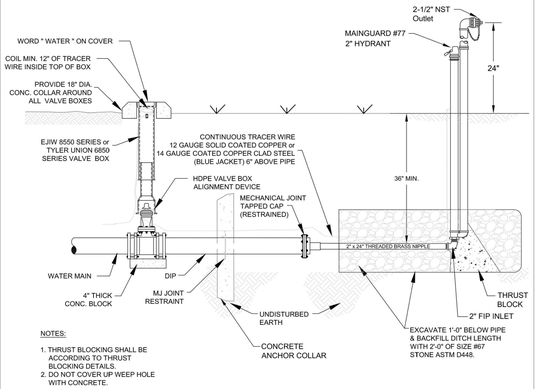
HOPE CONSULTING
ENGINEERS - SURVEYORS
129 N. Main Street,
Benton, Arkansas 72015
PH. (501)315-2626
FAX (501) 315-0024
www.hopeconsulting.com

FOR USE AND BENEFIT OF:
RYE GENERAL CONTRACTORS

MARKET PLACE II
WATER DETAILS 3
6128 HIGHWAY 5, BRYANT, SALINE COUNTY, ARKANSAS

DATE:	11.11.25	C.A.D. BY:	DRAWING NUMBER: 25-0608
REVISED:		CHECKED BY:	
SHEET:	C-3.9	SCALE:	

500	01S	14W	0	22	440	62	1762



NOTES:

1. THRUST BLOCKING SHALL BE ACCORDING TO THRUST BLOCKING DETAILS.
2. DO NOT COVER UP WEEP HOLE WITH CONCRETE.

BLOW-OFF ASSEMBLY

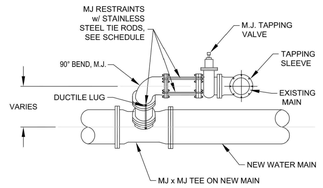
CITY OF BRYANT, AR WATER UTILITIES 210 S.W. 3rd. STREET BRYANT, AR PHONE: (501) 943-0468	TITLE: **WATER DETAILS**	DATE: APRIL 2015 REVISED ----- ----- ----- -----	SHEET: **W19**
	DESCRIPTION: **BLOW-OFF ASSEMBLY**		
	DRAWN BY: CHECKED BY: FILE: W19-Blow-off Assembly.dwg		

4/16/2015 11:47:16 AM

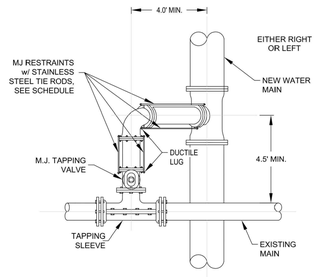
NOTES:

1. SWING CONNECTIONS USING 90° BENDS SHALL BE PERMITTED BY THE CITY ON A CASE BY CASE BASIS.
2. CONTRACTOR SHALL LOCATE EXISTING MAIN IN ADVANCE OF LAYING NEW LINE IN ORDER TO ASSURE ADEQUATE LENGTH TO ADJUST DEPTH OF NEW MAIN.
3. DIMENSIONS SHOWN ARE RECOMMENDED MINIMUMS TO PROVIDE ADEQUATE ROOM FOR TIGHTENING BOLTS ON JOINTS (OTHER DIMENSIONS MAY BE USED).
4. PROVIDE ALL THREAD STAINLESS STEEL TIE RODS WITH DUCTILE LUGS FOR ANCHORING ALL JOINTS.
5. ROTATE TEE UP & ELBOW DOWN AS REQUIRED TO MATCH.
6. TRACER WIRE SHALL BE INSTALLED ON ALL NEW WATER LINES.
7. ALL FITTINGS, VALVES, AND DIP SHALL BE POLY WRAPPED.

SCHEDULE OF TIE RODS		
SIZE	NUMBER OF ROD PER FITTING	DIAMETER OF S.S. RODS
8"	4	3/4"
12"	4	3/4"



SECTION VIEW



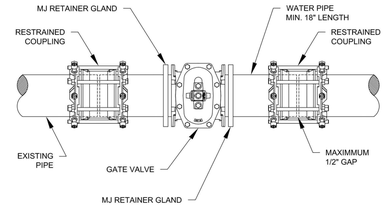
PLAN VIEW

CITY OF BRYANT, AR WATER UTILITIES 210 S.W. 3rd. STREET BRYANT, AR PHONE: (501) 943-0468	TITLE: **WATER DETAILS**	DATE: APRIL 2015 REVISED ----- ----- ----- -----	SHEET: **W20**
	DESCRIPTION: **SWING CONNECTION - NEW MAIN TO EXISTING MAIN**		
	DRAWN BY: CHECKED BY: FILE: W20-Swing Connection.dwg		

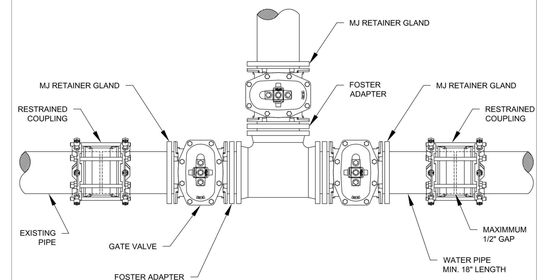
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NOTES:

1. ALL VALVES SHALL BE SECURELY ANCHORED.
2. ALL HARDWARE SHALL BE 316 STAINLESS STEEL.
3. IF DEPTH OF BURY EXCEEDS 4 FT., A VALVE STEM EXTENSION SHALL BE REQUIRED. THE VALVE STEM EXTENSION NUT SHALL BE WITHIN 24-INCHES TO 12-INCHES OF THE FINISHED SURFACE.



VALVE CUT-IN

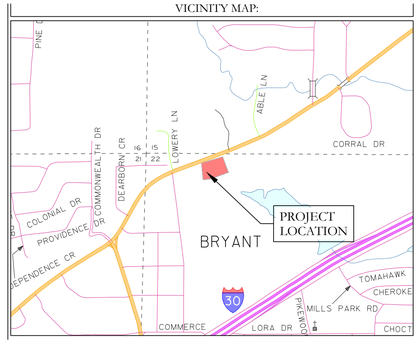


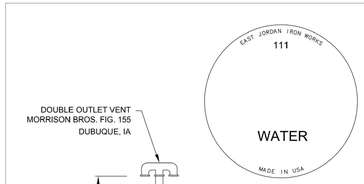
TEE AND VALVES CUT-IN

CITY OF BRYANT, AR WATER UTILITIES 210 S.W. 3rd. STREET BRYANT, AR PHONE: (501) 943-0468	TITLE: **WATER DETAILS**	DATE: APRIL 2015 REVISED ----- ----- ----- -----	SHEET: **W21**
	DESCRIPTION: **VALVE CUT-IN**		
	DRAWN BY: CHECKED BY: FILE: W21-Valve Cut In.dwg		

4/16/2015 11:47:27 AM

VICINITY MAP:





NOTES:

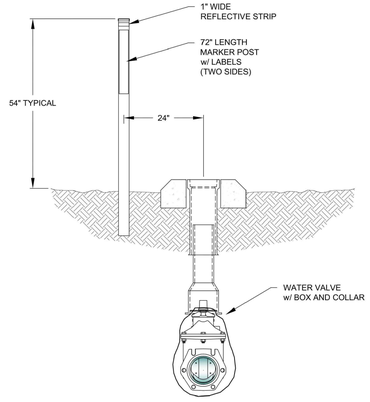
1. AIR VALVES SHALL HAVE NPT INLET AND OUTLETS.
2. TOP OF AIR VALVE SHALL BE MIN. 12" BELOW GROUND.
3. SEAL WALL PENETRATIONS WITH BUTYL SEALANT..

CITY OF BRYANT, AR WATER UTILITIES 210 S.W. 3rd. STREET BRYANT, AR PHONE: (501) 943-0468	TITLE: **WATER DETAILS**	DATE: APRIL 2015 REVISED ----- ----- ----- -----	SHEET: **W23**
	DESCRIPTION: **1" COMBINATION AIR VALVE**		
	DRAWN BY: CHECKED BY: FILE: W23-1inch Air Release.dwg		

4/16/2015 11:47:32 AM

NOTES:

1. WATER LINE MARKERS SHALL BE TRI-VIEW MARKING SYSTEM BY RHINO MARKING AND PROTECTION SYSTEMS OR CARSONITE INTERNATIONAL DUAL-SIDED UTILITY MARKER (CIB-380).
2. THE UPPERMOST PORTION OF THE CARSONITE MARKER SHALL BE MADE OF VISIBILITY ENHANCER (CVE-360).
3. TRI-VIEW MARKERS DO NOT REQUIRE VISIBILITY ENHANCERS.
4. AN ADDITIONAL WHITE 1" WIDE REFLECTIVE TAPE (3M OR EQUAL) SHALL BE PLACED AROUND THE FULL CIRCUMFERENCE OF THE TOP OF THE MARKER.



VALVE MARKER

CITY OF BRYANT, AR WATER UTILITIES 210 S.W. 3rd. STREET BRYANT, AR PHONE: (501) 943-0468	TITLE: **WATER DETAILS**	DATE: APRIL 2015 REVISED ----- ----- ----- -----	SHEET: **W22**
	DESCRIPTION: **VALVE MARKER**		
	DRAWN BY: CHECKED BY: FILE: W22-Valve Marker.dwg		

4/16/2015 11:47:12 AM

NOTES:

1. AIR VALVES SHALL HAVE NPT INLET AND OUTLETS.
2. TOP OF AIR VALVE SHALL BE MIN. 12" BELOW GROUND.
3. SEAL WALL PENETRATIONS WITH BUTYL SEALANT..

CITY OF BRYANT, AR WATER UTILITIES 210 S.W. 3rd. STREET BRYANT, AR PHONE: (501) 943-0468	TITLE: **WATER DETAILS**	DATE: APRIL 2015 REVISED ----- ----- ----- -----	SHEET: **W24**
	DESCRIPTION: **2" COMBINATION AIR VALVE**		
	DRAWN BY: CHECKED BY: FILE: W24-2inch Air Release.dwg		

4/16/2015 11:47:37 AM

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 20870
SAMZDUL ISLAM
11-19-2025

CERTIFICATE OF AUTHORIZATION
HOPE CONSULTING, INC.
No. 1931
ARKANSAS

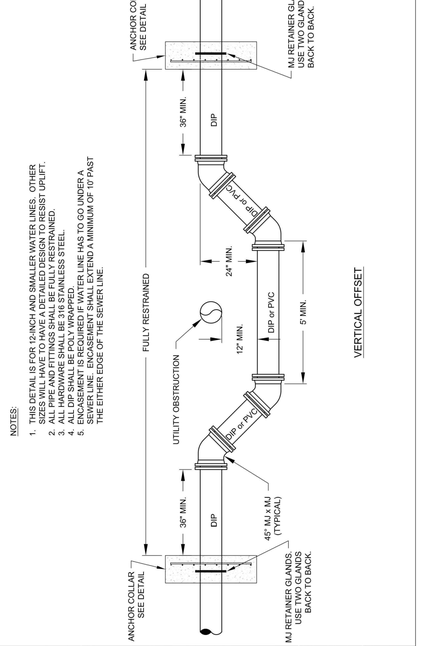
HOPE CONSULTING
ENGINEERS - SURVEYORS
129 N. Main Street,
Benton, Arkansas 72015
PH. (501)315-2626
FAX (501) 315-0024
www.hopeconsulting.com

FOR USE AND BENEFIT OF:
RYE GENERAL CONTRACTORS

MARKET PLACE II
WATER DETAILS 4
6128 HIGHWAY 5, BRYANT, SALINE COUNTY, ARKANSAS

DATE:	11.11.25	C.A.D. BY:		DRAWING NUMBER:
REVISED:		CHECKED BY:		25-0608
SHEET:	C-3.10	SCALE:		

500	01S	14W	0	22	440	62	1762



NOTES:

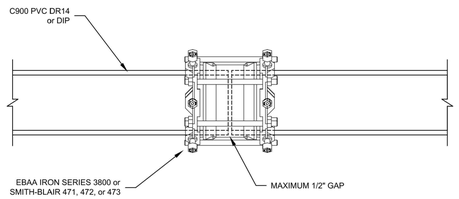
1. THIS DETAIL IS FOR 12-INCH AND SMALLER WATER LINES. OTHER SIZES WILL HAVE TO HAVE A DETAILED DESIGN TO RESIST UPLIFT.
2. ALL VALVES AND FITTINGS SHALL BE MECHANICAL JOINT.
3. ALL HARDWARE SHALL BE 316 STAINLESS STEEL.
4. ALL DIP SHALL BE POLY WRAPPED.
5. ENCASEMENT IS REQUIRED IF WATER LINE HAS TO GO UNDER A SEWER LINE. ENCASEMENT SHALL EXTEND A MINIMUM OF 10' PAST THE EITHER EDGE OF THE SEWER LINE.

CITY OF BRYANT, AR	TITLE:	WATER DETAILS	DATE: APRIL 2015	SHEET:
WATER UTILITIES 210 S.W. 3rd. STREET BRYANT, AR PHONE: (501) 943-0468	DESCRIPTION:	VERTICAL OFFSET	REVISED	W25
	DRAWN BY:	CHECKED BY:	FILE: W25-Vertical Offset.dwg	

4/16/2015 11:47:58 AM

NOTE:

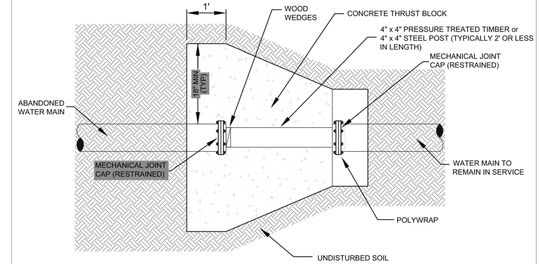
RESTRAINED COUPLINGS SHALL BE USED WHEN JOINING TWO CUT PIECES OF PIPE, GENERALLY WHEN CUTTING IN VALVES AND TEES.



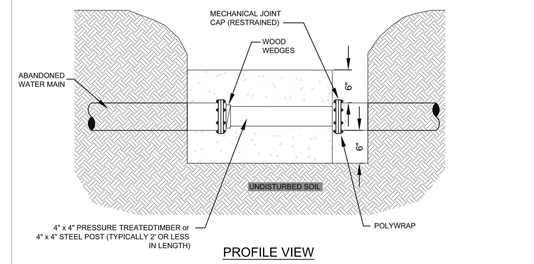
RESTRAINED COUPLING

CITY OF BRYANT, AR	TITLE:	WATER DETAILS	DATE: APRIL 2015	SHEET:
WATER UTILITIES 210 S.W. 3rd. STREET BRYANT, AR PHONE: (501) 943-0468	DESCRIPTION:	RESTRAINED COUPLING	REVISED	W26
	DRAWN BY:	CHECKED BY:	FILE: W26-Restrained Coupling.dwg	

4/16/2015 11:47:53 AM



PLAN VIEW

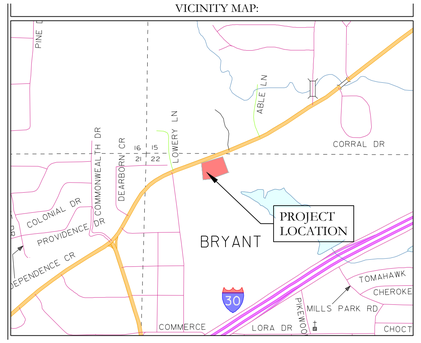


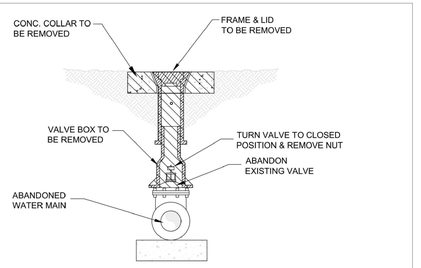
PROFILE VIEW

CITY OF BRYANT, AR	TITLE:	WATER DETAILS	DATE: APRIL 2015	SHEET:
WATER UTILITIES 210 S.W. 3rd. STREET BRYANT, AR PHONE: (501) 943-0468	DESCRIPTION:	CUT AND CAP WATER LINE	REVISED	W27
	DRAWN BY:	CHECKED BY:	FILE: W27-Cut and Cap.dwg	

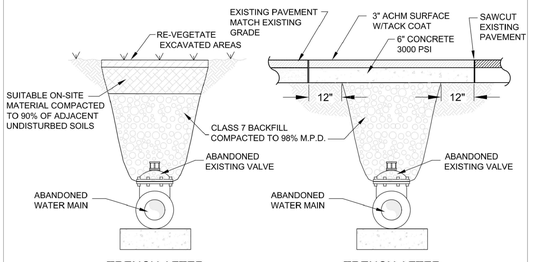
4/16/2015 11:47:48 AM

VICINITY MAP:





ABANDON WATER VALVE

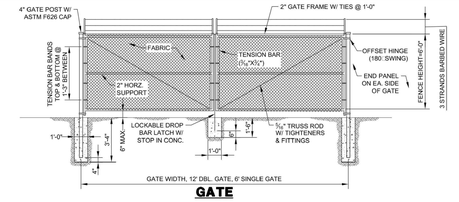


TRENCH AFTER VALVE BOX REMOVED (NON-PAVED AREA)

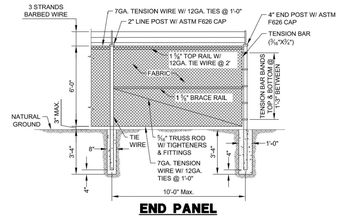
TRENCH AFTER VALVE BOX REMOVED (UNDER ASPHALT)

CITY OF BRYANT, AR	TITLE:	WATER DETAILS	DATE: APRIL 2015	SHEET:
WATER UTILITIES 210 S.W. 3rd. STREET BRYANT, AR PHONE: (501) 943-0468	DESCRIPTION:	ABANDON WATER VALVE	REVISED	W28
	DRAWN BY:	CHECKED BY:	FILE: W28-Abandon Water Valve.dwg	

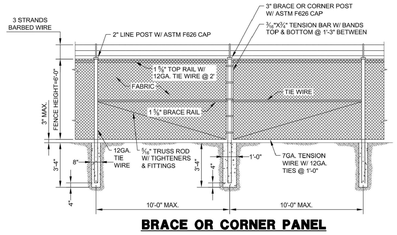
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GATE



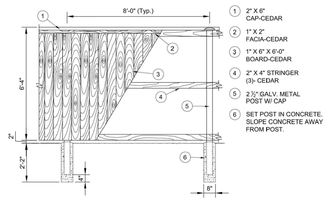
END PANEL



BRACE OR CORNER PANEL

CITY OF BRYANT, AR	TITLE:	WATER DETAILS	DATE: Sept. 10, 2014	SHEET:
WATER UTILITIES 210 S.W. 3rd. STREET BRYANT, AR PHONE: (501) 943-0468	DESCRIPTION:	CHAIN LINK FENCE DETAILS	REVISED	W29
	DRAWN BY: ???	CHECKED BY: ???	FILE: W29-Chain Link Fence Details.dwg	

4/16/2015 11:52:26 AM



1. 2" X 6" CAP-CEDAR
2. 1" X 2" FACIA-CEDAR
3. 1" X 6" X 6'-0" BOARD-CEDAR
4. 2" X 4" STRINGER (3)- CEDAR
5. 2 ⅜" GALV. METAL POST W/ CAP
6. SET POST IN CONCRETE. SLOPE CONCRETE AWAY FROM POST.

BOARD & BATT CEDAR FENCE

CITY OF BRYANT, AR	TITLE:	WATER DETAILS	DATE: APRIL 2015	SHEET:
WATER UTILITIES 210 S.W. 3rd. STREET BRYANT, AR PHONE: (501) 943-0468	DESCRIPTION:	WOOD FENCE DETAIL	REVISED	W30
	DRAWN BY:	CHECKED BY:	FILE: W29_W30-Fence Details.dwg	

4/16/2015 11:52:32 AM

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 20676
11-19-2025

CERTIFICATE OF AUTHORIZATION
HOPE CONSULTING, INC.
No. 1931
ARKANSAS

HOPE CONSULTING
ENGINEERS - SURVEYORS
129 N. Main Street,
Benton, Arkansas 72015
PH. (501)315-2626
FAX (501) 315-0024
www.hopeconsulting.com

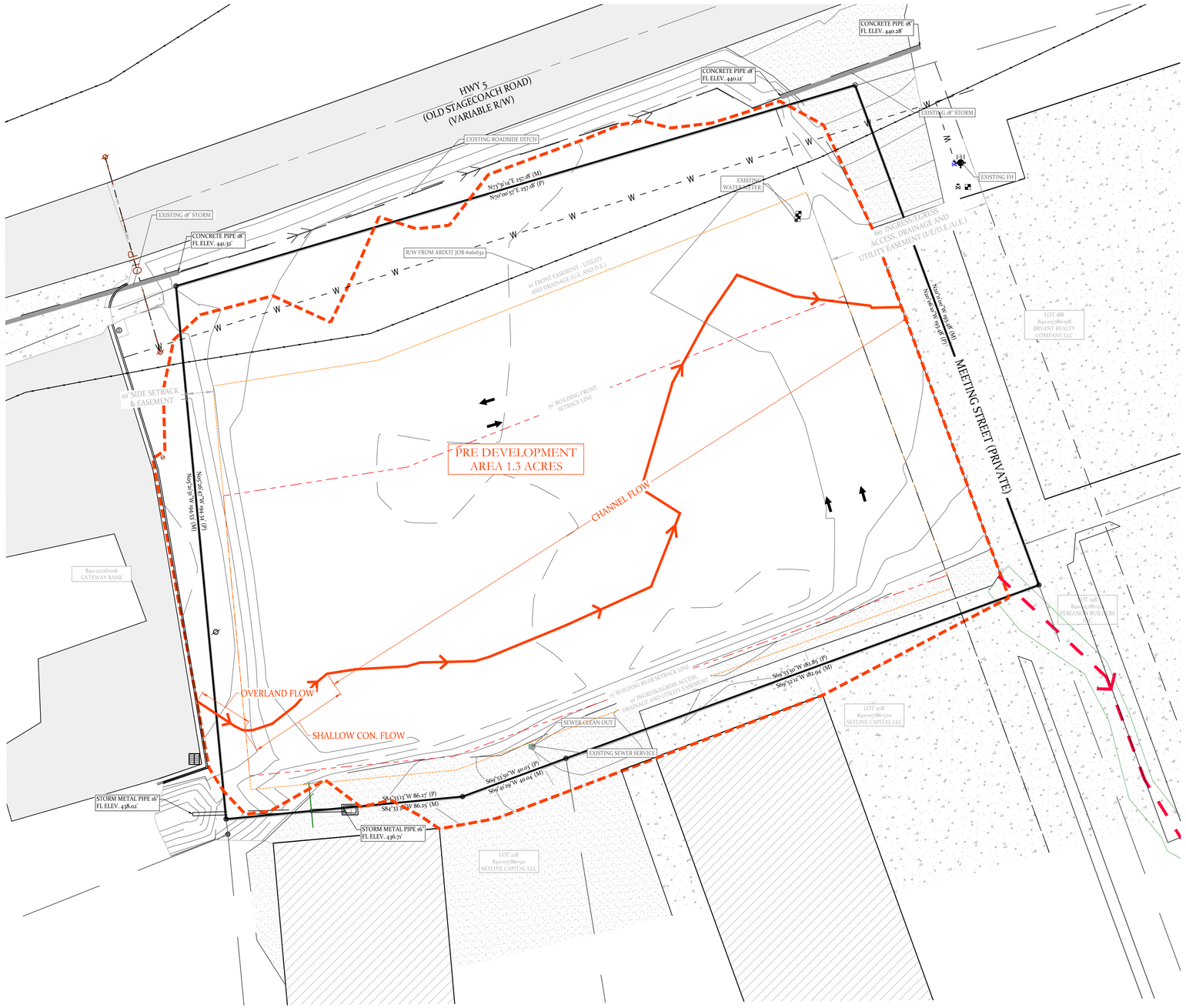
FOR USE AND BENEFIT OF:
RYE GENERAL CONTRACTORS

MARKET PLACE II
WATER DETAILS 5

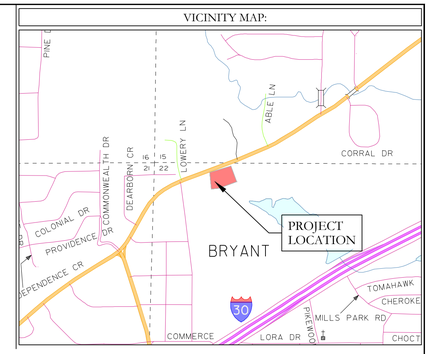
6128 HIGHWAY 5, BRYANT, SALINE COUNTY, ARKANSAS

DATE:	11.11.25	C.A.D. BY:		DRAWING NUMBER:	25-0608
REVISED:		CHECKED BY:			
SHEET:	C-3.11	SCALE:			

500	01S	14W	0	22	440	62	1762



VICINITY MAP:



PRE DEVELOPMENT AREA TOC:

Area A

Time of Concentration, tc (min)

Area (ft2)	56814.3						
Area (Acre)	*1.30*						
Total Length, L (ft)	***374.3***						
Change in Elevation (ft)	5.5						
Slope, S (ft/ft)	*0.015*						
N (Coeff. Of roughness, Table 400-3)	0.100						
L_i (overland/sheet flow, ft)	10.0						
L_{scs}(shallow concentrated, ft)	40.0	Velocity, V (ft/sec)	Length, L (ft)	Height, h (ft)	Slope, S (ft/ft)	Mannings, n	Hydraulic Radius, R
L_{cs} (channel , ft)	324.3						
$t_i = 0.83 \frac{(N L_i)^{0.467}}{S^{0.5}}$, (min)	*2.62*		10.0	1.0	*0.100*		
$t_{scs} = \frac{L_{scs}}{60\,V}$, (min) , unpaved *V=16.1345(S^0.5)*	*0.17*	*4.03*	40.0	2.5	*0.063*		
$t_{cs} = \frac{L_{cs}}{60\,V}$, (min) $V = \frac{1.49}{n} R^{\frac{2}{3}} S^{\frac{1}{2}}$ Ch1	*4.80*	*1.12*	324.3	2.0	*0.006*	0.050	*0.333*
Total time of concentration, tc (min)	**7.59**						
USE	**7.50**						

MARKET PLACE-II PHASE 3

PRE DEVELOPMENT DRAINAGE AREA

BASIS OF BEARING:
GRID NORTH, ARKANSAS
COORDINATE SYSTEM, SOUTH ZONE
BY GPS OBSERVATION

20' 10' 0 20'

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
SEAL
No. 20876
SEAN TAMZIDUL ISLAM
11-19-2025

CERTIFICATE OF AUTHORIZATION
HOPE CONSULTING, INC.
No. 1931
ARKANSAS

OWNER:	DEVELOPER:
Name: PHILLIP RYE	Name: RYE GENERAL CONTRACTORS
Address: 7416 PALM BEACH, BENTON	Address: 6128 HIGHWAY 5 NORTH
AR 72019	AR 72022
Phone: 501-317-9883	Phone:
Email: philliprye@phillipryе.com	Email:

SITE DATA	
TOTAL SITE AREA	*1.30 ACRES*
TOTAL DEVELOPMENT AREA	*1.30 ACRES*
GROSS BUILDING AREA	*BUILDING 111340 SQ. FT.*
BUILDING SETBACKS	*FRONT SETBACK LINE: 50'* *RIGHT SIDE SETBACK LINE: AS SHOWN* *REAR SETBACK LINE: 15'* *LEFT SIDE SETBACK LINE: 10'*
BUILDING HEIGHTS	*1 STORY*
BUSINESS TYPE	*RETAIL*
PARKING CALCULATION (PROVIDED)	*PROVIDED PARKING SPACES 41 (2 ADA SPACES)*

LEGEND

- PLSS Aliquot Corner
- Fnd. Corner Monument
- Set 1/2" Rebar/Cap (1664)
- Computed Point
(M)- As Measured
(P)- Per Deed or Plat Records
ESMT - Easement
B.S.L. - Building Setback Lines
- Clean Out
- Water Meter
- Power Pole
- Sewer Manhole
- Light Pole
- Telephone Pedestal
- Drainage Manhole
- Gas Meter
- Fence
- Overhead Power
- Sewer Line
- Water Line
- Telephone Line
- Electric Line
- Gas Line
- Existing Access Agreement
- Public Right-of-Way Dedication

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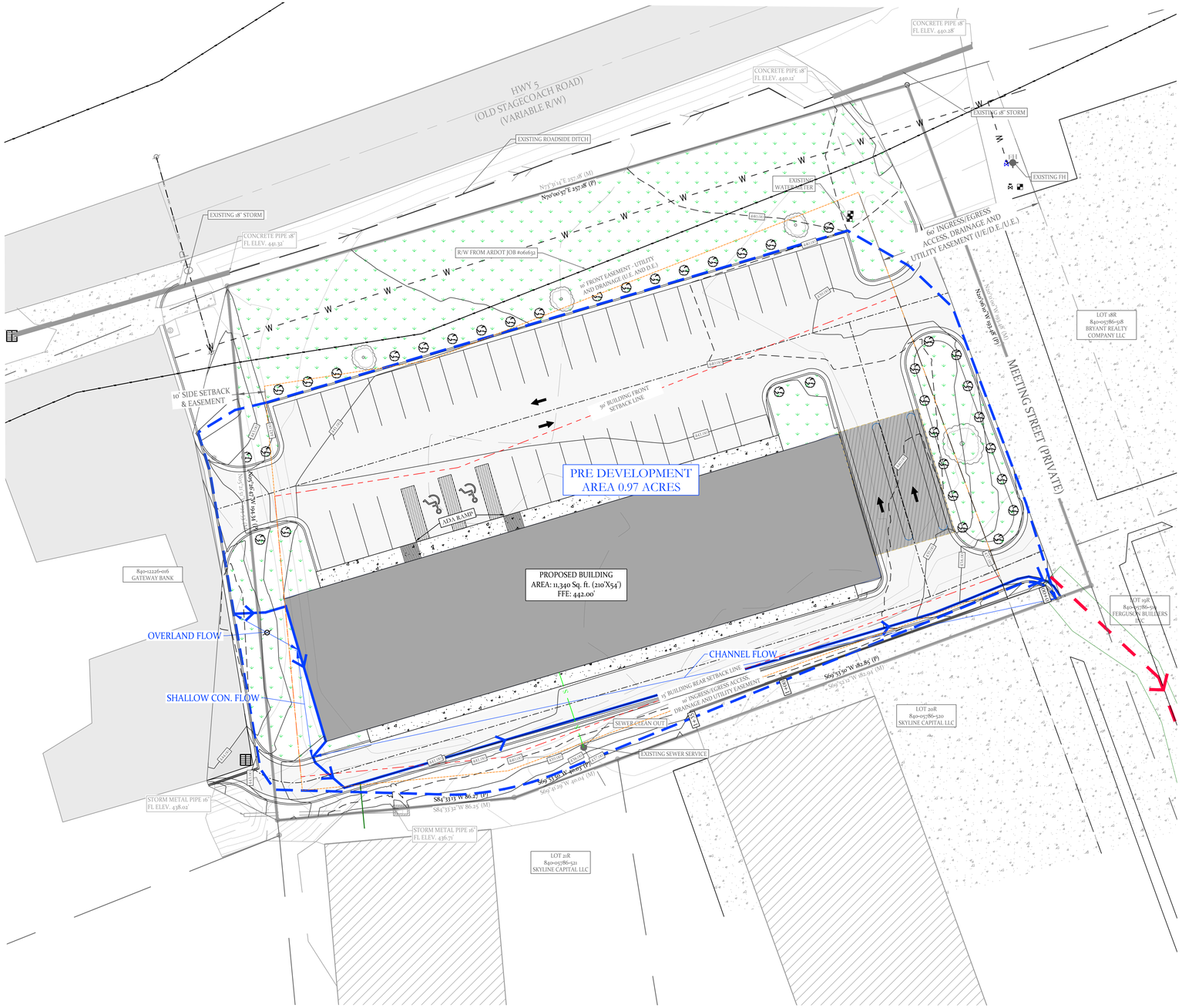
FOR USE AND BENEFIT OF:
RYE GENERAL CONTRACTORS

MARKET PLACE II
PRE DEVELOPMENT AREA TOC CALULATION
6128 HIGHWAY 5, BRYANT, SALINE COUNTY, ARKANSAS

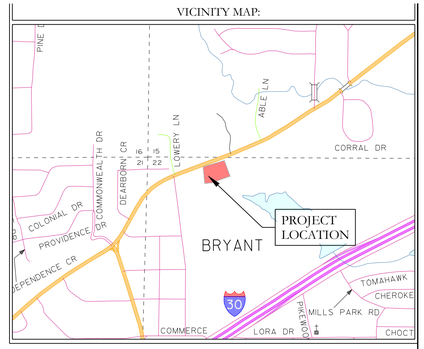
DATE:	11.11.25	C.A.D. BY:		DRAWING NUMBER:
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SHEET:	C-4.1	SCALE:		

500	01S	14W	0	22	440	62	1762

E:\2- HOPE CONSULTING\1. PROJECTS FILES\25-0608 LOT 22R MARKET PLACE-II PH3\CIVIL\DWG\25-0608 LOT 22R MARKET PLACE-II PH3 11.05.25.DWG



VICINITY MAP:



POST DEVELOPMENT AREA TOC:

Time of Concentration, tc (min)

Area (ft2)	42090.7						
Area (Acre)	*0.97*						
Total Length, L (ft)	***370.0***						
Change in Elevation (ft)	10.8						
Slope, S (ft/ft)	*0.029*						
N (Coeff. Of roughness, Table 400-3)	0.400						
L_i (overland/sheet flow, ft)	*30.0*						
L_{scs}(shallow concentrated, ft)	*40.0*	Velocity, V (ft/sec)	Length, L (ft)	Height, h (ft)	Slope, S (ft/ft)	Mannings, n	Hydraulic Radius, R
L_{cs} (channel , ft)	300.0						
$t_i = 0.42\frac{(N\,L_i)^{0.8}}{P^{0.5}*S^{0.4}}$, (min)	*3.72*		30.0	3.6	*0.120*		
$t_{scs} = \frac{L_{scs}}{60\,V}$, (min) , unpaved							
V=16.1345(S^0.5)	*0.83*	*0.81*	40.0	0.1	*0.003*		
$t_{cs} = \frac{L_{cs}}{60\,V}$, (min)							
$V = \frac{1.49}{n} R^{\frac{2}{3}} S^{\frac{1}{2}}$ Ch1	*0.54*	*9.35*	300.0	7.1	*0.024*	0.011	*0.300*
Total time of concentration, tc (min)	**5.08**						
USE	**5.00**	**min**					

MARKET PLACE-II PHASE 3

POST DEVELOPMENT AREA

BASIS OF BEARING:
GRID NORTH, ARKANSAS
COORDINATE SYSTEM, SOUTH ZONE
BY GIS OBSERVATION

20' 10' 0 20'

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 20078
11-19-2025

CERTIFICATE OF AUTHORIZATION
HOPE CONSULTING, INC.
No. 1931
ARKANSAS

OWNER:	DEVELOPER:
Name: PHILLIP RYE	Name: RYE GENERAL CONTRACTORS
Address: 7416 PALM BEACH, BENTON	Address: 6128 HIGHWAY 5 NORTH
AR 72019	AR 72022
Phone: 501-317-9883	Phone:
Email: philliprye@phillipprye.com	Email:

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BUILDING HEIGHTS	*1 STORY*
BUSINESS TYPE	*RETAIL*
PARKING CALCULATION (PROVIDED)	*PROVIDED PARKING SPACES 41 (2 ADA SPACES)*

LEGEND

- PLSS Aliquot Corner
- Fnd. Corner Monument
- Set 1/2" Rebar/Cap (1664)
- Computed Point
- (M)- As Measured
- (P) - Per Deed or Plat Records
- ESMT - Easement
- B.S.L. - Building Setback Lines
- Clean Out
- Water Meter
- Power Pole
- Sewer Manhole
- Light Pole
- Telephone Pedestal
- Drainage Manhole
- Gas Meter
- Fence
- Overhead Power
- Sewer Line
- Water Line
- Telephone Line
- Electric Line
- Gas Line
- Existing Access Agreement
- Public Right-of-Way Dedication

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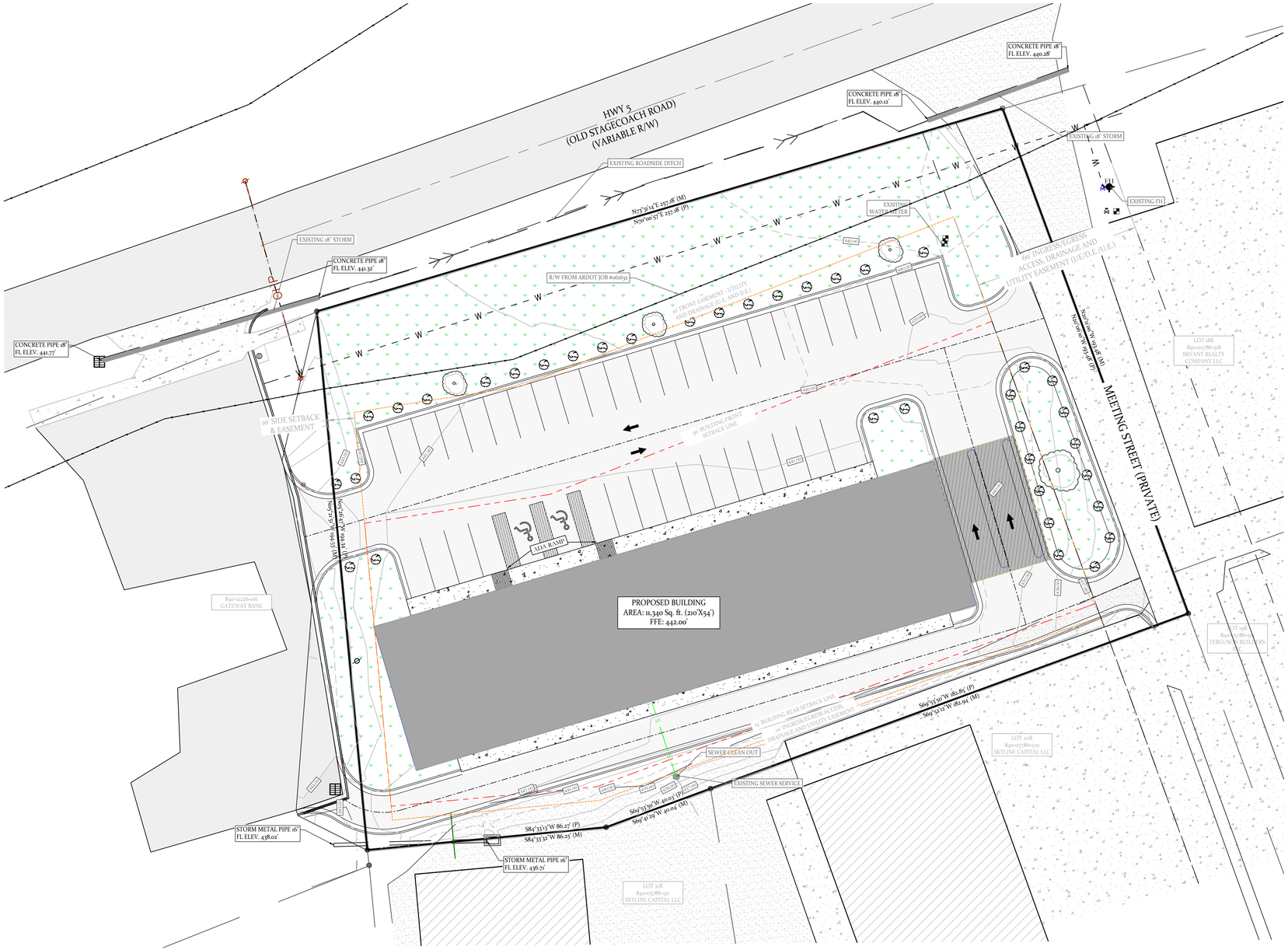
FOR USE AND BENEFIT OF:
RYE GENERAL CONTRACTORS

MARKET PLACE II
POST DEVELOPMET AREA TOC CALCULATION
6128 HIGHWAY 5, BRYANT, SALINE COUNTY, ARKANSAS

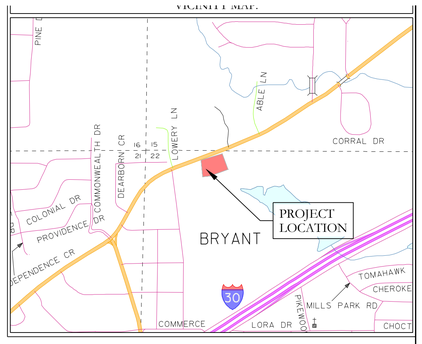
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REVISED:		CHECKED BY:	
SHEET:	C-4.2	SCALE:	

500	01S	14W	0	22	440	62	1762

E:\2-HOPE CONSULTING\1-PROJECTS FILES\25-0608 LOT 22R MARKET PLACE-II PH3\CIVIL\DWG\25-0608 LOT 22R MARKET PLACE-II PH3 11.05.25.DWG



MARKET PLACE-II PHASE 3

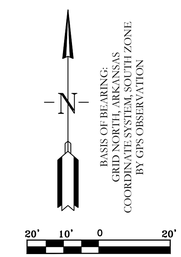


RUNOFF CO-EFFICIENT FOR SURFACE TYPE

HATCH TYPE	SURFACE TYPE	RUNOFF CO-EFFICIENTS
	ASPHALTIC	0.95
	GREEN AREA	0.46
	ROOF	0.97
	CONCRETE	0.97

DRAINAGE CALCULATION

SURFACE TYPE	RUNOFF CO-EFFICIENT	AREA (ha)	TOTAL AREA (ha), A	AVG. RUNOFF CO-EFFICIENT, C	RAINFALL INTENSITY (inches/hr) (5 min Duration Rain) 5 YEAR	10 YEAR	25 YEAR	100 YEAR
ASPHALTIC	0.95	0.6	0.99	0.88	7.28	8.21	9.43	11.2
GREEN AREA	0.46	0.15						
ROOF	0.97	0.2						
CONCRETE	0.97	0.04						
PEAK DISCHARGE,Q = CIA					6.35 cfs	7.16 cfs	8.22 cfs	9.76 cfs



STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
WILLIAM DOUGLAS HOPE
NO. 20876
11-19-2025

CERTIFICATE OF AUTHORIZATION
HOPE CONSULTING, INC.
No. 1931
ARKANSAS

HOPE CONSULTING
ENGINEERS - SURVEYORS
129 N. Main Street,
Benton, Arkansas 72015
PH. (501)315-2626
FAX (501) 315-0024
www.hopeconsulting.com

FOR USE AND BENEFIT OF:
RYE GENERAL CONTRACTORS

MARKET PLACE II
DRAINAGE CALCULATION
6128 HIGHWAY 5, BRYANT, SALINE COUNTY, ARKANSAS

DATE:	11.11.25	C.A.D. BY:	DRAWING NUMBER: 25-0608
REVISED:		CHECKED BY:	
SHEET:	C-4.3	SCALE:	

500	01S	14W	0	22	440	62	1762

I:\2025 PROJECTS\11-2025 PROJECTS\25-0608 MARKET PLACE II\CAD\PRINT\DWG\25-0608 MARKET PLACE II C-4.3 DRAINAGE CALCULATIONS.DWG



MARKET PLACE-II PHASE 3

DRAINAGE FLOW PATH

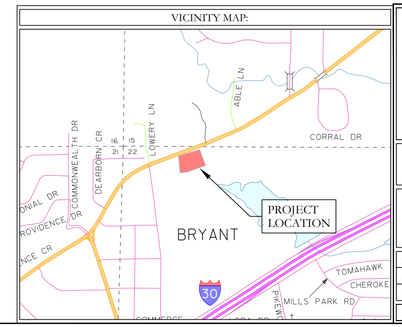
STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
TAMZIDUL HAQUE
NO. 20016
11-19-2025

CERTIFICATE OF AUTHORIZATION
HOPE CONSULTING, INC.
No. 1931
ARKANSAS

BASIS OF BEARING:
GRID NORTH AS PER ARKANSAS
COORDINATE SYSTEM, SOUTH ZONE
BY GPS OBSERVATION

50' 25' 0 50'

VICINITY MAP:



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129 N. Main Street,
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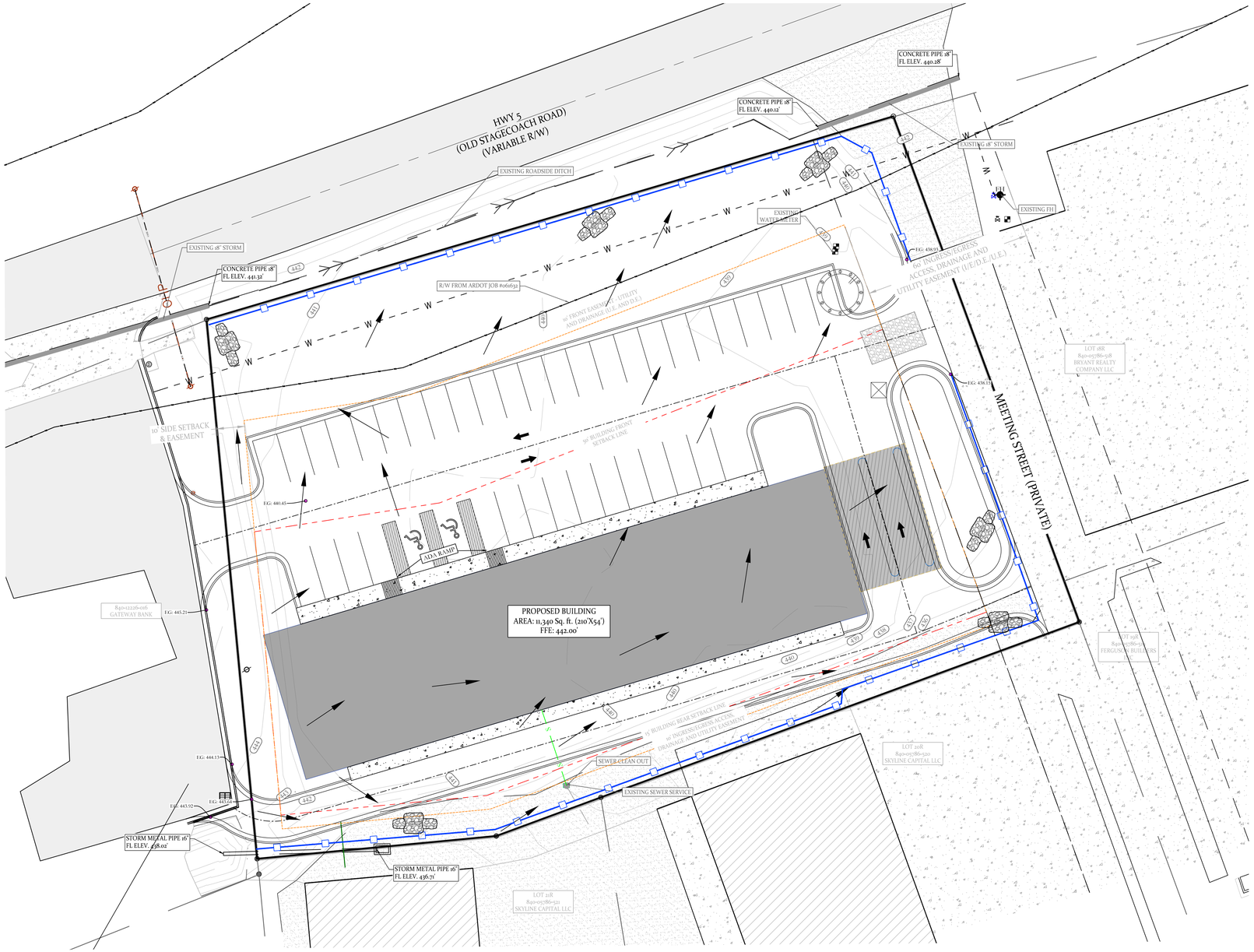
FOR USE AND BENEFIT OF:
RYE GENERAL CONTRACTORS

MARKET PLACE II
DRAINAGE FLOW PATH
6128 HIGHWAY 5, BRYANT, SALINE COUNTY, ARKANSAS

DATE:	11.11.25	C.A.D. BY:	DRAWING NUMBER:
REVISED:		CHECKED BY:	25-0608
SHEET:	C-4.4	SCALE:	

500	01S	14W	0	22	440	62	1762

E:\2 HOPE CONSULTING\25 PROJECTS\25-0608 MARKET PLACE II\CAD\PLOT\25-0608 MARKET PLACE II-C-4.4 DRAINAGE FLOW PATH.DWG



MARKET PLACE-II PHASE 3

ERC LEGEND

SITE POSTING

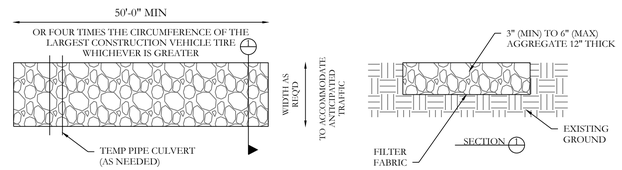
CONC. WASHOUT

DETENTION AREA

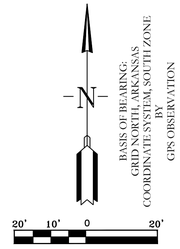
SILT FENCE

RIP RAP CHECK DAM

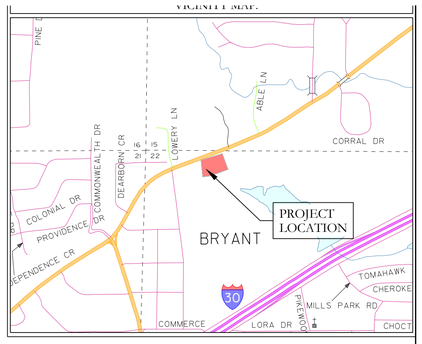
CONSTRUCTION ENTRANCE



STABILIZED CONSTRUCTION ENTRANCE
N.T.S



BASIS OF BEARING:
GRID NORTH, ARKANSAS
COORDINATE SYSTEM, SOUTH ZONE
GPS OBSERVATION

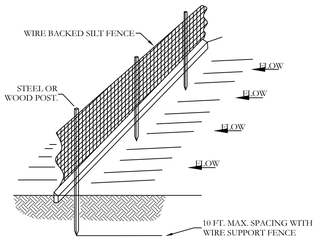


NOTE:
1.) INSPECT AND REPAIR FENCE AFTER EACH STORM EVENT AND REMOVE SEDIMENT WHEN NECESSARY.

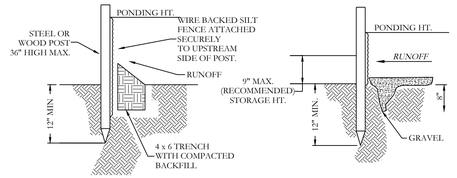
2.) REMOVED SEDIMENT SHALL BE DEPOSITED TO AN AREA THAT WILL NOT CONTRIBUTE SEDIMENT OFF-SITE AND CAN BE PERMANENTLY STABILIZED.

3.) SILT FENCE SHALL BE PLACED ON SLOPE CONTOURS TO MAXIMIZE PONDING EFFICIENCY.

4.) USE ONLY WIRE BACKED SILT FENCE.

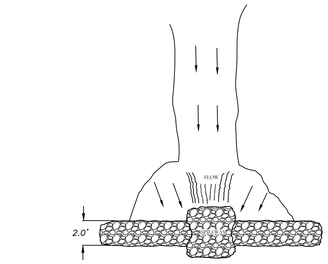


SILT FENCE



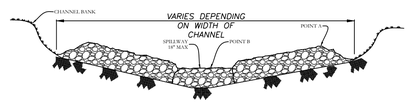
STANDARD DETAIL
TRENCH WITH NATIVE BACKFILL

ALTERNATE DETAIL
TRENCH WITH GRAVEL



PLAN

RIP-RAP CHECK DAM



VIEW LOOKING UPSTREAM

NOTES:

1.) POINT 'A' MUST BE HIGHER THAN POINT 'B' (SPILLWAY HEIGHT)
2.) PLACE RIP-RAP BARRIER PERPENDICULAR TO THE FLOW WITH TIGHT GROUPING. USE STRAW, ROCKS, OR FILTER FABRIC TO FILL ANY GAPS AND TAMP BACKFILL MATERIAL TO PREVENT EROSION OR FLOW AROUND THE DAM.
3.) SPILLWAY HEIGHT SHALL NOT EXEED 18"-24".
4.) INSPECT AFTER EACH SIGNIFICANT STORM, MAINTAIN AND REPAIR PROMPTLY.

EROSION CONTROL NOTES

SOD DETENTION AREA POST-CONSTRUCTION (IF APPLICABLE) MAXIMUM SLOPE OF 3H:1V ON DETENTION POND LEVEES CONTRACTOR MUST HAVE INLET PROTECTION MEASURES INSTALLED IMMEDIATELY AFTER CONSTRUCTION OF DRAINAGE INLETS/STRUCTURES IS COMPLETE. SEDIMENT BARRIERS SHALL BE MAINTAINED THROUGHOUT AND INSPECTED THROUGHOUT CONSTRUCTION PROCESS UNTIL PROJECT IS COMPLETE

RIP RAP SEDIMENT BARRIERS SHALL BE USED AT ALL STORMWATER DISCHARGE POINTS SHOWN ON PLANS ASAP

CONTRACTOR SHOULD WORK WITH ENGINEER TO ESTABLISH EFFECTIVE AND EFFICIENT PLAN TO PREVENT SEDIMENT RUNOFF BY DETERMINING WHERE SILT FENCING OR OTHER TYPES OF CONTROLS ARE NECESSARY

SOME EROSION CONTROL MEASURES, SILT FENCING, OR CHECK DAMS MAY NOT BE NECESSARY DURING INITIAL ROW CLEARING BUT MAY BE NEEDED ONCE LOT CLEARING AND HOME BUILDING BEGINS

EXISTING VEGETATION WILL ONLY BE REMOVED INSIDE ROW AND WITHIN HOUSE FOOTPRINTS AS THEY ARE CONSTRUCTED. ADDITIONAL WIRE-BACKED SILT FENCING WILL BE ADDED TO INDIVIDUAL LOTS AS HOME CONSTRUCTION TAKES PLACE.

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
NO. 20876
ALEX T. ZAMZIDUL ISLAM
11-19-2025

CERTIFICATE OF AUTHORIZATION
HOPE CONSULTING, INC.
No. 1931
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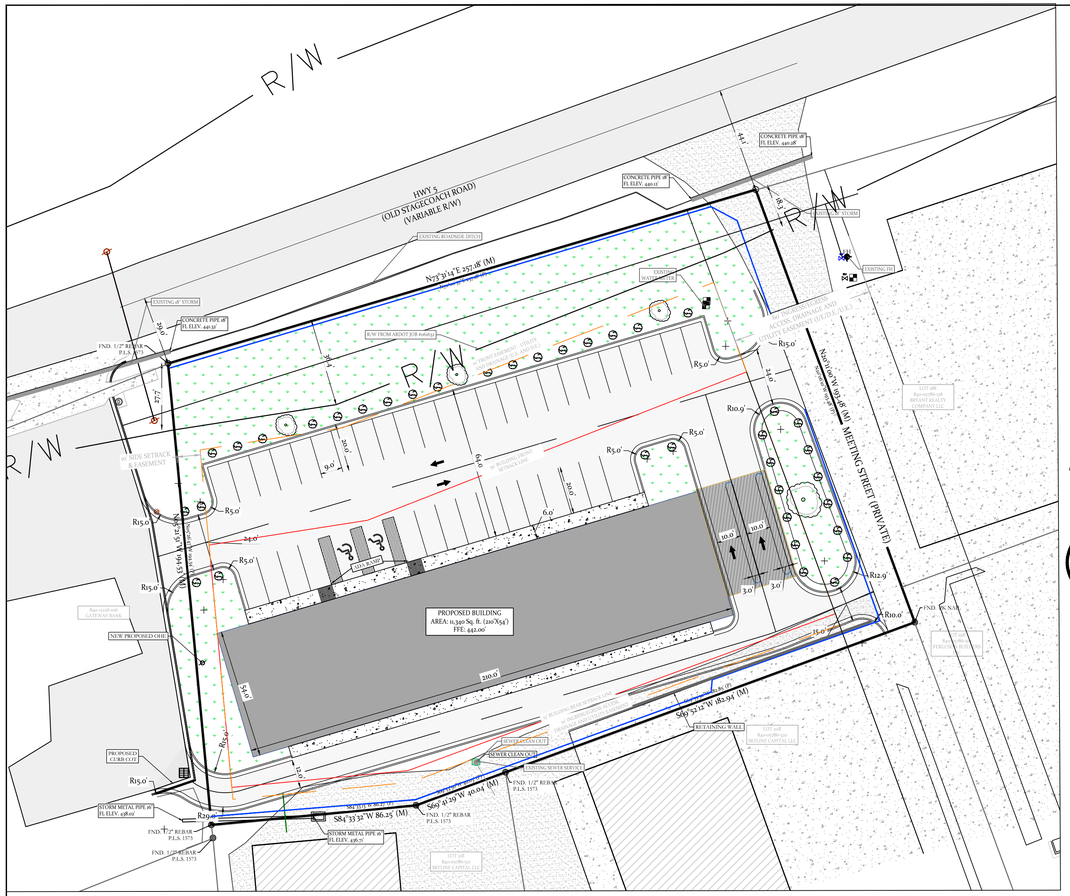
FOR USE AND BENEFIT OF:
RYE GENERAL CONTRACTORS

MARKET PLACE II
EROSION CONTROL PLAN
6128 HIGHWAY 5, BRYANT, SALINE COUNTY, ARKANSAS

DATE:	11.11.25	C.A.D. BY:	DRAWING NUMBER:
REVISED:		CHECKED BY:	25-0608
SHEET:	C-5.0	SCALE:	

500	01S	14W	0	22	440	62	1762

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R/W
HWY 5
(OLD STAGECOACH ROAD)
(VARIABLE R/W)
N72°39'14" E 257.68' (M)
EXISTING 48" STORM
EXISTING ROADSIDE DITCH
CONCRETE PIPE @ FL ELEV. 440.18'
CONCRETE PIPE @ FL ELEV. 440.02'
EXISTING 18" STORM
EXISTING 24" STORM
EXISTING FH
EXISTING 12" STORM
CONCRETE PIPE @ FL ELEV. 440.10'
FND. 1/2" REBAR P.L.S. 1575
24.0'
30.4'
27.7'
BUILDING SETBACK LINE
UTILITY EASEMENT
R/W
R/W
R/W
R5.0'
R15.0'
24.0'
9.0'
20.0'
64.0'
6.0'
24.0'
R10.9'
R5.0'
R5.0'
R15.0'
R5.0'
R15.0'
R5.0'
R15