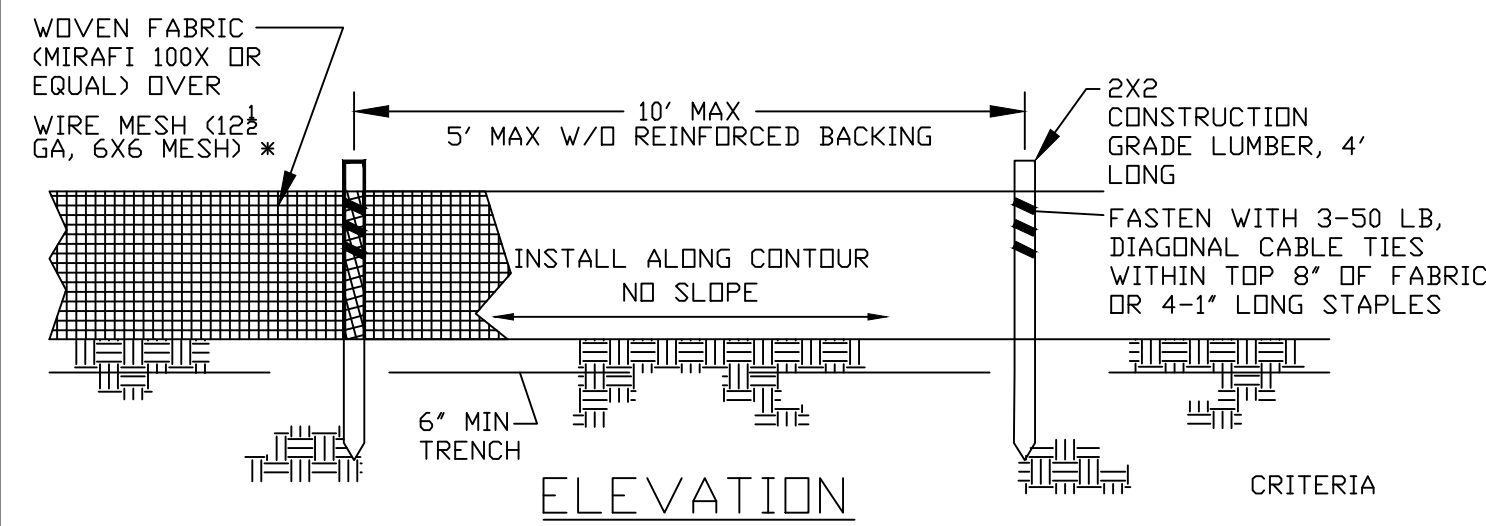


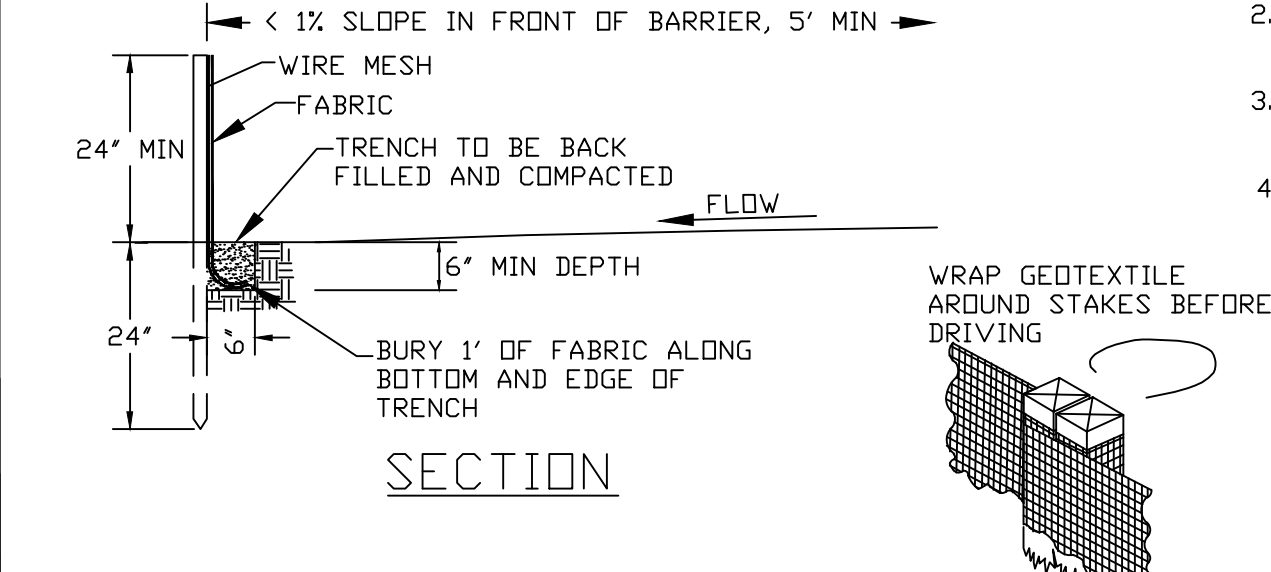
- DESIGN CRITERIA**
- SILT FENCE FOR SHEET FLOW SHALL HAVE A MAXIMUM DRAINAGE AREA OF 1/4 ACRE PER 100 LF.
 - STRAW BALE BARRIERS FOR SHEET FLOW SHALL HAVE A MAXIMUM DRAINAGE AREA OF 1/4 ACRE PER 100 LF.
 - REFER TO INDIVIDUAL ESC FIGURE FOR INSTALLATION.
 - TERRACING INCLUDES LOGS, WATTLES & FILTER SOCKS.

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**SPACING CHART
FOR ESC DEVICES**



- CRITERIA**
- SILT FENCE SHALL BE 24 INCHES HIGH.
 - SILT FENCE SHALL NOT BE USED FOR CONCENTRATED FLOWS.
 - GEOSYNTHETIC REINFORCED SILT FENCE BACKING MAY BE USED IN LIEU OF WIRE MESH.
 - WIRE MESH WILL BE USED AT LOCATIONS SHOWN ON THE APPROVED SWPPP.

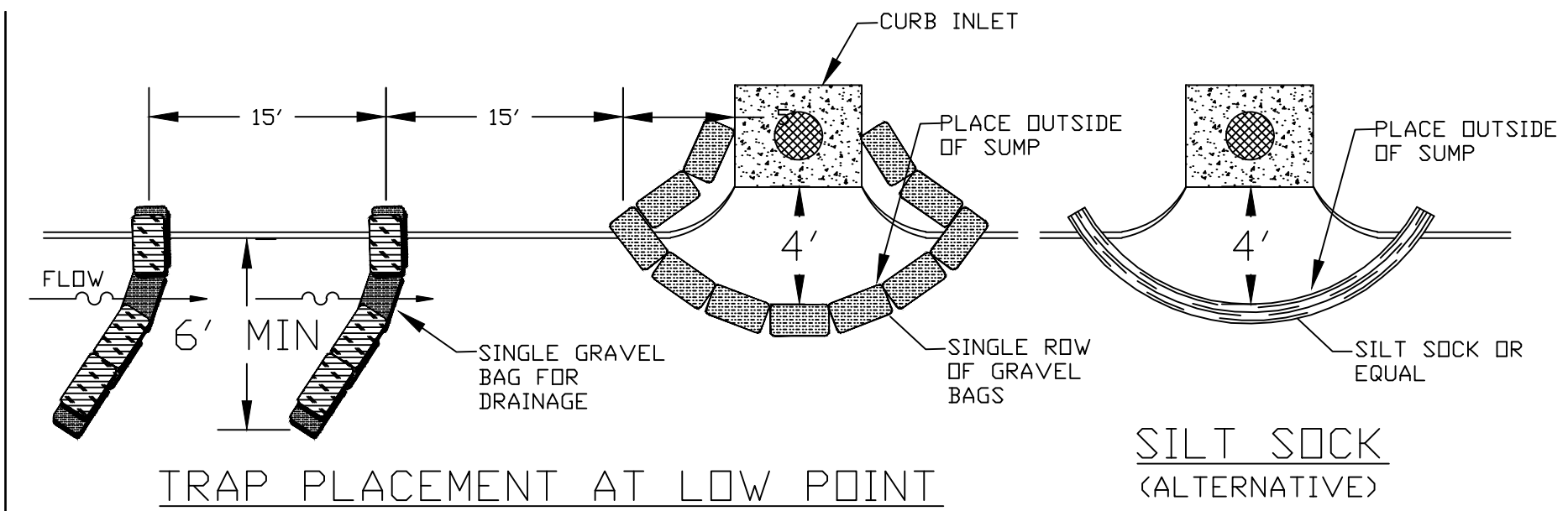


**JOINING SECTIONS OF
SILT FENCE**

NOTE: IF FABRIC IS INSTALLED BY EQUIPMENT DESIGNED TO SLICE INTO THE GROUND, THE TRENCH IS NOT REQ'D.

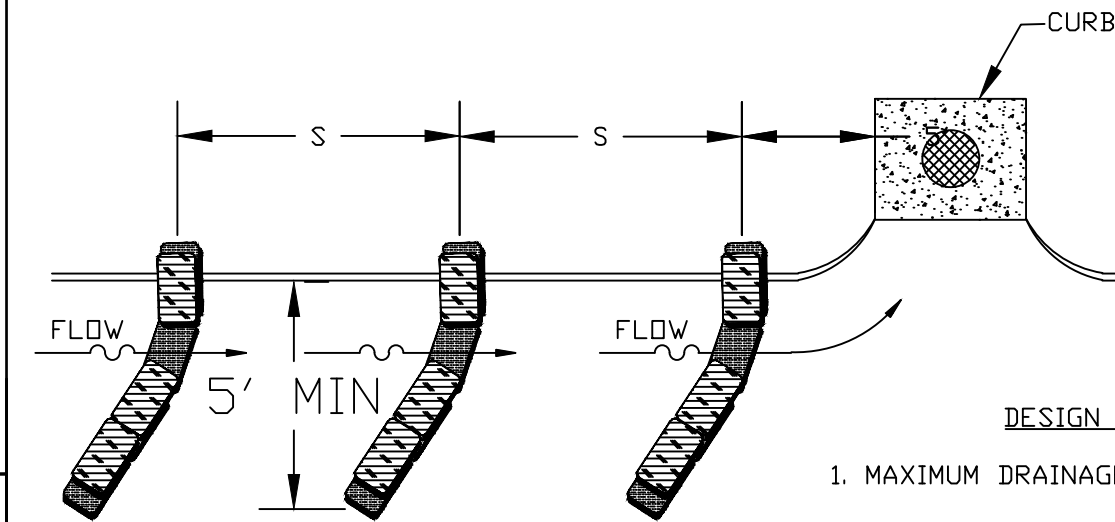
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**SILT FENCE INSTALLATION
SHEET FLOW (ONLY)**



TRAP PLACEMENT AT LOW POINT

**SILT SOCK
(ALTERNATIVE)**



**TRAP PLACEMENT
AT INTERMEDIATE
INLET**

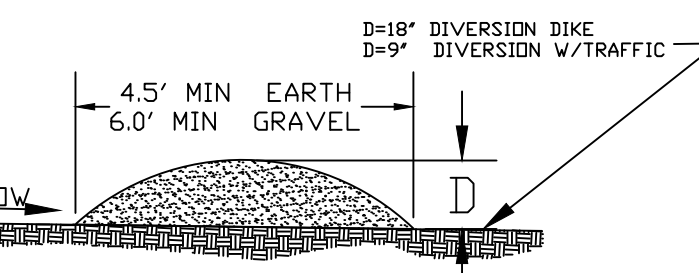
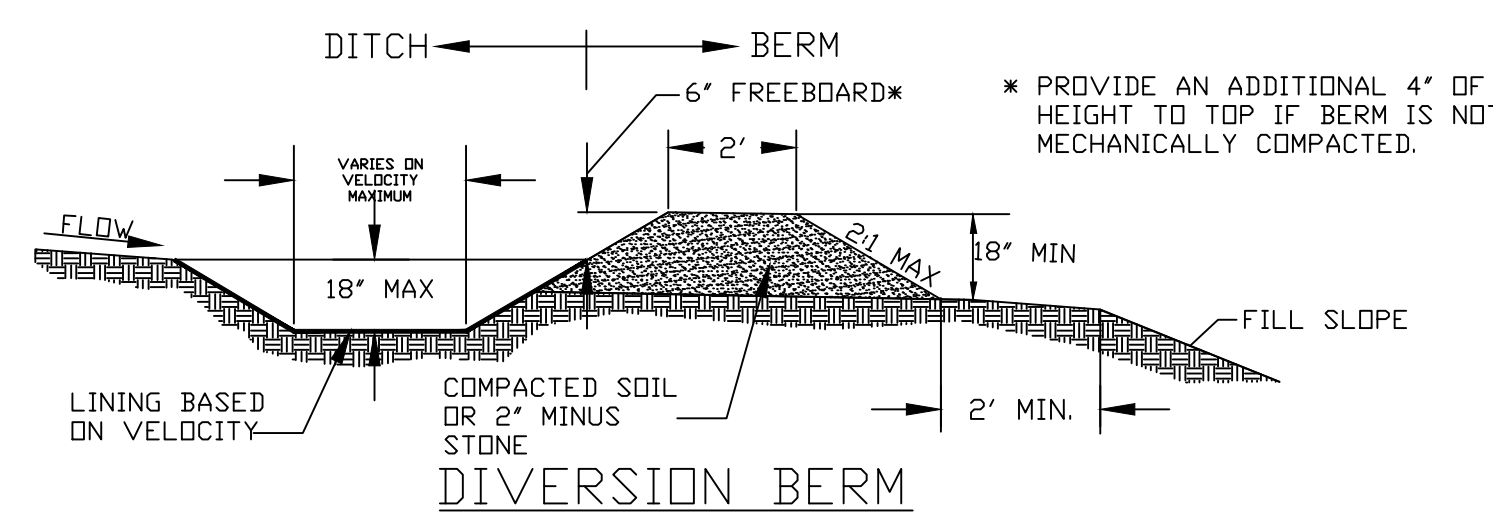
- DESIGN CRITERIA**
- MAXIMUM DRAINAGE AREA - 1 ACRE.
 - PEAK RUNOFF SHALL BE ≤2 CFS BASED ON THE 6-MONTH STORM.
 - STACK GRAVEL BAGS DOUBLE HIGH. PROVIDE GAP FOR DRAINAGE.

SPACING OF TRAPS

GUTTER SLOPE	S
LOW PT	15'
2%	20'
3% MAX.	10'

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**CURB INLET
PROTECTION**

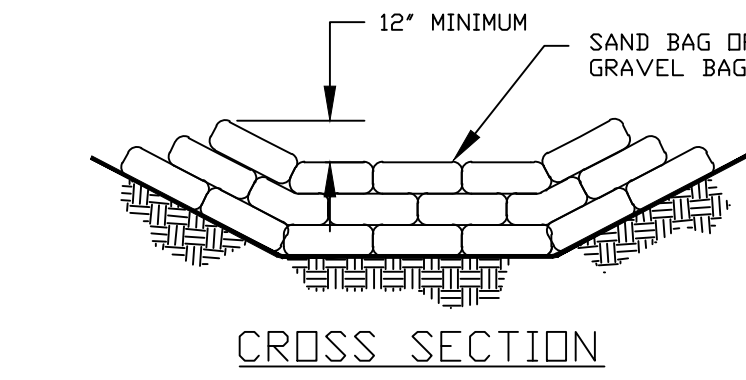


DIVERSION DIKE

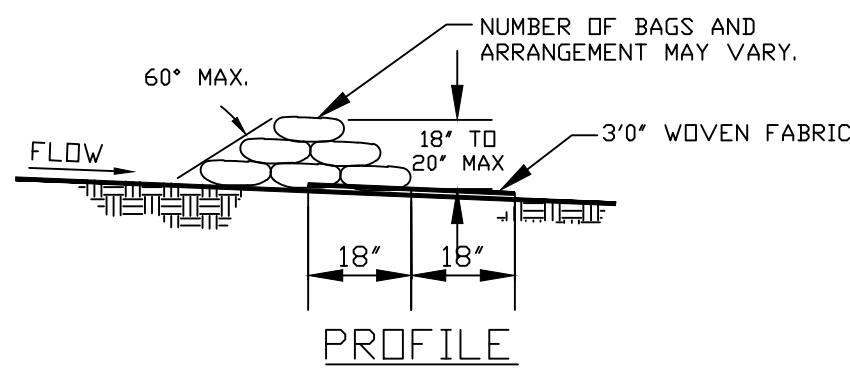
- DESIGN CRITERIA**
- DIVERSIONS SHALL BE USED FOR DRAINAGE AREAS ≤ 3 ACRES.
 - DIVERSION CHANNELS SHALL BE DESIGNED TO CONVEY THE 6-MO STORM AT NON-EROSIVE VELOCITIES.
 - CRITICAL LOCATIONS SHALL BE DESIGNED FOR THE 15YR / 20Min. STORM.
 - MAXIMUM CHANNEL SLOPE OF 3% WITHOUT CHECK DAMS.
 - SWALE SEDIMENT TRAPS ARE TO BE USED IN HIGHLY ERODIVE AREAS.
 - CHANNELS SHALL BE PROTECTED USING APPROPRIATE CHANNEL LINERS.
 - CHANNEL OUTLETS MUST BE STABILIZED.
 - STORM SEWERS MAY BE USED IN LIEU OF OPEN CHANNELS.

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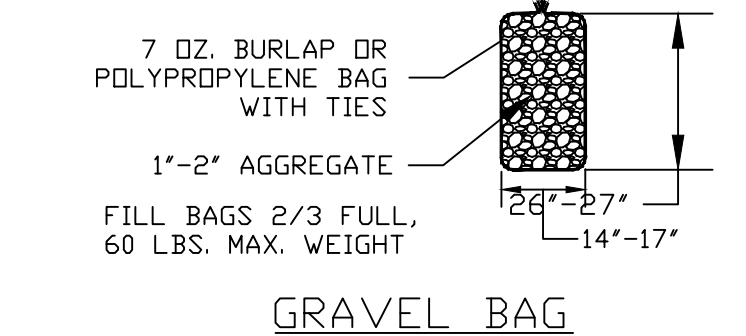
**DIVERSION BERMS
+ DIKES**



CROSS SECTION

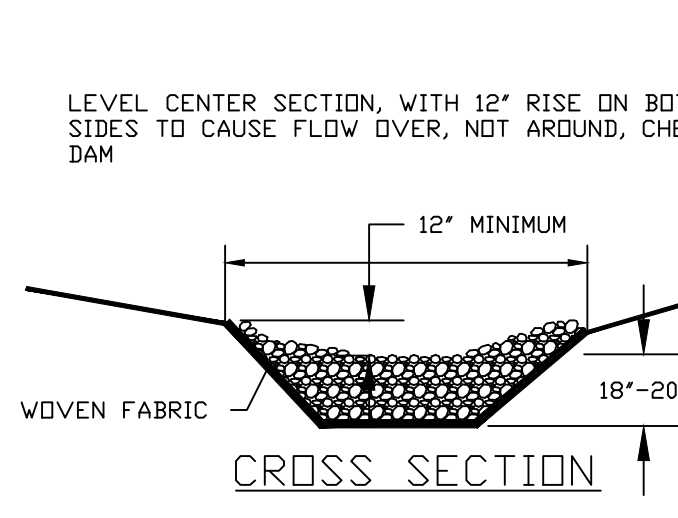


**PROFILE
SAND BAG OR GRAVEL BAG
CHECK DAM**

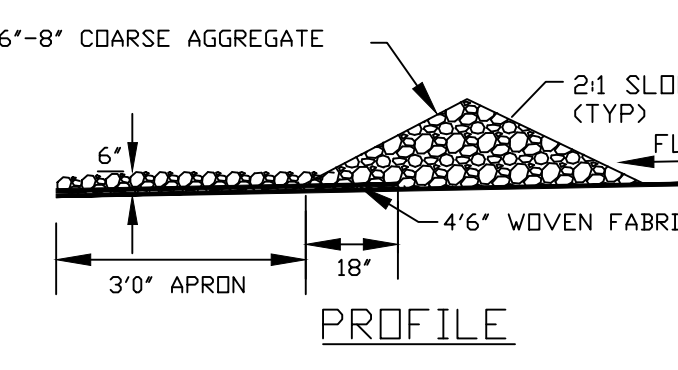


GRAVEL BAG

- NOTE:**
- CHECK DAMS MAY BE CONSTRUCTED OF SEVERAL ESC CHECK DAM PRODUCTS.
 - SEE TABLE 60-12 AND ESC 1 FOR CHECK DAM SPACING.



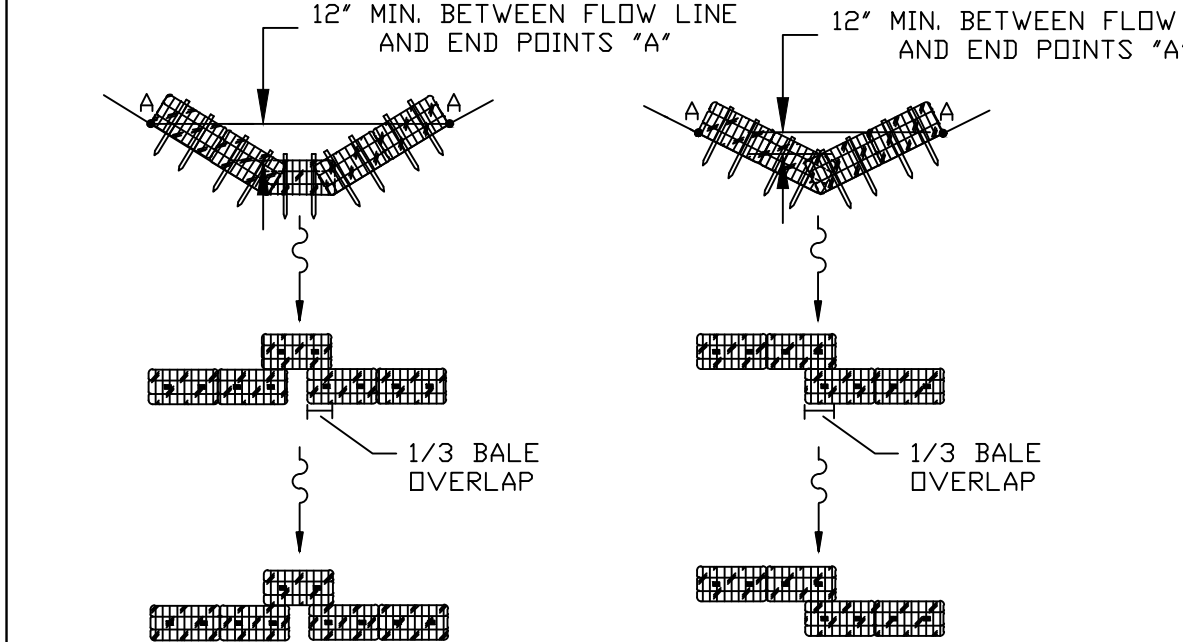
CROSS SECTION



**PROFILE
ROCK CHECK DAM**

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CHECK DAMS



TRAPEZOIDAL DITCH V-DITCH

- CRITERIA FOR LOW CONCENTRATED FLOWS**
- DRAINAGE AREAS SHALL BE LESS THAN 1 ACRE.
 - INSTALL TWO STAKES PER BALE.
 - BALES WILL BE TRENCHED 4' DEEP INTO EARTH.
 - MAXIMUM CHANNEL SLOPE OF 3%.
 - SEDIMENTATION TRAPS TO BE USED IN HIGHLY ERODIVE AREAS.

CHECK DAM SPACING

Ditch Slope	Maximum Spacing
3%	50'
2%	75'

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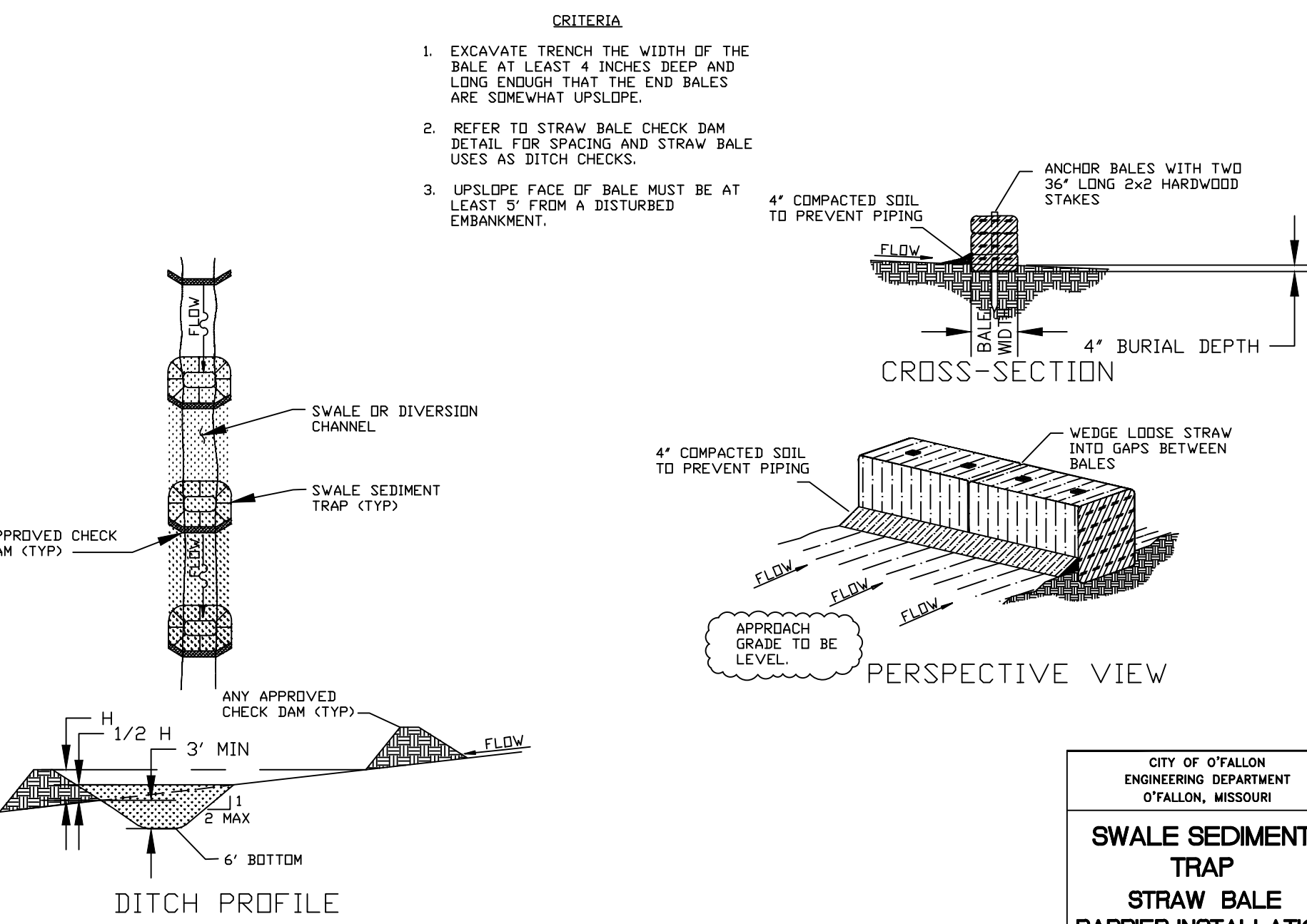
**STRAW BALE
CHECK DAM**



DITCH PROFILE

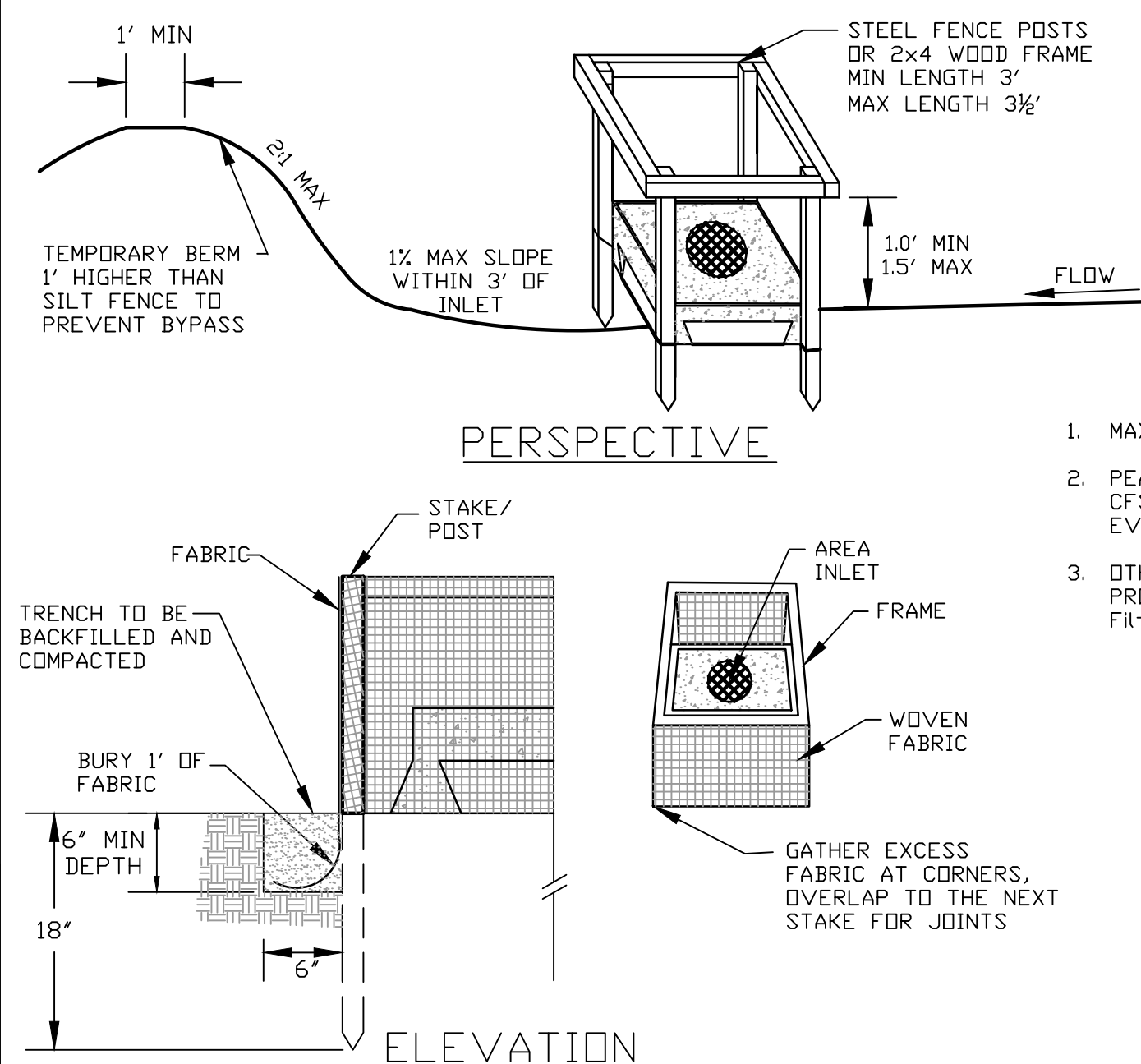
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**STRAW BALE
CHECK DAM**



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**SWALE SEDIMENT
TRAP
STRAW BALE
BARRIER INSTALLATION**



PERSPECTIVE

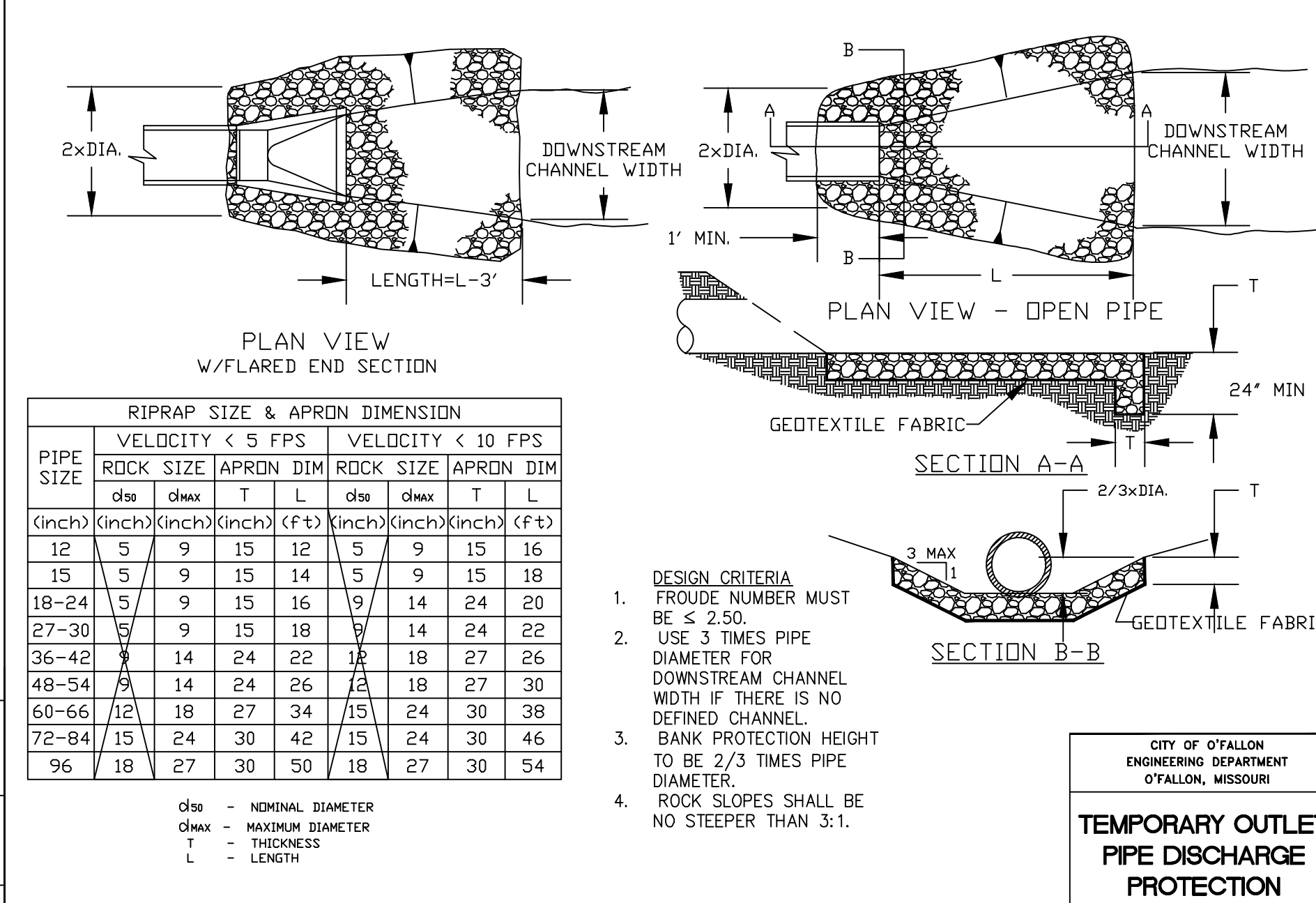
ELEVATION

- DESIGN CRITERIA**
- MAXIMUM DRAINAGE AREA - 1 ACRE.
 - PEAK RUNOFF SHALL NOT EXCEED 2 CFS BASED ON A 6-MONTH STORM EVENT.
 - OTHER SEDIMENT PROTECTION PRODUCTS MAY BE USED, SUCH AS FILTER FENCE™.

St. Charles County
Erosion & Sediment Controls
Standard Drawings

**AREA INLET
PROTECTION
FABRIC DROP**

DATE: MARCH 2008 DRAWING: ESC-14



**PLAN VIEW
W/ FLARED END SECTION**

RIPRAP SIZE & APRON DIMENSION

PIPE SIZE	VELOCITY < 5 FPS				VELOCITY < 10 FPS			
	ROCK SIZE	APRON DIM	ROCK SIZE	APRON DIM	ROCK SIZE	APRON DIM	ROCK SIZE	APRON DIM
12	5	9	15	12	5	9	15	16
15	5	9	15	14	5	9	15	18
18-24	5	9	15	16	9	14	24	20
27-30	5	9	15	18	14	24	22	
36-42	7	14	24	22	18	27	26	
48-54	9	14	24	26	18	27	30	
60-66	12	18	27	34	15	24	30	38
72-84	15	24	30	42	15	24	30	46
96	18	27	30	50	18	27	30	54

d_{nom} - NOMINAL DIAMETER
 d_{max} - MAXIMUM DIAMETER
 T - THICKNESS
 L - LENGTH

- DESIGN CRITERIA**
- FROUDE NUMBER MUST BE ≤ 2.50.
 - USE 3 TIMES PIPE DIAMETER FOR DOWNSTREAM CHANNEL WIDTH IF THERE IS NO DEFINED CHANNEL.
 - BANK PROTECTION HEIGHT TO BE 2/3 TIMES PIPE DIAMETER.
 - ROCK SLOPES SHALL BE NO STEEPER THAN 3:1.

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**TEMPORARY OUTLET
PIPE DISCHARGE
PROTECTION**

**McDONALD'S
CONSTRUCTION PLAN**

A TRACT OF LAND BEING LOT 4 OF 'BRYAN ROAD COMMERCIAL, PLAT 1' RECORDED AS DOCUMENT 2023R-08185 IN THE ST CHARLES COUNTY RECORDS, BEING IN THE SOUTHWEST QUARTER OF FRACTIONAL SECTION 30, TOWNSHIP 47 NORTH, RANGE 9 EAST OF THE FIFTH PRINCIPAL MERIDIAN, CITY OF OFALLON, ST. CHARLES COUNTY, MISSOURI

**Civil & Environmental
Consultants, Inc.**

3000 Little Hills Expressway, Suite 102
St. Charles, MO 63301
314-656-4566 · 866-250-3679
www.ceinc.com



PATRICK T. BENNETT
MO PE# 2002003134
PROFESSIONAL CIVIL ENGINEER
HAND SIGNATURE ON FILE

MIL	GAS	FTB	388-966
DRAWN BY:	CHECKED BY:	APPROVED BY:	PROJECT NO:

Developer / Owner Information
McDONALD'S RESTAURANT
NSN 43008 (024-1305)
962 BRYAN ROAD
OFALLON, MISSOURI

McDONALD'S

CITY OF OFALLON DETAILS

P+Z No. 24-00803
Approval Date 04/08/2024
Permit No.
Page No. **C804**