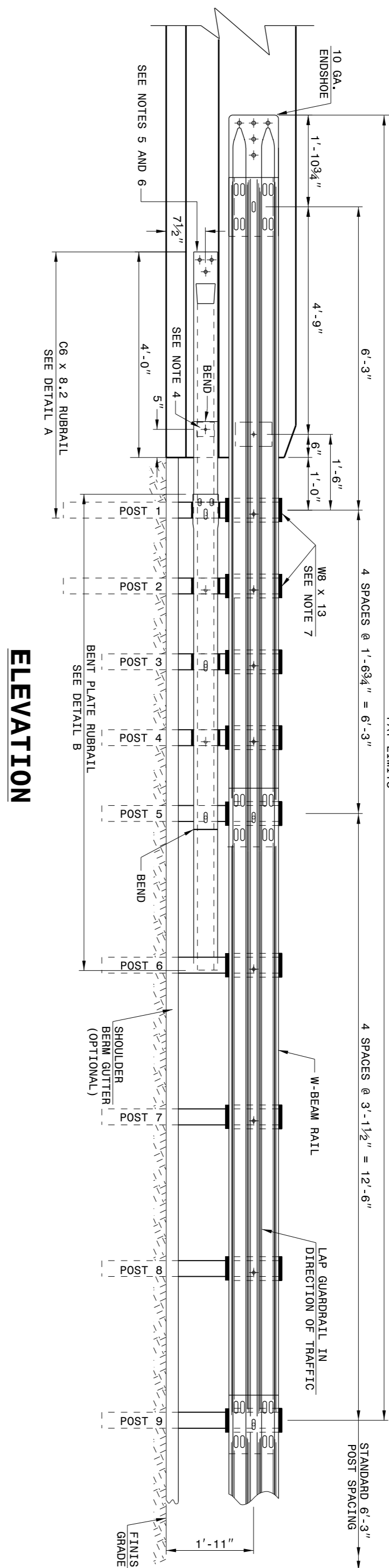


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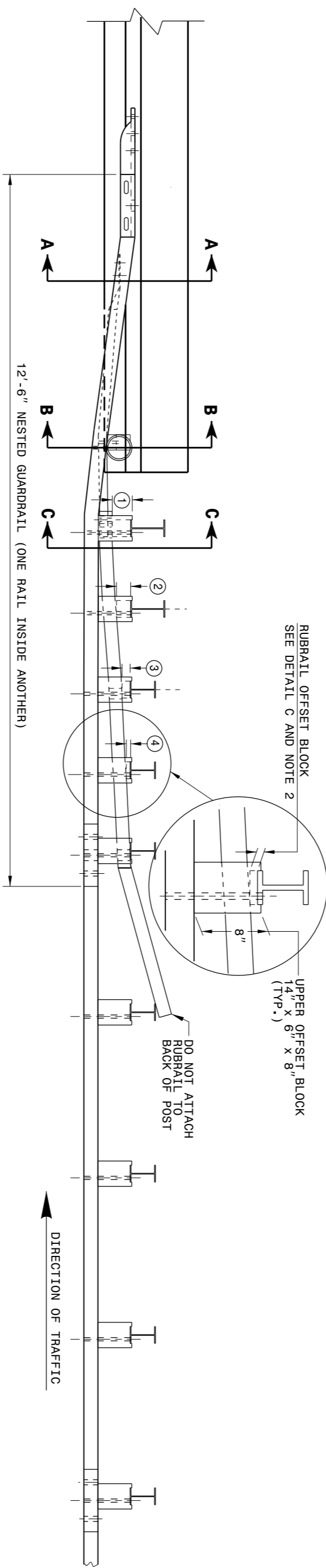
ENGLISH DETAIL DRAWING FOR
GUARDRAIL ANCHOR UNIT
FOR F-SHAPE BARRIER

SHEET 4 OF 7
862D03



ELEVATION

- GENERAL NOTES:
- 1) POSTS 1 THROUGH 5 REQUIRE AN ADDITIONAL HOLE TO ATTACH LOWER BLOCKOUTS AND/OR RUBRAIL.
 - 2) BLOCKOUTS ARE TO BE FABRICATED FROM 1/2" THICK STEEL PLATE AND 3/4" DIA. ROUNDS IN POSTS 8 AND 9. RUBRAIL IS SECURED TO POST 5 WITH A 5/8" x 4 1/2" BUTTONEAD BOLT. RUBRAIL IS FLARED TO BACK OF POST 6 AND NOT SECURED.
 - 3) STEEL SPACER TUBE IS A SCHEDULE 40 GALVANIZED PIPE 6" INSIDE DIAMETER x 9' LONG. ATTACH TUBE TO GUARDRAIL ONLY WITH 5/8" x 1 1/4" LONG BUTTONEAD BOLT AND RECTANGULAR PLATE WASHER.
 - 4) SEE DETAIL D FOR SLOPED RUBRAIL BLOCKOUT. BLOCKOUT IS ATTACHED TO RAIL ELEMENT ONLY. USE 3/8" x 3" LAG BOLT WITH FLAT WASHER.
 - 5) TYPE OF F-SHAPE BARRIER OR BRIDGE RAIL.
 - 6) ANCHORAGE:
 - (a) AT EXISTING BRIDGE RAIL AND NEW OR EXISTING BARRIERS, ANCHOR RUBRAIL USING THREE 5/8" x 6" CHEMICALLY ANCHORED BOLTS WITH WASHERS. MAXIMUM PROJECTION FOR BOLTS IS 1/2".
 - (b) AT EXISTING BRIDGE RAIL AND NEW OR EXISTING BARRIERS, ANCHOR THE W-BEAM END SHOE USING A 4 BOLT HOLD DOWN PLATE (SEE STD. DWG. 862.04).
 - (c) AT NEW BRIDGE RAIL, ANCHOR THE W-BEAM END SHOE AND RUBRAIL AS DETAILED ON THE STRUCTURE PLANS.
 - 7) POSTS 1 AND 2 ARE W8 X 13, 7'-6" LONG. ALL OTHER POSTS IN THE ANCHOR UNIT ARE W8 X 8.5.



PLAN

ENGLISH DETAIL DRAWING FOR
STRUCTURE ANCHOR UNIT
GUARDRAIL ANCHOR UNIT TYPE B-77
FOR F-SHAPE BARRIER

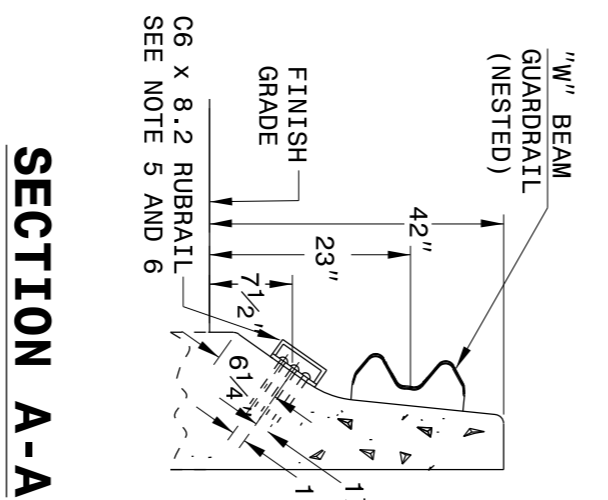
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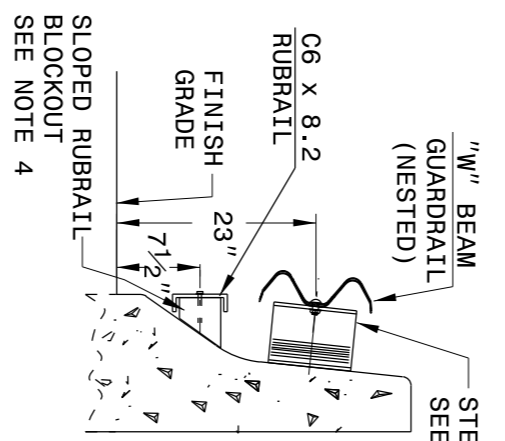
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ENGLISH DETAIL DRAWING FOR
STRUCTURE ANCHOR UNIT
FOR F-SHAPE BARRIER

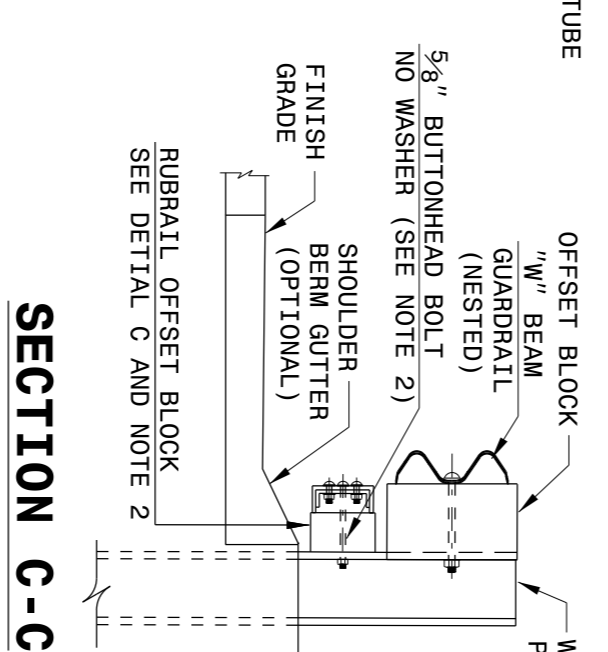
SHEET 5 OF 7
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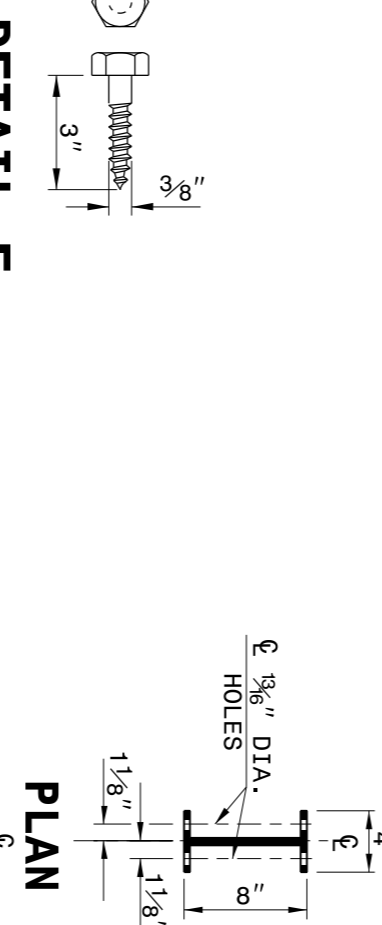
SECTION A-A



SECTION B-B



SECTION C-C

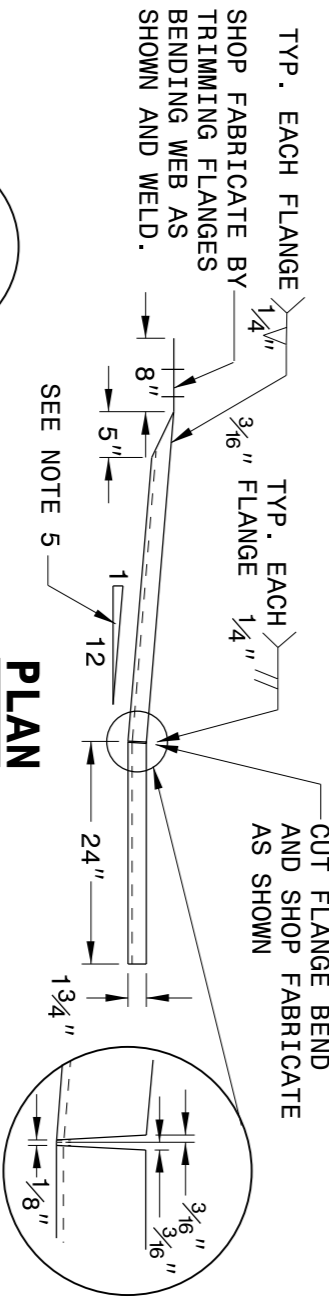


DETAIL E
LAG BOLT

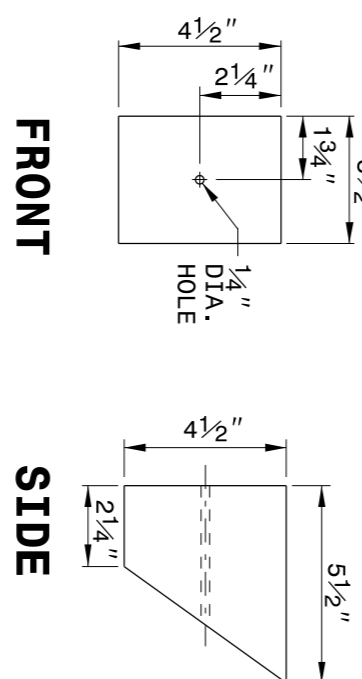
RUBRAIL BLOCKS 7" HIGH X 4" WIDE	POST	THICKNESS	BOLT LENGTH
(1)	4 1/4"	9"	5" *
(2)	3 1/4"	5" *	6"
(3)	2"	6"	3" *
(4)	1"	3" *	3" *

* BOLTS FOR POSTS AND 4 ARE USED TO ATTACH BLOCKOUT TO BLOCK.

DETAIL C
RUBRAIL BLOCKOUT

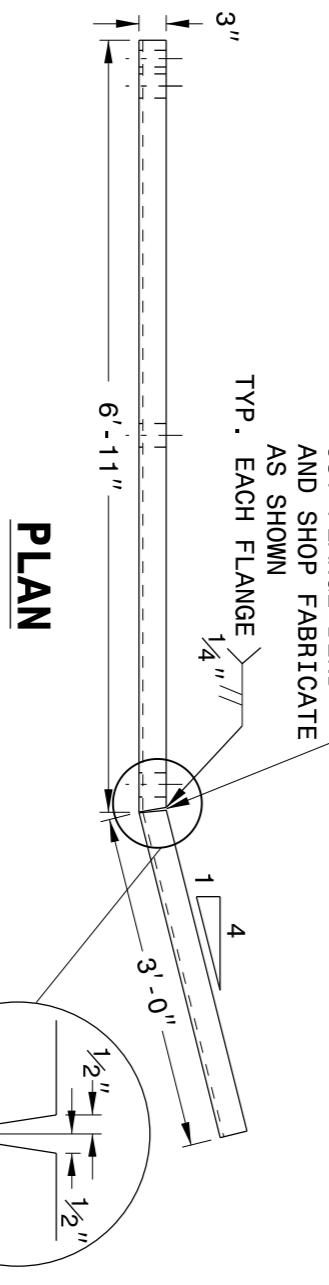


PLAN

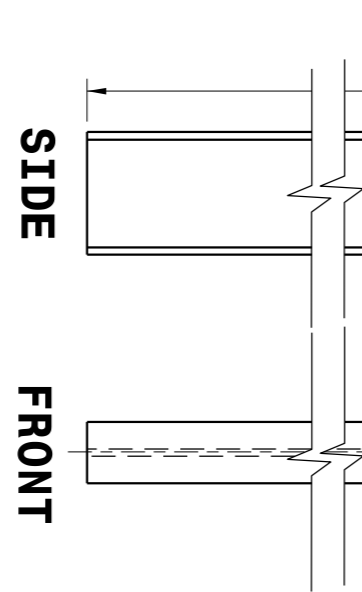


FRONT
SIDE

DETAIL D
SLOPED RUBRAIL BLOCKOUT

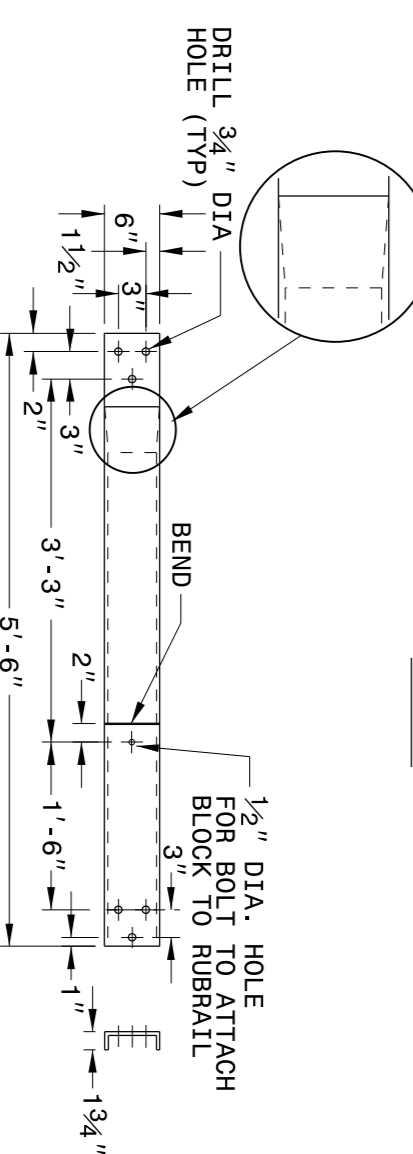


PLAN



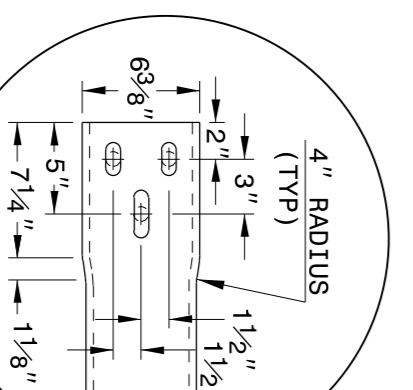
FRONT
SIDE

DETAIL F
W8 X 13 X 7'-6"



ELEVATION

DETAIL A
6 X 8.2 RUBRAIL



ELEVATION

DETAIL B
BENT PLATE RUBRAIL

ENGLISH DETAIL DRAWING FOR
STRUCTURE ANCHOR UNIT
GUARDRAIL ANCHOR UNIT TYPE B-77
FOR F-SHAPE BARRIER

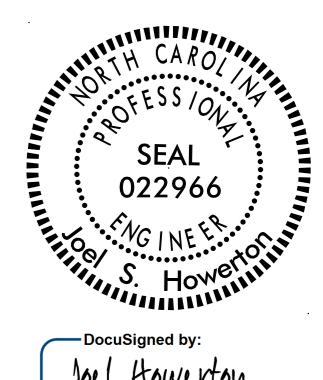
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SHEET 5 OF 7
862D03

CONTRACT STANDARDS
AND DEVELOPMENT UNIT
Office 919-707-6950 FAX 919-250-4119

SEE TITLE BLOCK

ORIGINAL BY: J HOWERTON DATE: 06-22-12
 MODIFIED BY: DATE:
 CHECKED BY: DATE:
 FILE SPEC.:



4/15/2015

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