

NOTES:

1. SHOW ROAD AND STREAM ON PLAN VIEW, INDICATING CHANGES IN ALIGNMENT AND SPECIAL FEATURES THAT AFFECT THE DESIGN.
2. SHOW BOTH THE EXISTING AND PROPOSED LONGITUDINAL PROFILE, CURRENT WATER SURFACE ELEVATION, SPECIFY CULVERT INVERTS, BED ELEVATIONS AND DEGREE OF REGRADE EXPECTED. LENGTH OF PROFILE SHOULD BE AT LEAST 40 TIMES THE BANKFULL WIDTH PLUS THE LENGTH OF THE CULVERT.
3. SHOW PROPOSED CULVERT CROSS SECTION WITH STREAMBED SHAPE. SPECIFY CULVERT BED MATERIALS.
4. SHOW ROAD DRAINAGE PLAN, INCLUDING CROSS CULVERTS, DITCH LINING, SEDIMENT PONDS, ETC.
5. SHOW 100-YEAR FLOOD WATER SURFACE, AND TOP OF BANK ON PROFILE.
6. SHOW DETAILS CONCERNING STREAM CHANNEL CHARACTERISTICS, FOR INSTANCE POOL-RIFFLE GEOMETRY, SIZE AND PLACEMENT OF LARGE WOOD.
7. PROVIDE A SITE MAP WITH CONTOURS AND STREAM LAYOUT DETAILS.
8. INDICATE BANKFULL WIDTH AND APPROXIMATE LOCATIONS OF MEASUREMENTS.



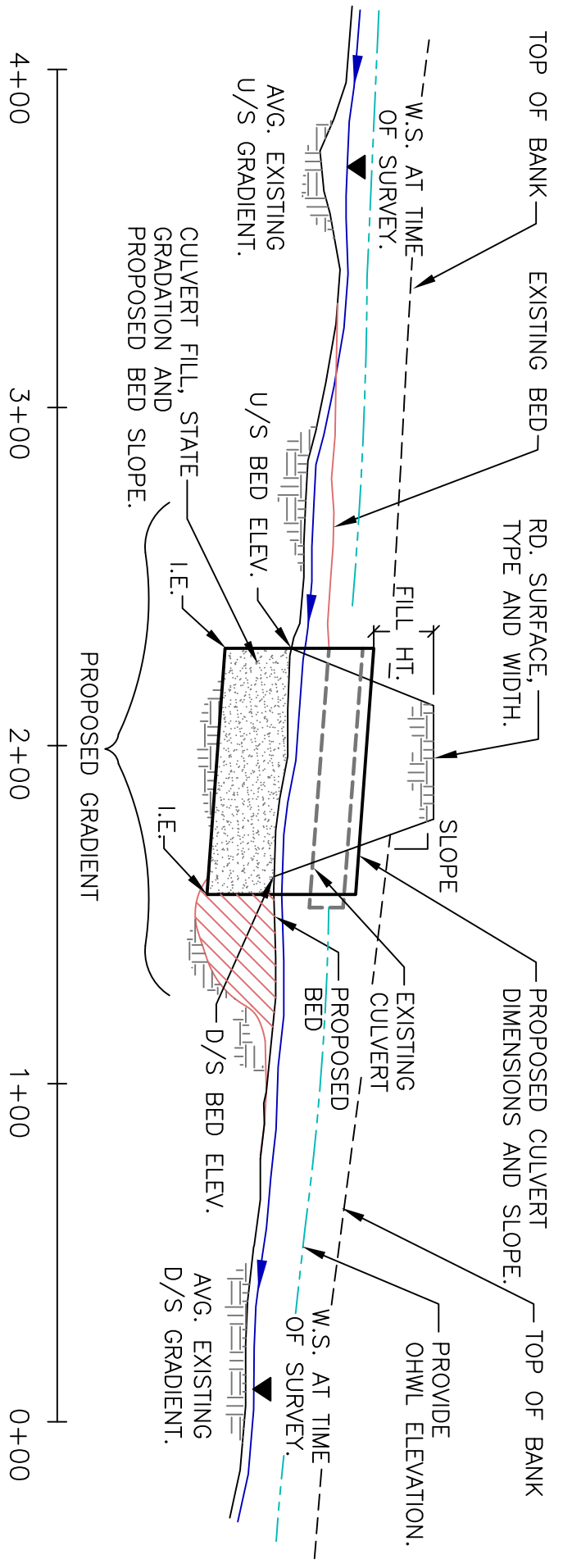
Engineer: D.PONDER
 Drawn by: K.CORWIN
 Reviewed by: C.MORSS
 Approved by:

EXAMPLE DRAWING S-1A
CULVERT REPLACEMENT

DATE: 8-11-17
 SHEET: 1 OF 2



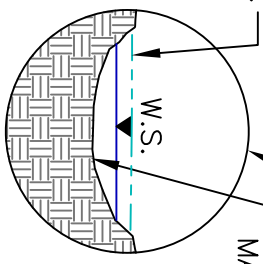
Engineer: D.PONDER
 Drawn by: K.CORWIN
 Reviewed by: C.MORSS
 Approved by:



STREAM PROFILE

Scale: _____ " = _____ ,

PROVIDE OHWL ELEVATION. _____



PROVIDE CULVERT SIZE AND LENGTH.
 SPECIFY STREAMBED MATERIALS.

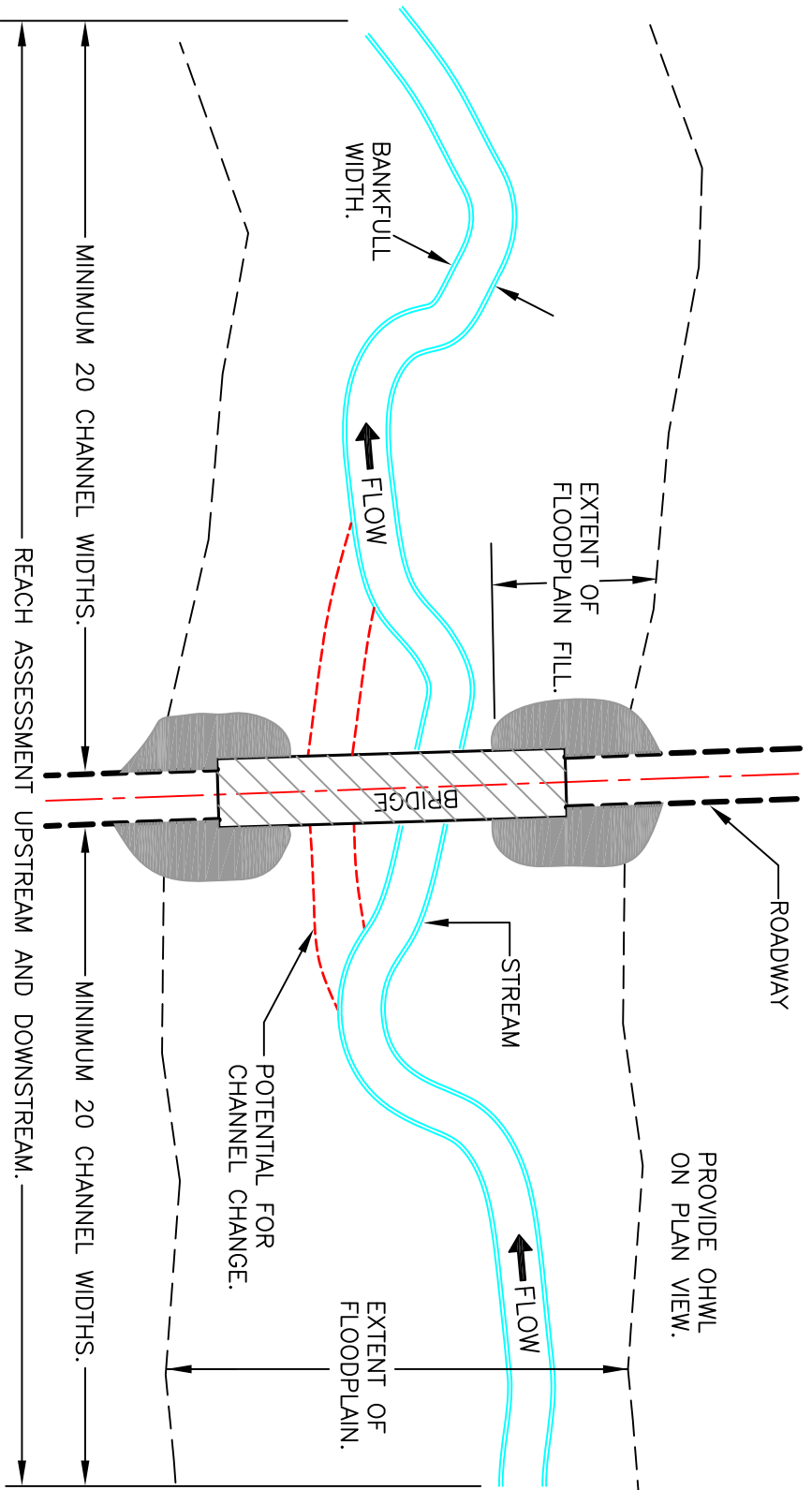
PROPOSED SECTION A-A PROPOSED CULVERT CROSS SECTION

EXAMPLE DRAWING S-1B CULVERT REPLACEMENT

DATE: 8-11-17
 SHEET: 2 OF 2



Engineer: D.PONDER
 Drawn by: J. QUERY
 Reviewed by: C.MORSS
 Approved by:



REACH ASSESSMENT:

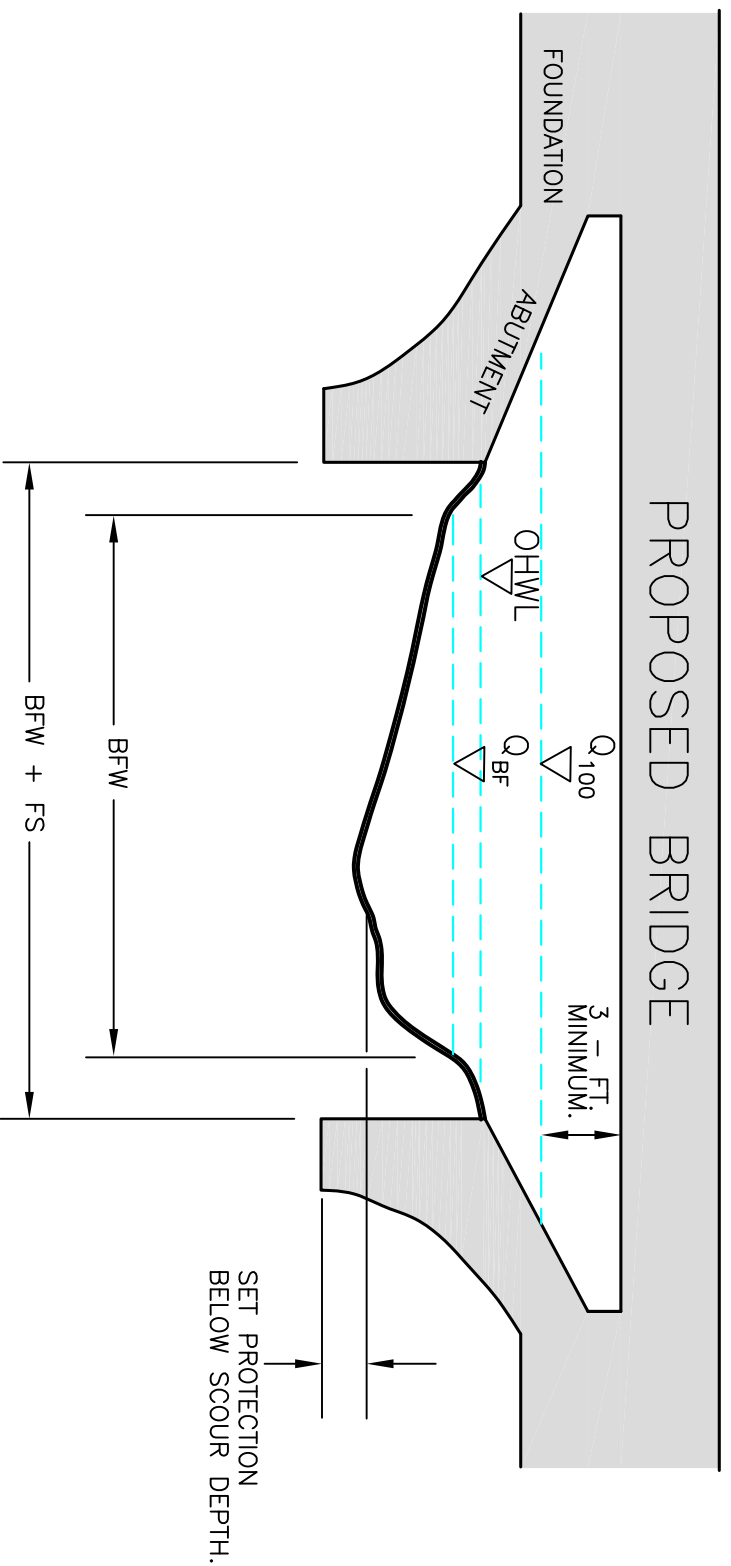
- ASSESSMENT LENGTH MIN 20 CHANNEL WIDTHS, LONGER FOR LARGER RIVERS.
- SHOW BASIC CHANNEL AND FLOODPLAIN GEOMETRY.
- SHOW EXPECTED LATERAL MIGRATION DURING BRIDGE LIFE SPAN.
- SHOW BRIDGE ABUTMENTS, FOUNDATION, PIERS, AND FLOODPLAIN FILL.
- SHOW EXISTING INFRASTRUCTURE THAT AFFECTS BRIDGE DESIGN.
- SHOW CLEARANCE ABOVE 100-YEAR FLOOD WATER SURFACE WITH CONSIDERATION FOR DEBRIS.
- SHOW EXISTING LARGE WOOD JAMS.
- SHOW REVEGETATION PLAN AND MITIGATION MEASURES.

EXAMPLE DRAWING S-2

BRIDGE PLAN VIEW - REACH ASSESSMENT

DATE: 8 - 11 - 17
 SHEET: 1 OF 1

BRIDGE CROSS SECTION IN CONFINED CHANNEL (FLOODPLAIN WIDTH < 3 X BFW).

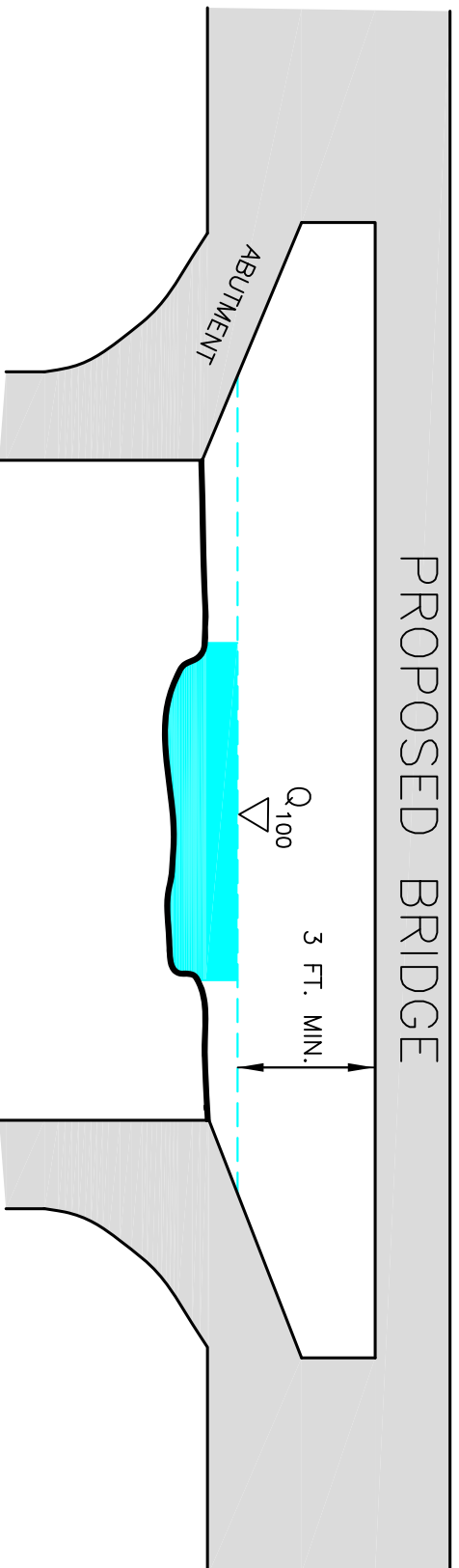
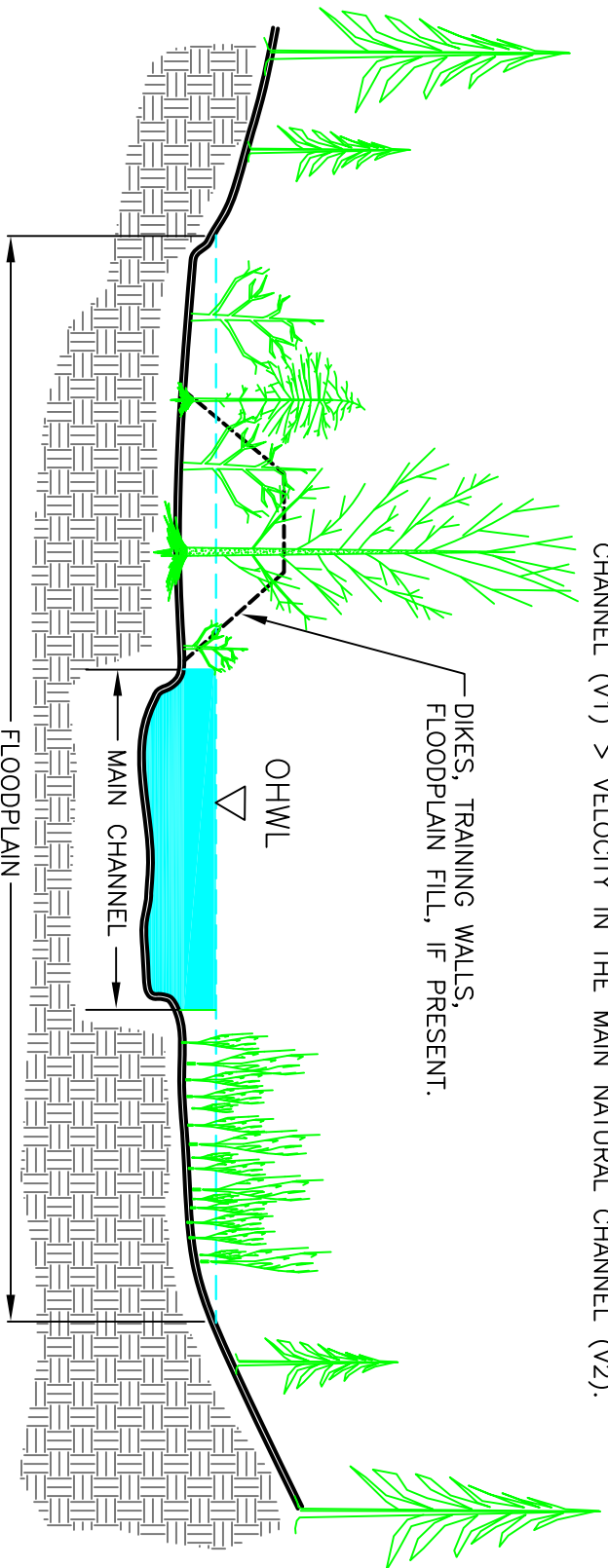


Engineer: D.PONDER
Drawn by: J. QUERY
Reviewed by: C.MORSS
Approved by:

EXAMPLE DRAWING S-3
BRIDGE CROSS SECTION - IN CONFINED CHANNEL

DATE:
8-11-17
SHEET:
1 OF 1

BRIDGE CROSS SECTION IN UNCONFINED CHANNEL (FLOODPLAIN WIDTH > 3 X BFW).
 ACCEPTABLE SPAN SECTION DOES NOT SIGNIFICANTLY INCREASE VELOCITY IN THE MAIN
 CHANNEL (V_1) > VELOCITY IN THE MAIN NATURAL CHANNEL (V_2).



Engineer: D.PONDER
 Drawn by: J. QUERY
 Reviewed by: C.MORSS
 Approved by:

EXAMPLE DRAWING S-4

BRIDGE CROSS SECTION - IN UNCONFINED CHANNEL

DATE: 8-11-17
 SHEET: 1 OF 1



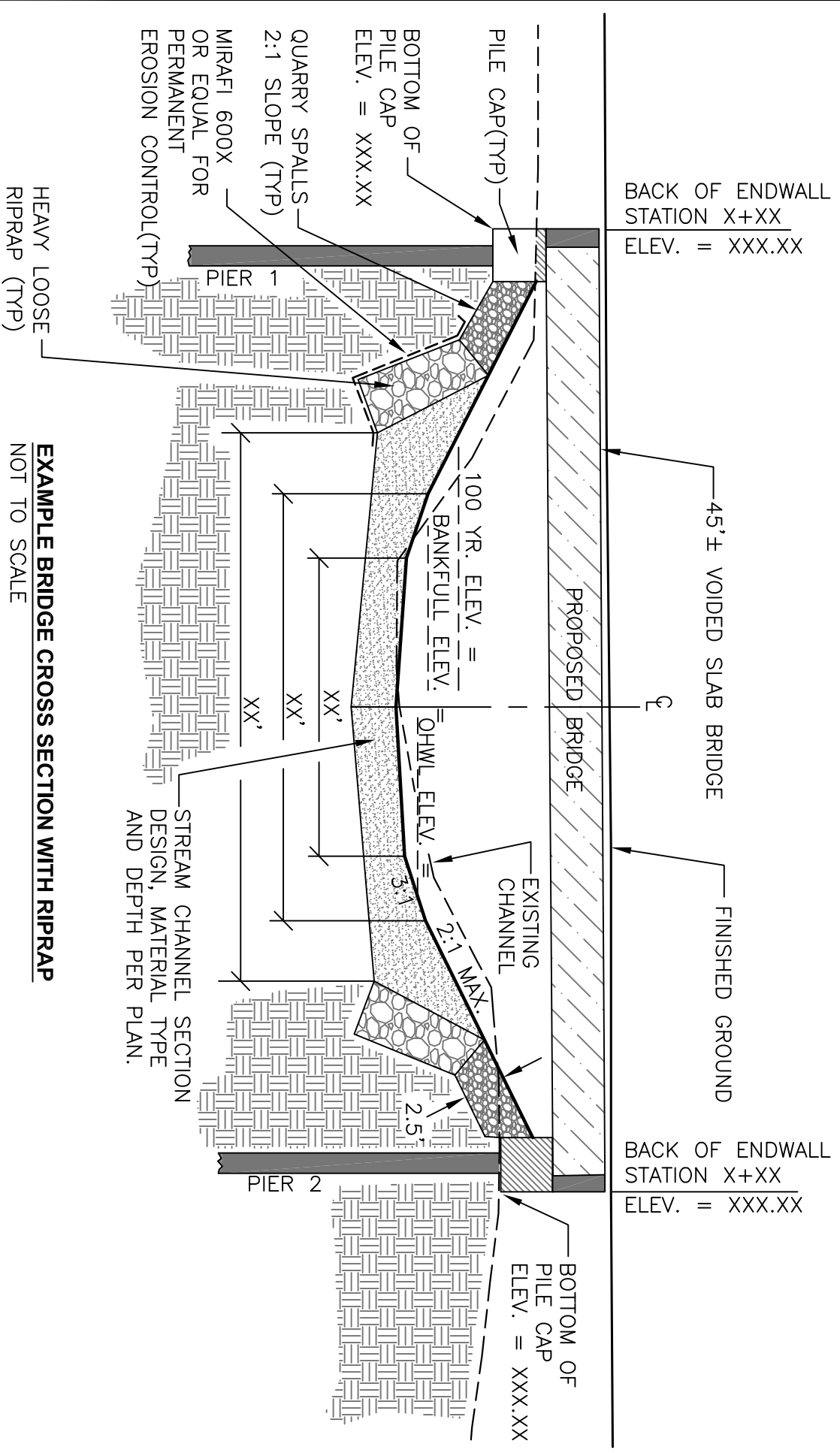
Engineer: D.PONDER
 Drawn by: J. QUERY
 Reviewed by: C.MORSS
 Approved by:

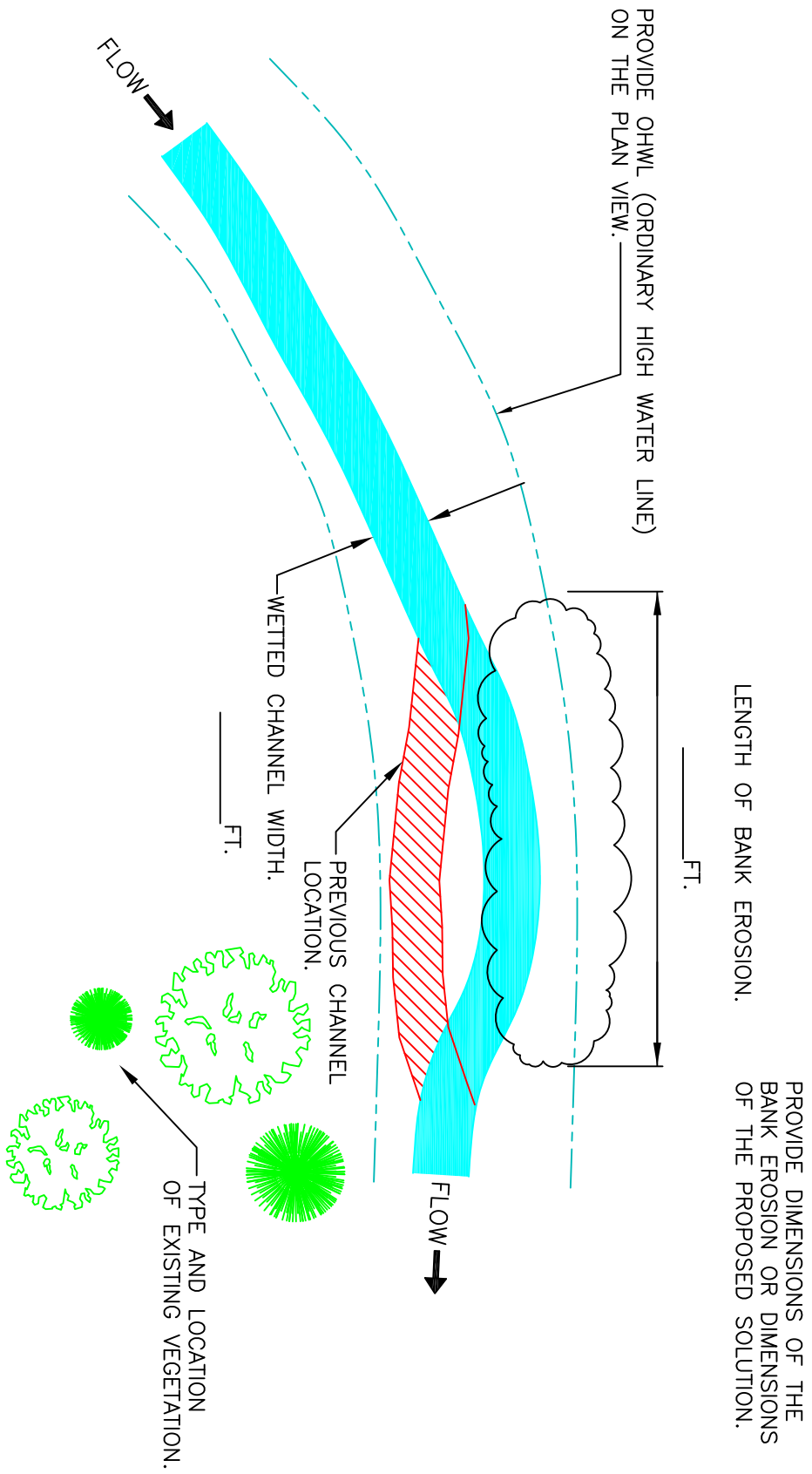
EXAMPLE DRAWING S-5

BRIDGE CROSS SECTION - WITH RIPRAP

DATE:
 8-11-17

SHEET:
 1 OF 1





PLAN VIEW - EXAMPLE

NOT TO SCALE



Engineer: D.PONDER
 Drawn by: J. QUERRY
 Reviewed by: C.MORSS
 Approved by:

EXAMPLE DRAWING S-6A
 BANK EROSION DETAIL - PLAN VIEW

DATE: 8-11-17
 SHEET: 1 OF 1

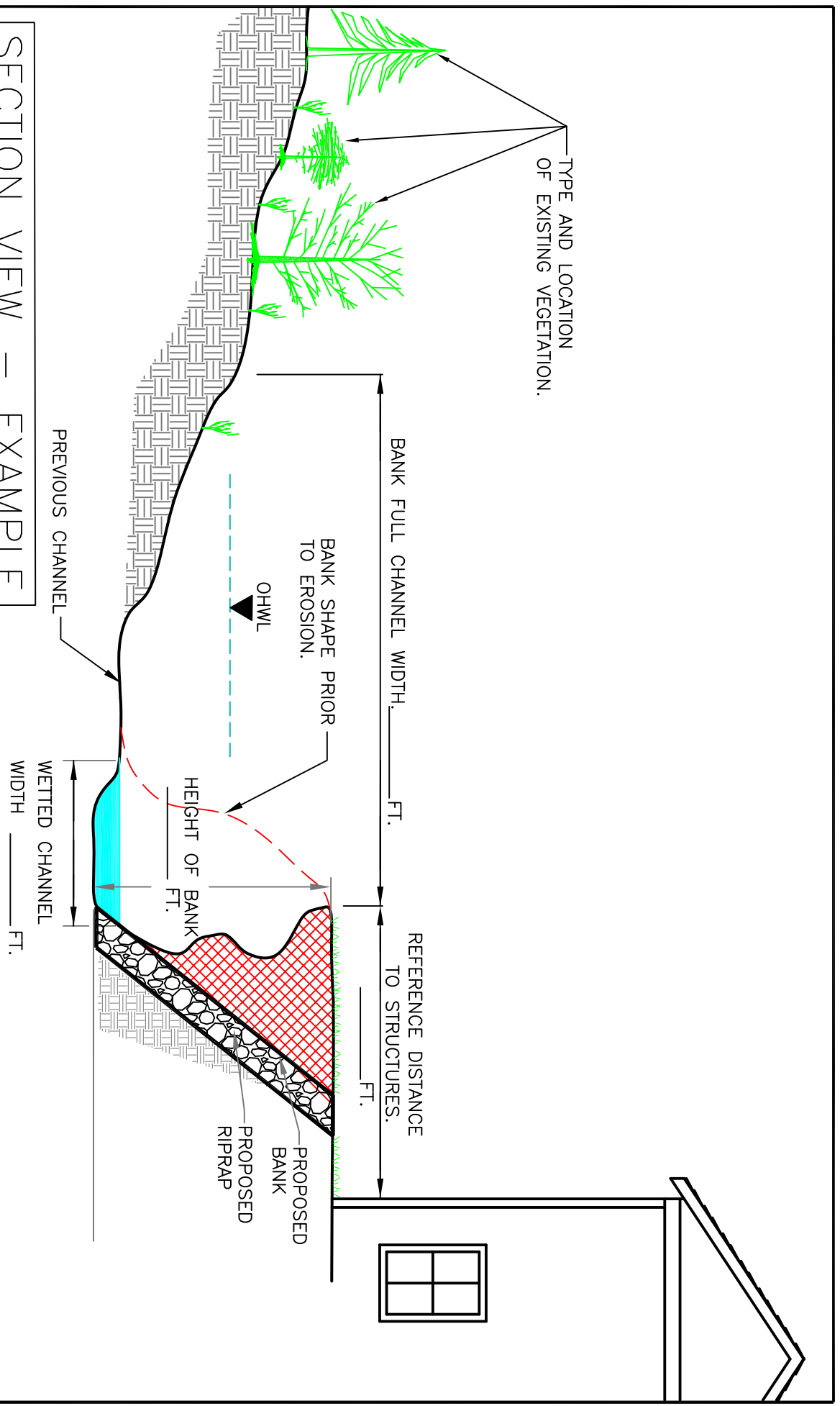


Engineer: D.PONDER
 Drawn by: J. QUERRY
 Reviewed by: C.MORSS
 Approved by:

EXAMPLE DRAWING S-6B
BANK EROSION DETAIL - SECTION

DATE: 8-11-17
 SHEET: 2 OF 2

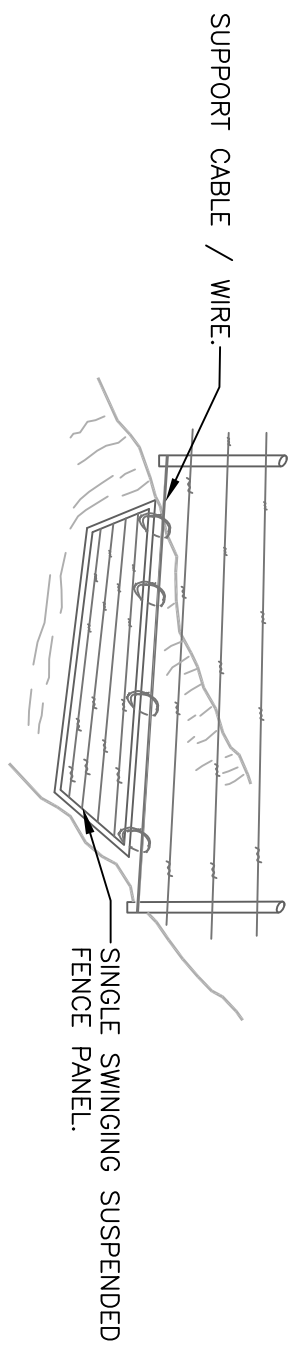
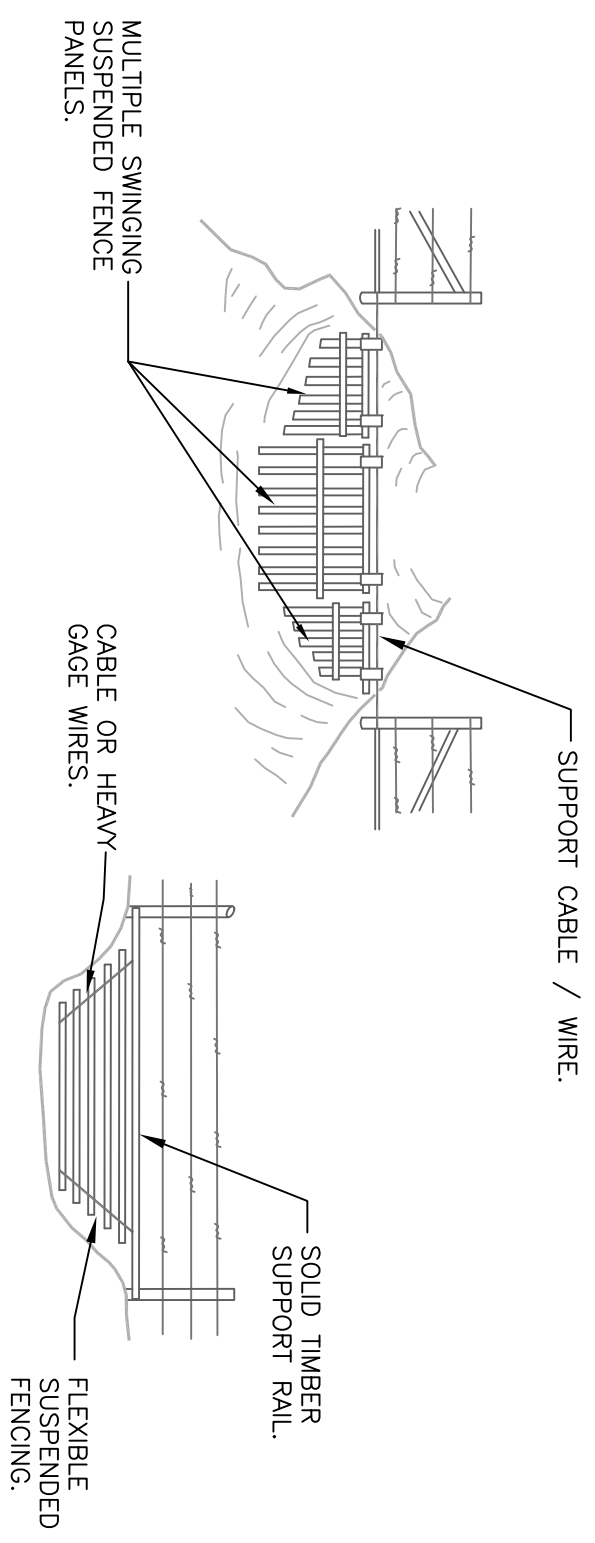
SECTION VIEW - EXAMPLE
 NOT TO SCALE





Engineer: D.PONDER
 Drawn by: K.CORWIN
 Reviewed by: C.MORSS
 Approved by:

EXAMPLE DRAWING S - 7
FENCING ALTERNATIVES FOR WATER GAPS

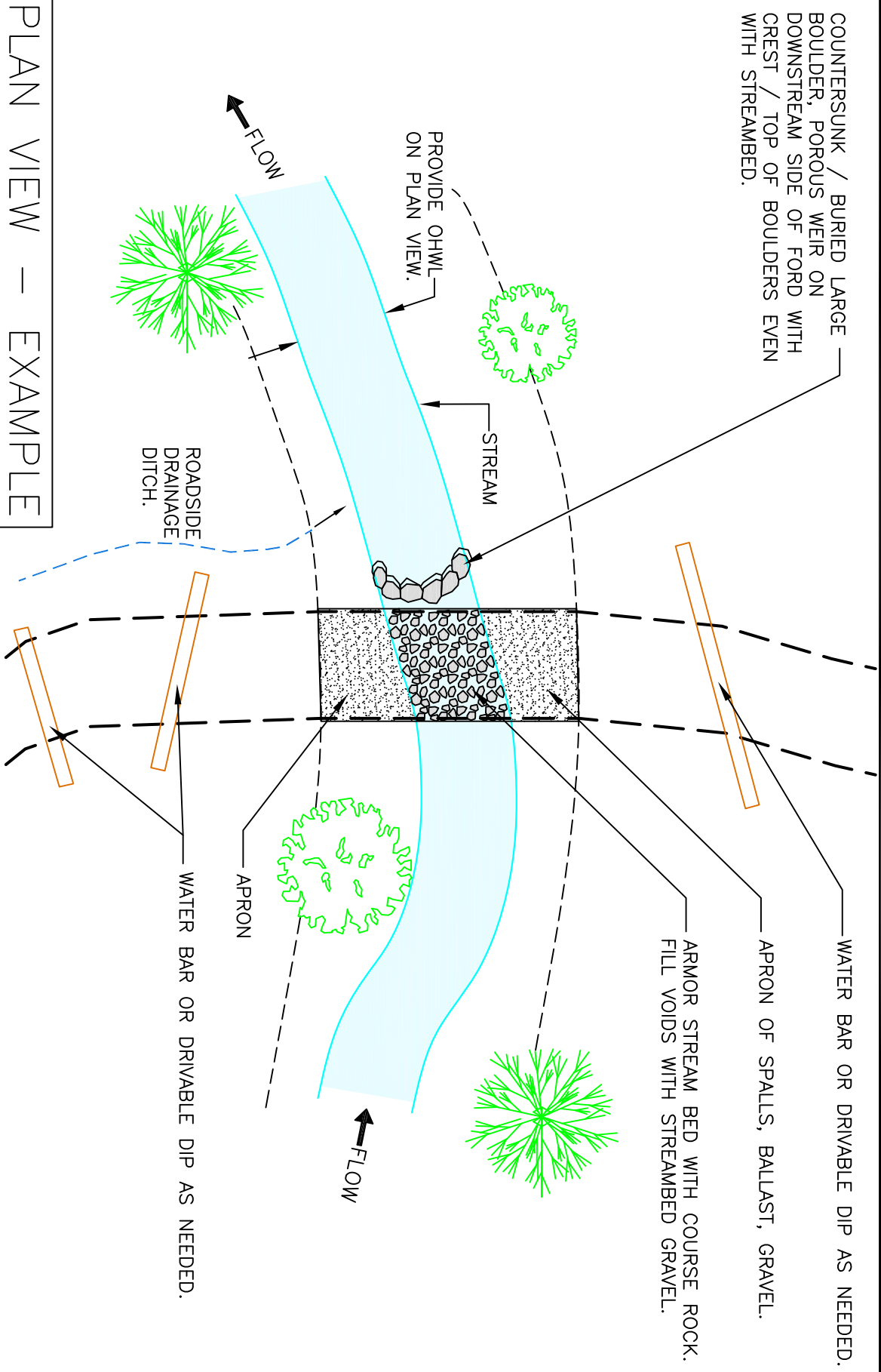


DATE: 6-3-17
 SHEET: 1 OF 1



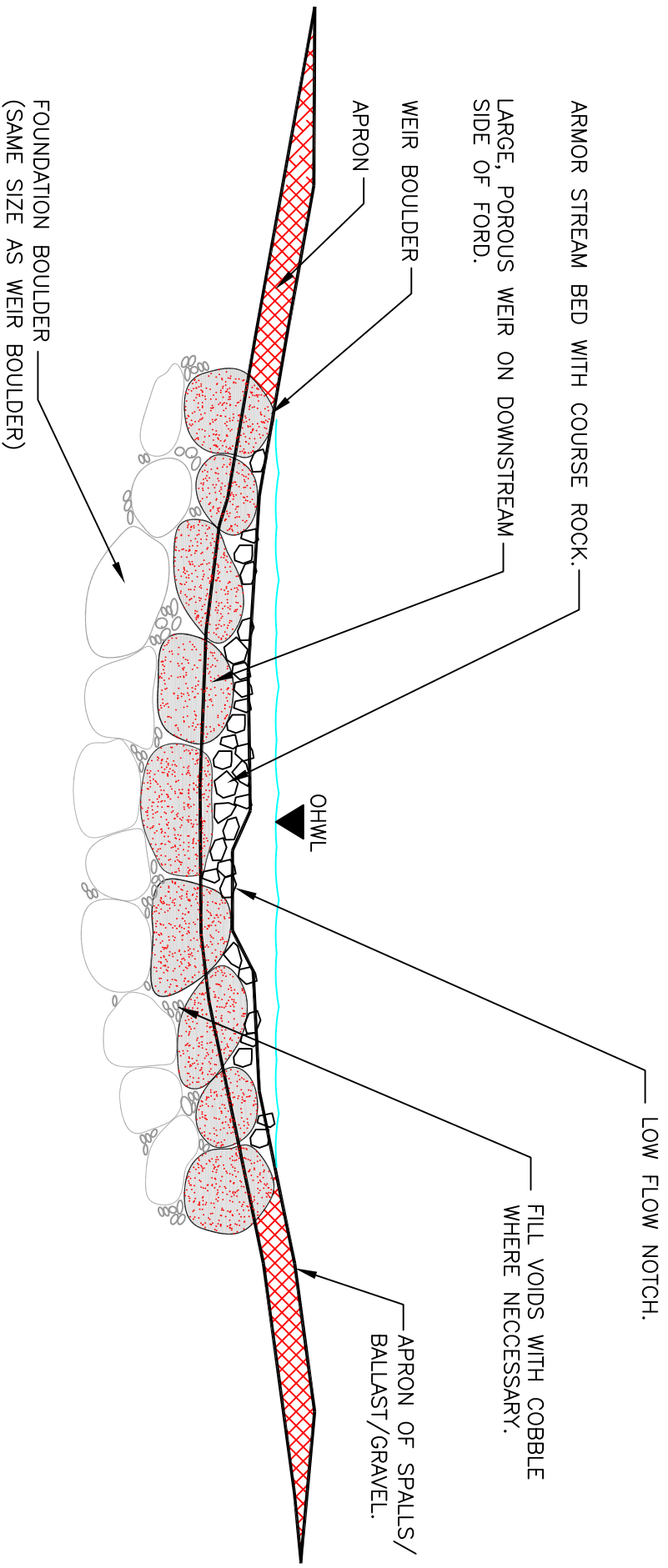
Engineer: D.PONDER
 Drawn by: K.CORWIN
 Reviewed by: C.MORSS
 Approved by:

PLAN VIEW - EXAMPLE
 NOT TO SCALE



EXAMPLE DRAWING S-8A
FORD DETAIL - PLAN VIEW

DATE: 8-11-17
 SHEET: 1 OF 1



SECTION VIEW – EXAMPLE

NOT TO SCALE



Engineer: D.PONDER
 Drawn by: K.CORWIN
 Reviewed by: C.MORSS
 Approved by:

**EXAMPLE DRAWING S-8B
 FORD DETAIL - SECTION**

DATE: 8-11-17
 SHEET: 1 OF 1