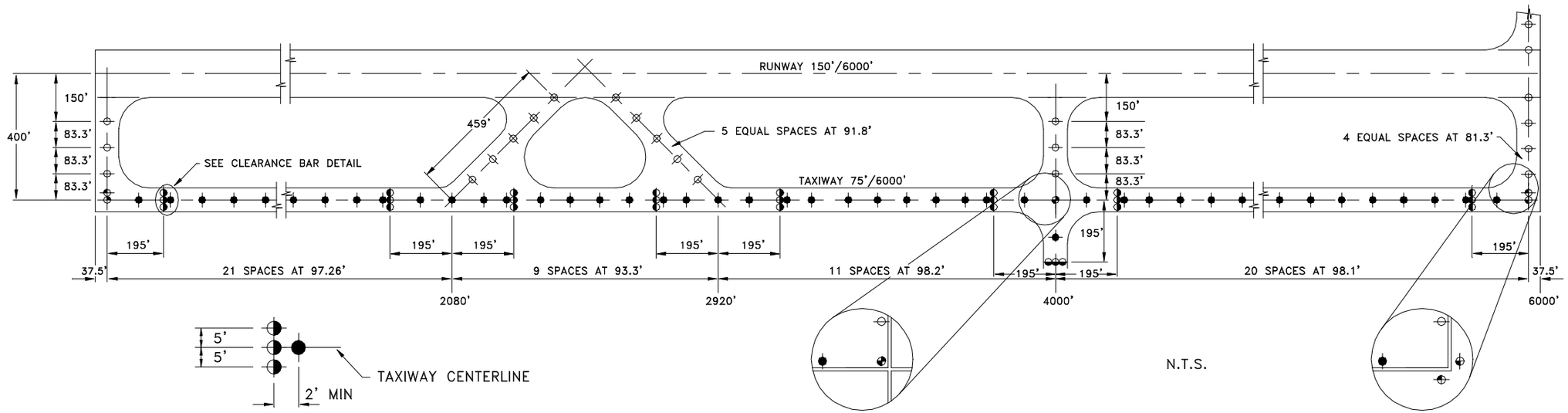
APPENDIX 2. DRAWINGS.



CLEARANCE BAR DETAIL

LEGEND

G⊕G	L-852B	BIDIRECTIONAL GREEN-GREEN
B◑Y	L-852A	UNIDIRECTIONAL BLANK-YELLOW
B◔G	L-852B	UNIDIRECTIONAL BLANK-GREEN
G●G	L-852A	BIDIRECTIONAL GREEN-GREEN
◔Y	L-852E	OMNIDIRECTIONAL YELLOW

NOTES

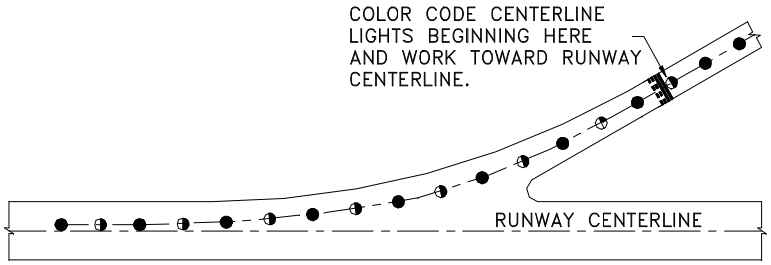
1. SEE PARAGRAPH 7A FOR INFORMATION ON CLEARANCE BARS AND L-852E TAXIWAY INTERSECTION LIGHTS.

2. CLEARANCE BARS ON EXIT TAXIWAYS MAY BE OMITTED IN ACCORDANCE WITH PARAGRAPH 7A(3).

3. CLEARANCE BARS ARE LOCATED IN RELATION TO THE AIRPLANE DESIGN GROUP FOR WHICH THE TAXIWAY IS DESIGNED. THEY ARE INSTALLED 2 FEET FURTHER FROM THE INTERSECTION THAN THE DISTANCE SPECIFIED IN AC 150/5340-1, FOR TAXIWAY INTERSECTION MARKINGS. SEE FIGURE 10.

4. THE METRIC EQUIVALENT (IN METERS) MAY BE FOUND BY DIVIDING FEET BY 3.281.

FIGURE 1. TYPICAL TAXIWAY CENTERLINE LIGHTING CONFIGURATION FOR NON-STANDARD FILLETS.
(Centerline light spacing for operations above 1,200 feet (365 m) RVR)



N.T.S.

NOTES

1. THE FIRST LIGHT ON THE RUNWAY IS GREEN. IF THERE IS AN ODD NUMBER OF COLOR–CODED LIGHTS, THE FIRST TWO LIGHTS SHOULD BE GREEN.

2. IF THERE IS AN ILS/MLS CRITICAL AREA PRESENT BEYOND THE RUNWAY HOLDING POSITION, THE COLOR–CODED LIGHTS CONTINUE TO THE ILS/MLS CRITICAL AREA HOLDING POSITION WITH THE LAST YELLOW LIGHT SIMILARLY LOCATED BEYOND THE CRITICAL AREA HOLDING POSITION.

3. SEE PARAGRAPH 8f (1) FOR INFORMATION ON FIXTURE SELECTION.

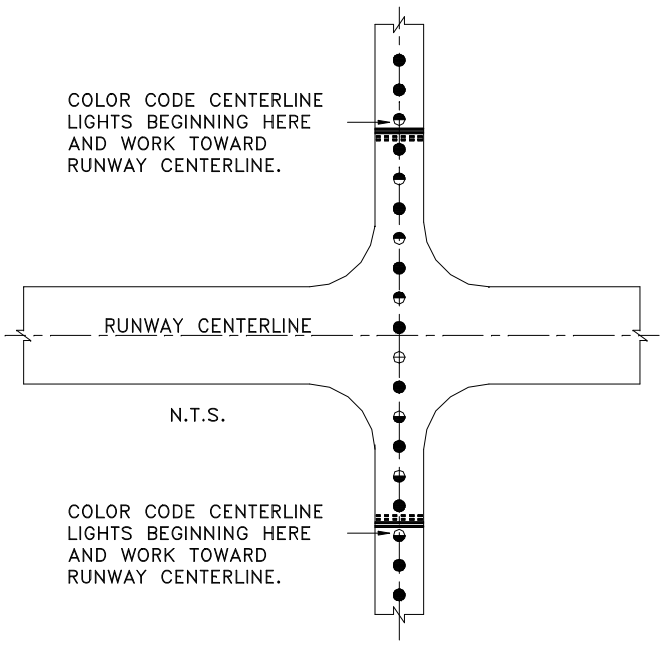
(A) EXIT TAXIWAY

LEGEND

Y ◑ G BIDIRECTIONAL YELLOW–GREEN

G ● G BIDIRECTIONAL GREEN–GREEN

Y ◐ Y BIDIRECTIONAL YELLOW–YELLOW



N.T.S.

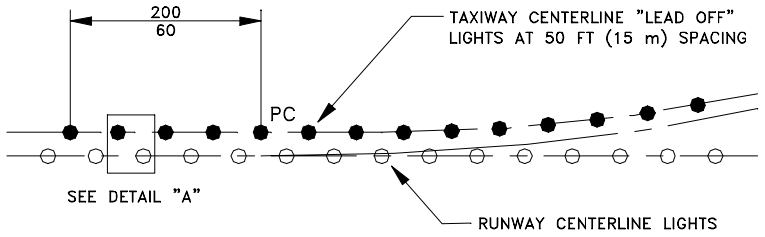
NOTES

1. THE LIGHTS ARE COLOR–CODED IN ACCORDANCE WITH PARAGRAPH 3b. WHERE BIDIRECTIONAL LIGHTS ARE INSTALLED, EACH DIRECTION IS COLOR–CODED INDEPENDENTLY.

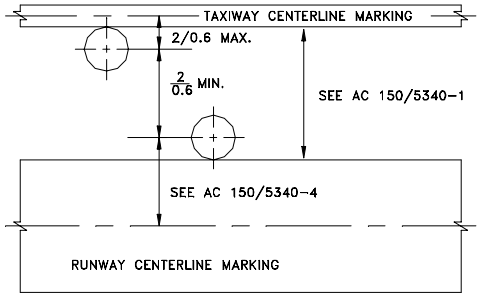
2. IF THERE IS AN ILS/MLS CRITICAL AREA PRESENT BEYOND THE RUNWAY HOLDING POSITION, THE COLOR–CODED LIGHTS CONTINUE TO THE ILS/MLS CRITICAL AREA HOLDING POSITION WITH THE LAST YELLOW LIGHT SIMILARLY LOCATED BEYOND THE CRITICAL AREA HOLDING POSITION.

(B) TAXIWAY CROSSING A RUNWAY

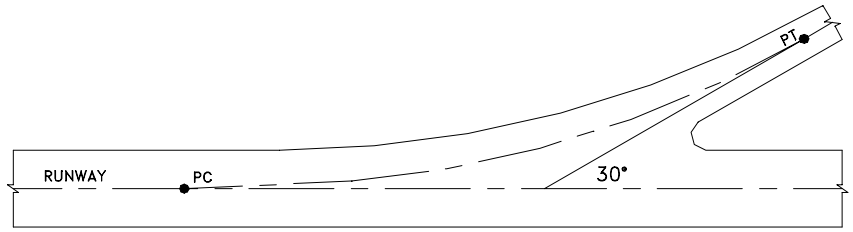
FIGURE 2. COLOR-CODING OF EXIT TAXIWAY CENTERLINE LIGHTS



LIGHT LOCATIONS AT BEGINNING OF ACUTE–ANGLED EXIT TAXIWAY



DETAIL "A"



ACUTE–ANGLED EXIT TAXIWAY (TYPICAL)

NOTES:

1. DIMENSIONS ARE EXPRESSED AS $\frac{\text{FEET}}{\text{METERS}}$,
E.G. $\frac{200}{60}$

2. THE TAXIWAY CENTERLINE "LEAD OFF" LIGHTS MAY BE INSTALLED ON EITHER SIDE OF THE TAXIWAY CENTERLINE MARKING.

3. THE TAXIWAY CENTELRINE "LEAD OFF" LIGHTS ARE INSTALLED IN RELATION TO THE CURVE DESIGNATED AS THE TRUE CENTERLINE OF THE TAXIWAY PATH.

4. THE ORIENTATION OF THE LIGHT BEAMS SHALL BE AS SPECIFIED IN PARAGRAPH 31(4).

FIGURE 3. TAXIWAY CENTERLINE LIGHTING CONFIGURATION FOR ACUTE-ANGLED EXITS

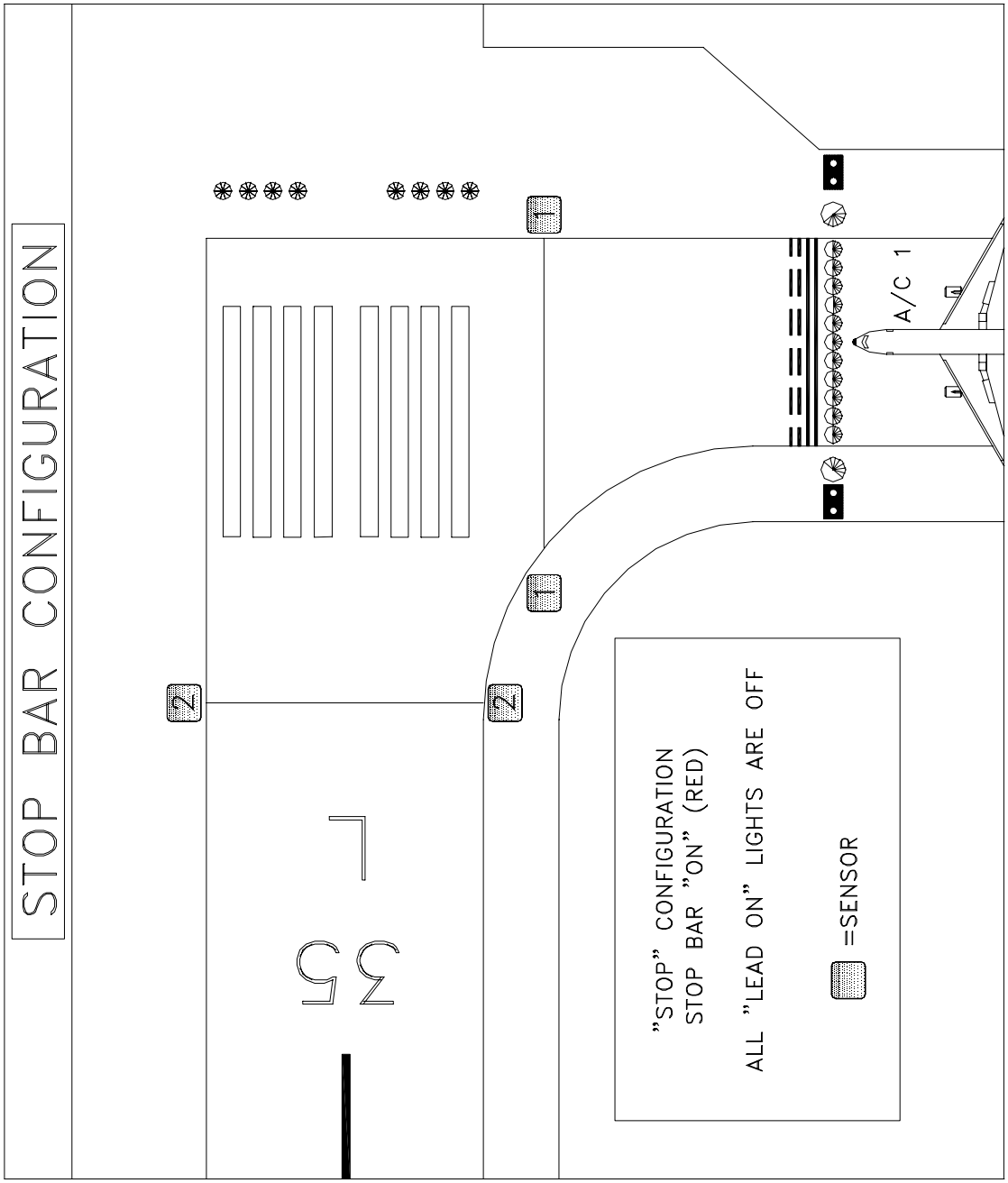


FIGURE 4a. CONTROLLED STOP BAR DESIGN AND OPERATION

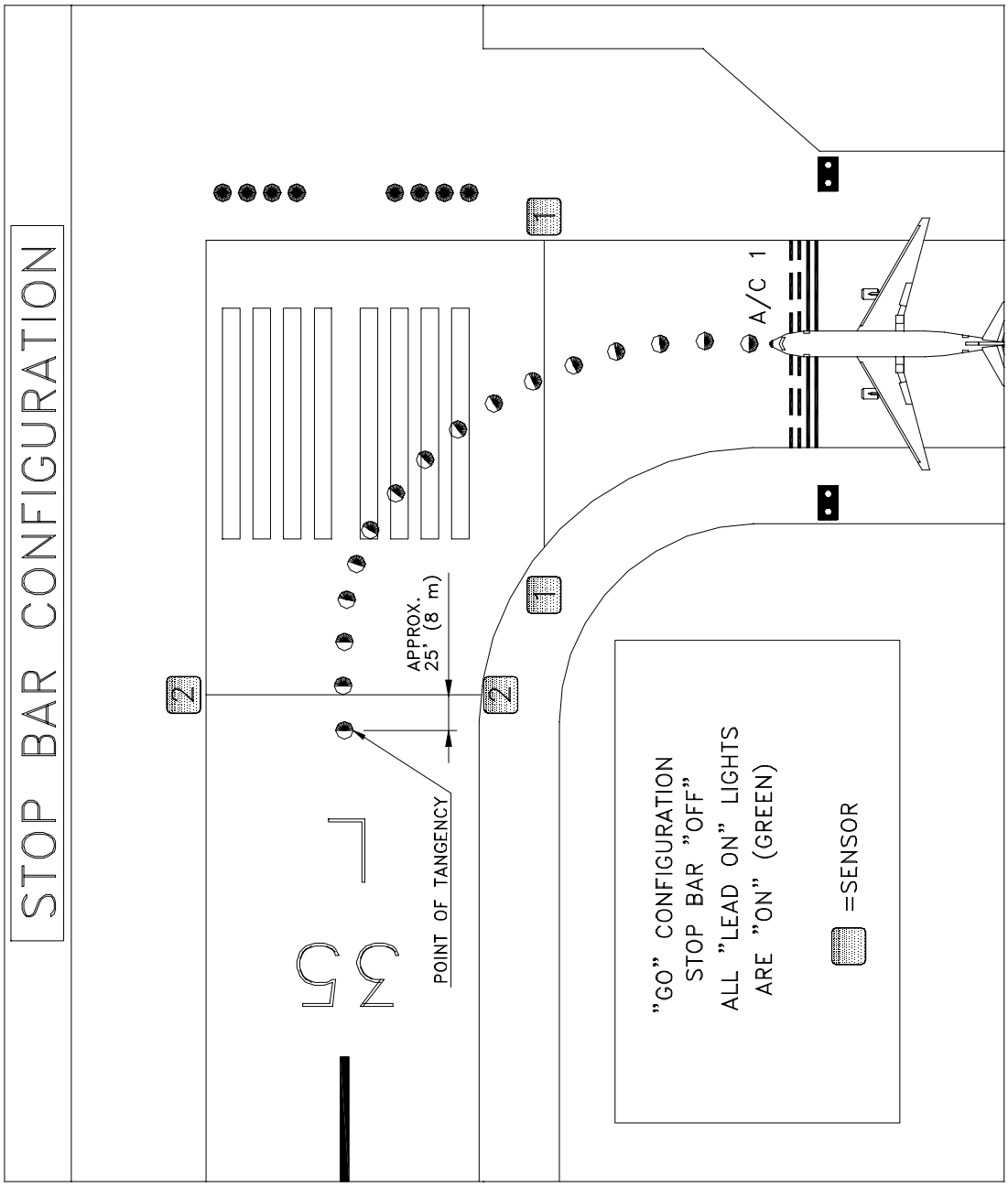


FIGURE 4b. CONTROLLED STOP BAR DESIGN AND OPERATION

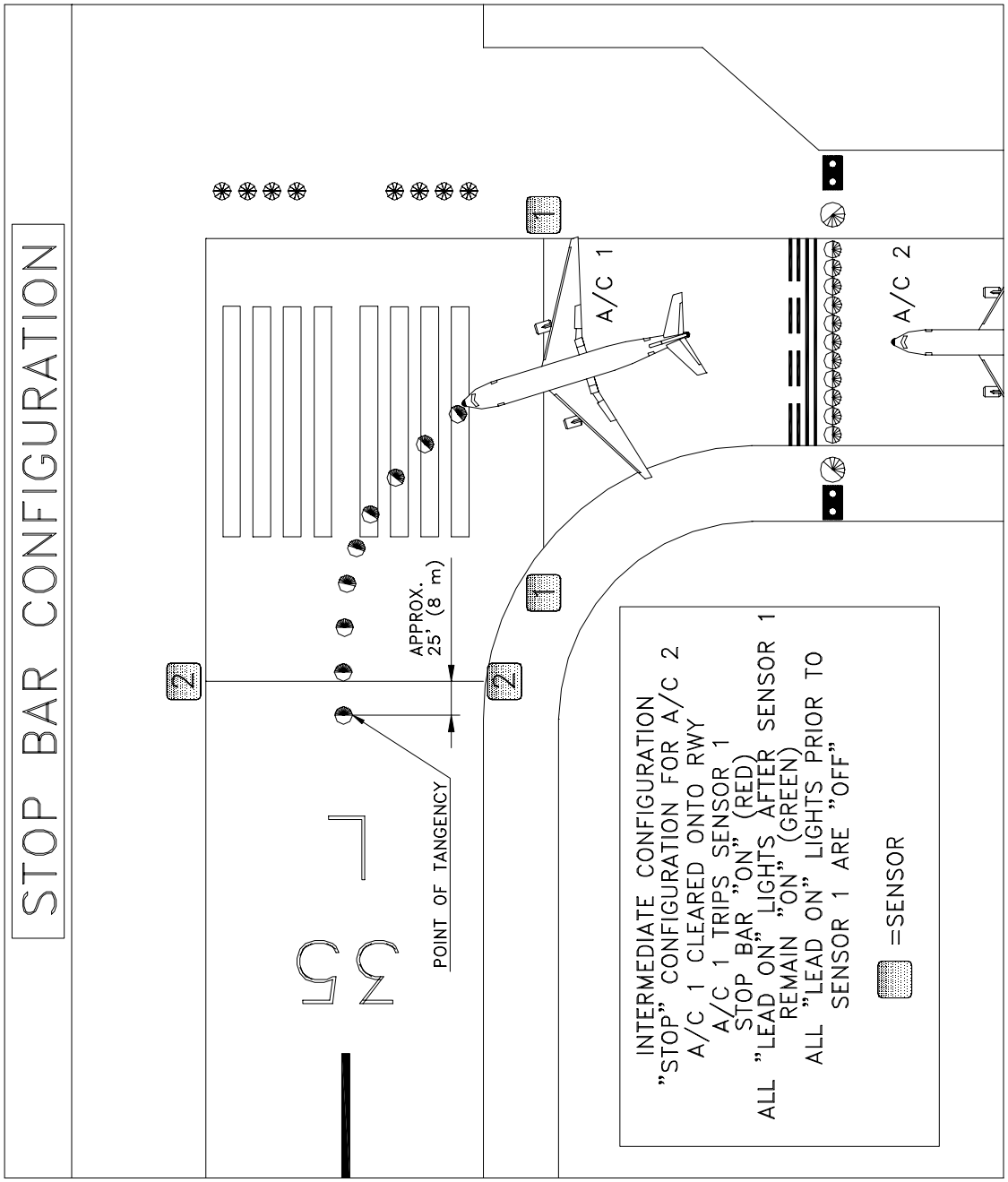


FIGURE 4c. CONTROLLED STOP BAR DESIGN AND OPERATION

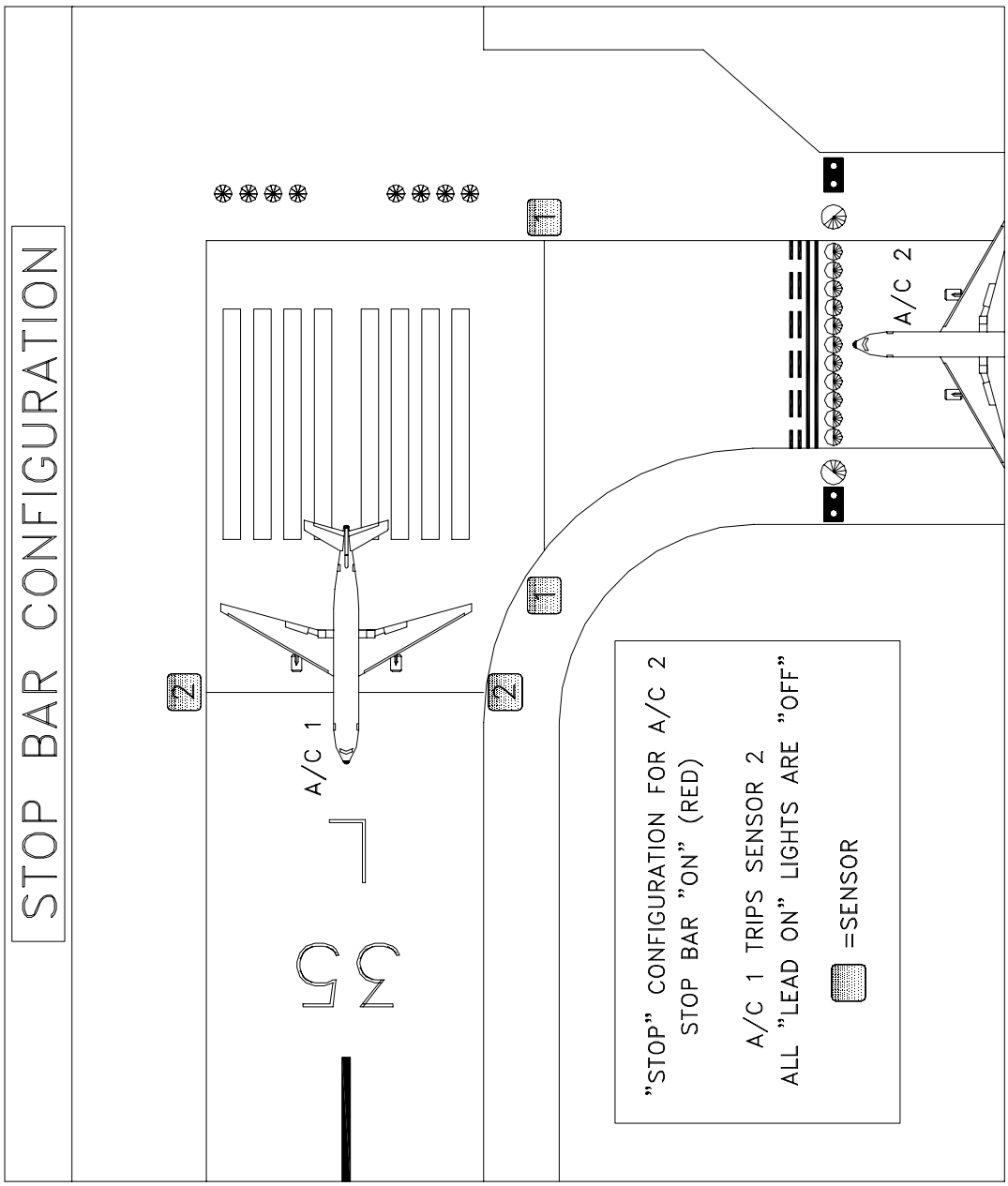
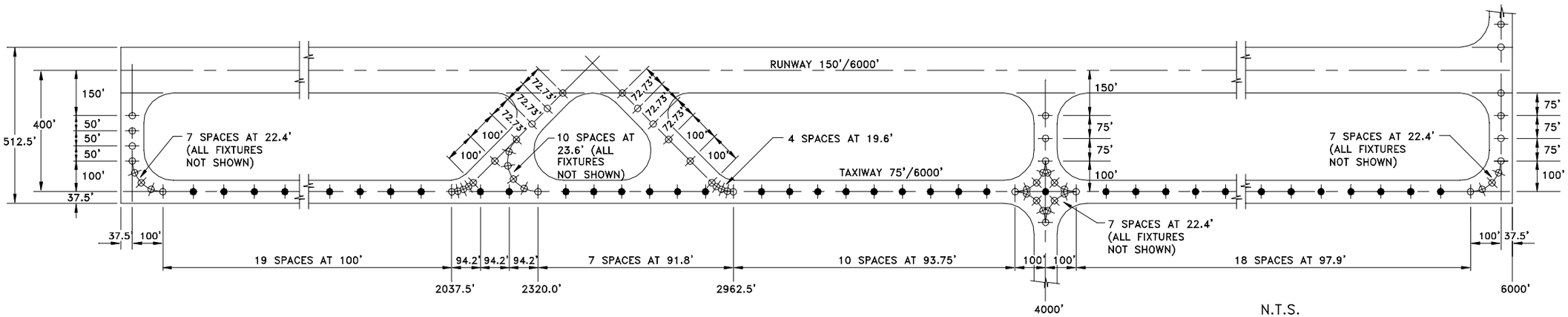


FIGURE 4d. CONTROLLED STOP BAR DESIGN AND OPERATION



LEGEND

● L-852A BIDIRECTIONAL GREEN-GREEN

○ L-852B BIDIRECTIONAL GREEN-GREEN

NOTES

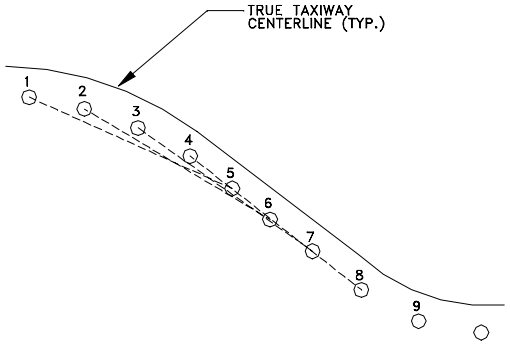
1. RUNWAY AND TAXIWAY FILLETS ARE IN ACCORDANCE WITH AC 150/5300-13.

2. LONGITUDINAL SPACING OF LIGHTS SPECIFIED IN PARAGRAPH 3C OF THIS CIRCULAR WAS ADHERED TO AS CLOSELY AS POSSIBLE.

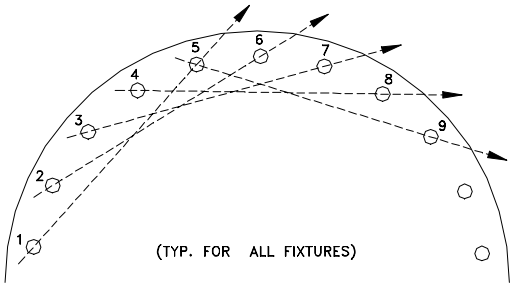
3. ORIENTATION OF THE LIGHT BEAMS SHOULD BE AS SPECIFIED IN PARAGRAPHS 3I(1) AND 3I(2).

4. THE METRIC EQUIVALENT (IN METERS) MAY BE FOUND BY DIVIDING FEET BY 3.281.

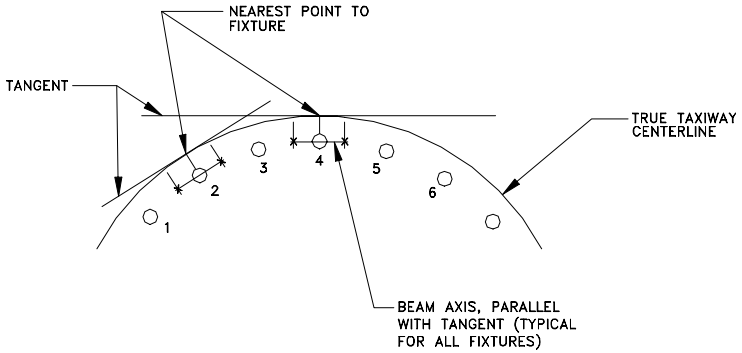
FIGURE 5. TYPICAL TAXIWAY CENTERLINE LIGHTING CONFIGURATION FOR STANDARD FILLETS
(Centerline light spacing for operations above 1,200 feet (365 m) RVR)



UNIDIRECTIONAL LIGHT ON SPIRAL CURVE



UNIDIRECTIONAL LIGHT ON CIRCULAR CURVE



BIDIRECTIONAL LIGHT ON CIRCULAR CURVE

NOTES:

1. FOR BIDIRECTIONAL LIGHTS, THE AXIS OF THE TWO BEAMS SHALL BE ORIENTED PARALLEL TO THE TANGENT OF THE NEAREST POINT OF THE CURVE DESIGNATED AS THE TRUE CENTERLINE OF THE TAXING PATH.

2. FOR UNIDIRECTIONAL LIGHTS, THE AXIS OF THE BEAM SHALL BE "TOED IN" TO INTERSECT THE CENTERLINE AT A POINT APPROXIMATELY EQUAL TO FOUR TIMES THE SPACING OF LIGHTS (EVERY FOURTH LIGHT) ON THE CURVE PORTION, AND SUCH SPACING SHALL BE MEASURED ALONG THE CHORD OF THE CURVE.

FIGURE 6. TAXIWAY CENTERLINE LIGHT BEAM ORIENTATION

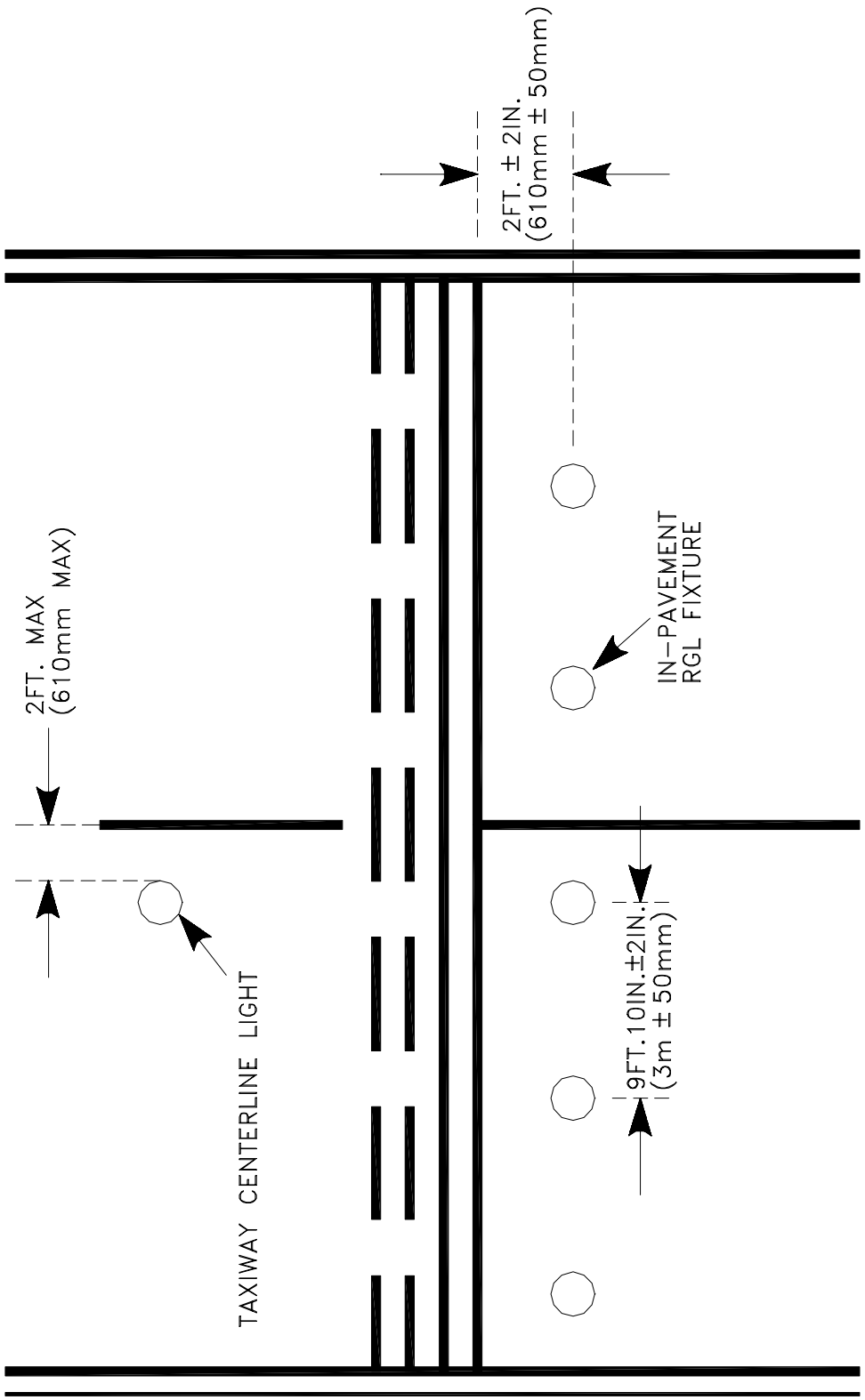


FIGURE 7. IN-PAVEMENT RUNWAY GUARD LIGHT CONFIGURATION

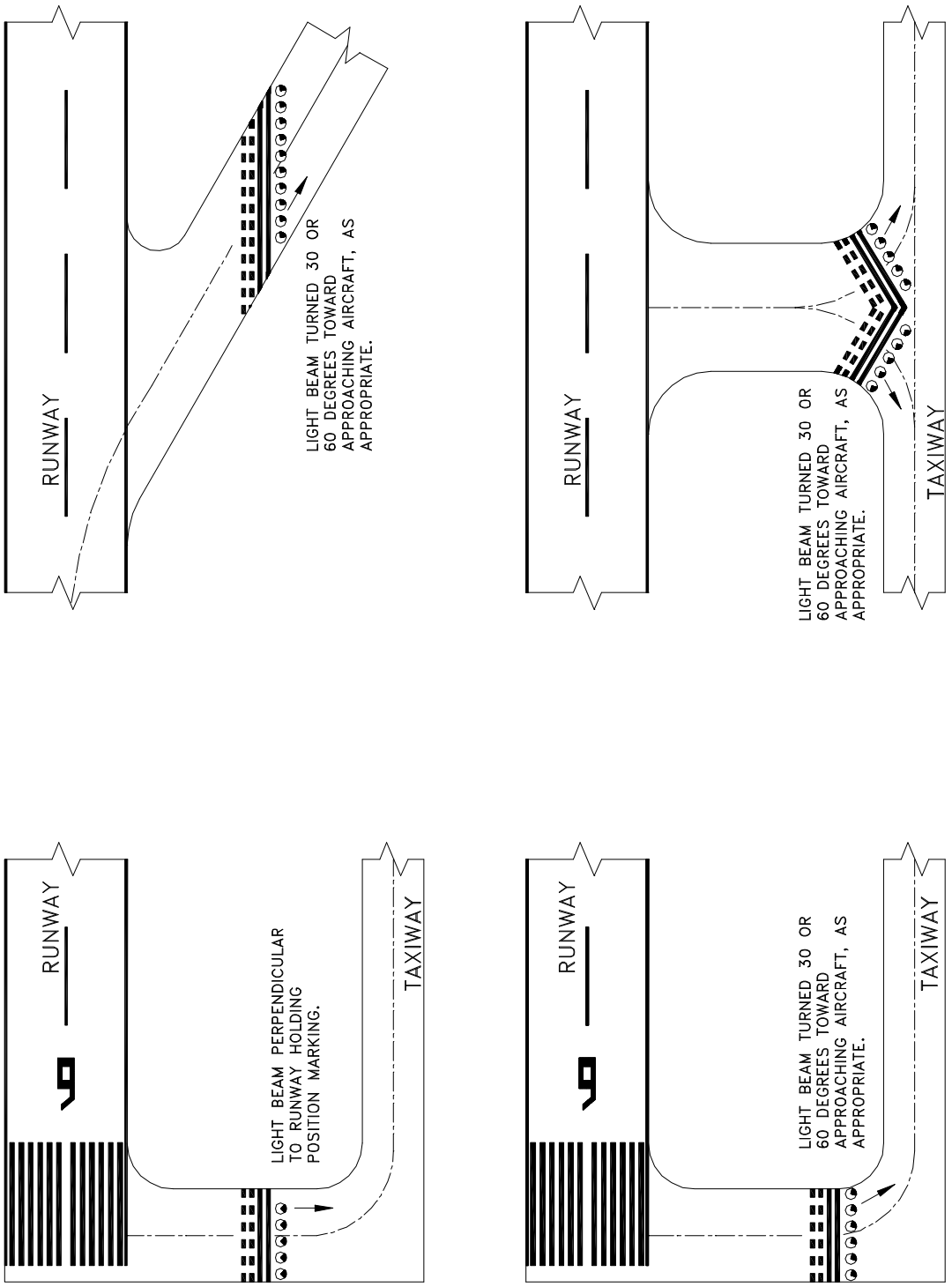
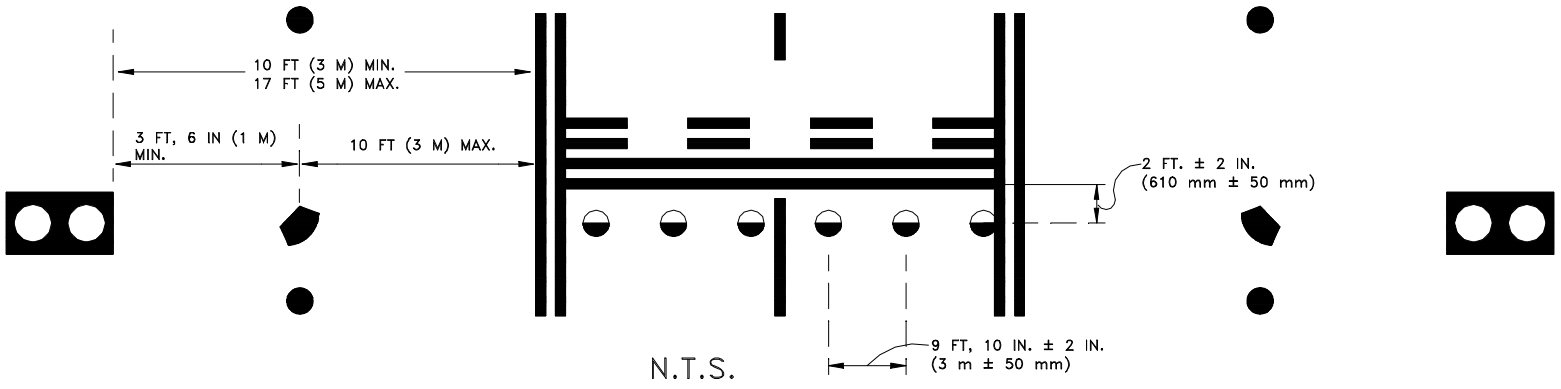


FIGURE 8. TYPICAL LIGHT BEAM ORIENTATION FOR IN-PAVEMENT RGLs AND STOP BARS



LEGEND

- IN–PAVEMENT STOP BAR FIXTURE
- ELEVATED STOP BAR FIXTURE
- TAXIWAY EDGE LIGHT
- ELEVATED RUNWAY GUARD LIGHT

NOTES

1. THE ELEVATED RUNWAY GUARD LIGHT AND ELEVATED STOP BAR MAY BE MOVED UP TO 10 FEET (3 M) MAX. AWAY FROM THE RUNWAY TO AVOID UNDESIRABLE SPOTS.

2. WHERE SNOW REMOVAL OPERATIONS OCCUR, IT IS ADVANTAGEOUS TO INSTALL ELEVATED STOP BAR LIGHTS NOT CLOSER TO THE TAXIWAY EDGE THAN THE LINE OF TAXIWAY EDGE LIGHTS.

FIGURE 9. ELEVATED RGL AND STOP BAR LIGHT CONFIGURATION

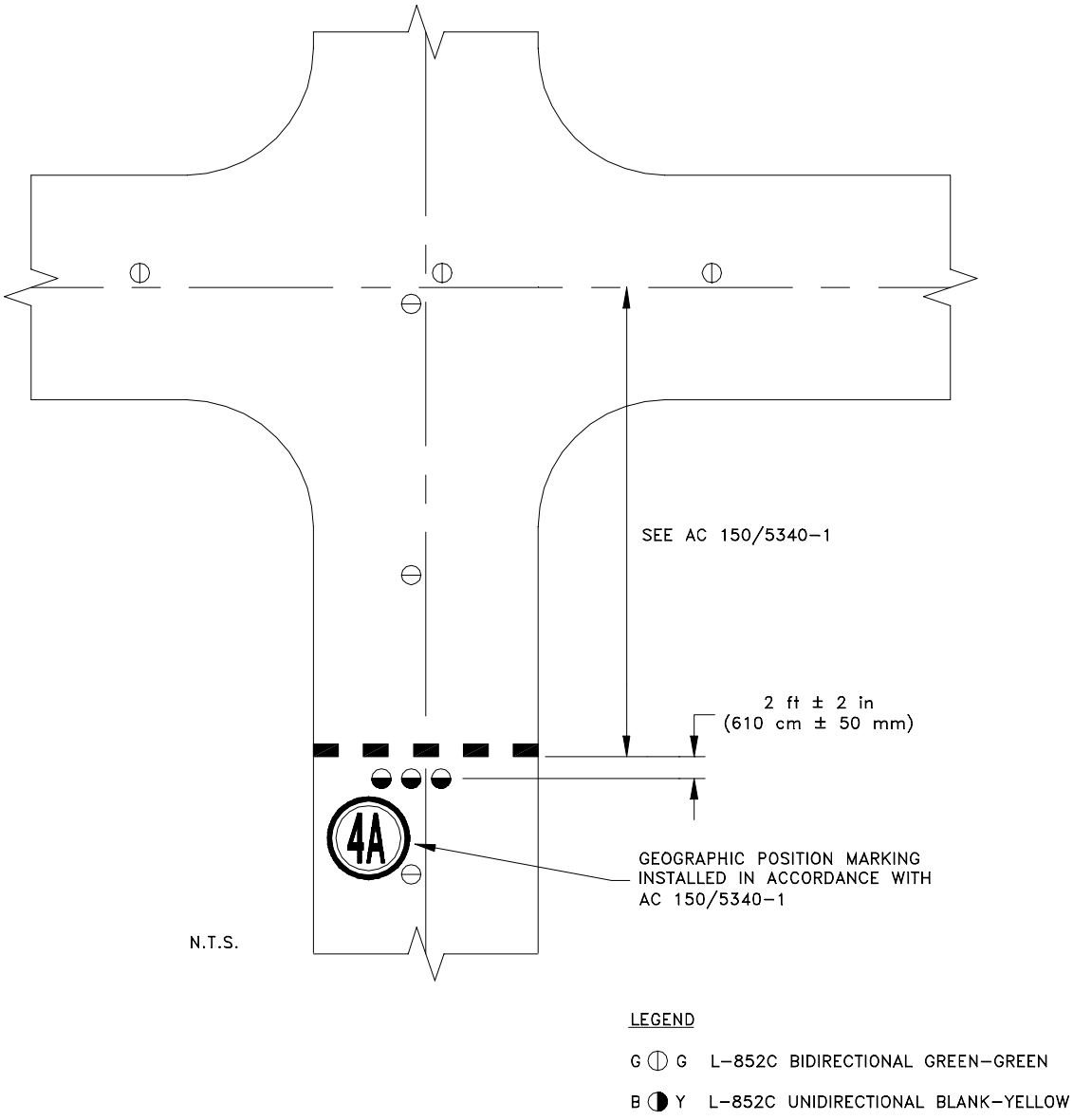
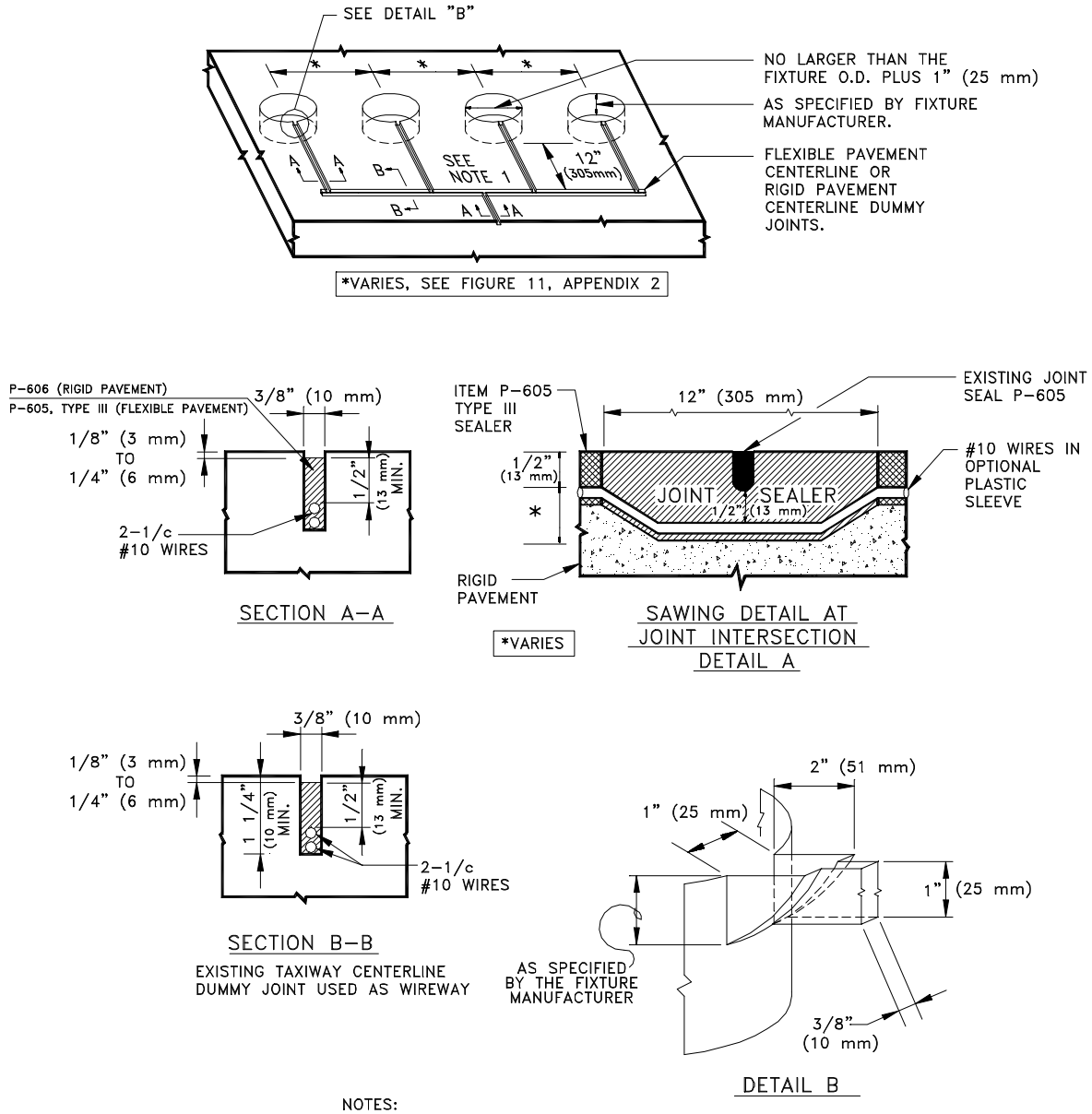


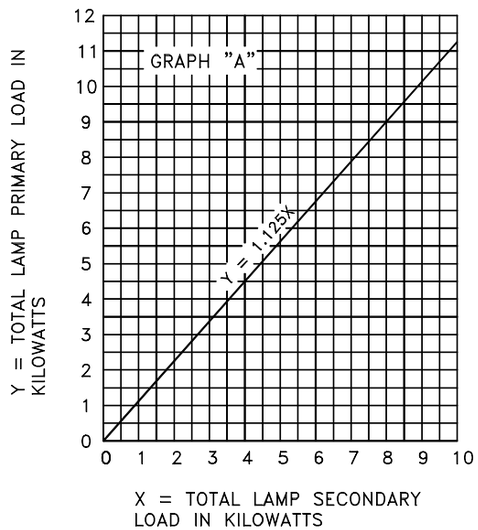
FIGURE 10. CLEARANCE BAR CONFIGURATION AT A LOW VISIBILITY HOLD POINT

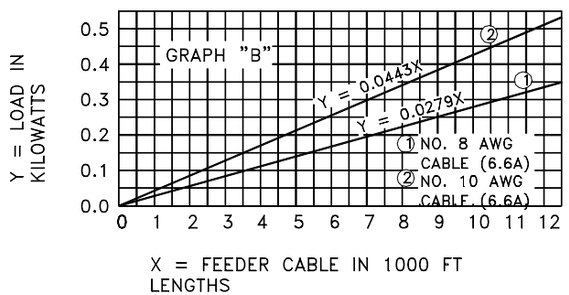


NOTES:

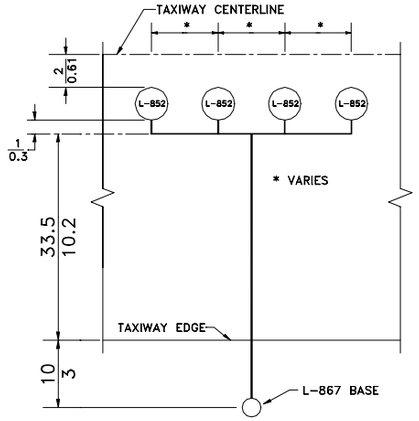
1. WIRES ARE NOT LESS THAN 1/2" (13 mm) BELOW JOINT SEAL COMPOUND.
2. WHEN THERE IS NO EXISTING DUMMY CENTERLINE JOINT SAW LONGITUDINAL WIREWAY IN ACCORDANCE WITH SECTION A-A.
3. DETAIL B IS FOR BASE-MOUNTED FIXTURES ONLY. USE SECTION A-A FOR DIRECT MOUNTED FIXTURES.

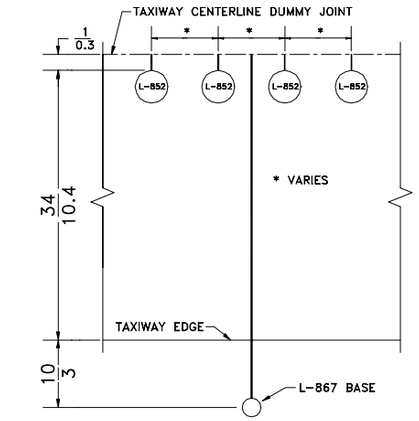
FIGURE 11. SAWING AND DRILLING DETAILS FOR IN-PAVEMENT TAXIWAY CENTERLINE LIGHTS





DIMENSIONS ARE EXPRESSED THUS:
FEET / METERS e.g. 10/3





HOW TO OBTAIN THE 6.6 AMPERE PRIMARY KW LOAD SAMPLE CALCULATIONS

1. Assumption. A taxiway centerline lighting configuration composed of 22 stations of four lights per station spaced longitudinally at 100 feet as shown in Station "A" Flexible Pavement. Ten stations of 65W wide-beam fixtures and twelve stations of 45W narrow-beam fixtures with a cable home-run separation distance of 2,500 feet.

   a. Total Lamp Secondary Watts.

      10 stations x 4 lights/station x 65 watts/fixture = 2,600 watts
      12 stations x 4 lights/station x 45 watts/fixture = 2,160 watts

      Total Lamp Secondary Watts = 4,760 watts

   b. Total Lamp Primary Watts.

      From Graph "A", 4,760 watts total lamp secondary load equals 5.355 KW total lamp primary load.

   c. Total Number feet of 10 AWG Secondary Cable.

      From the configuration shown in Station "A" Flexible Pavement, we have a 300 foot longitudinal saw kerf, four vertical saw kerfs of 1 foot, one vertical saw kerf edge of taxiway pavement to the 300 foot longitudinal saw kerf of 33.5 feet, and a distance of 10 feet from taxiway edge to the L-867 base (transformer housing).

      300 foot longitudinal saw kerf x 2 (number of cables) = 600 feet
      1 foot vertical saw kerf x 4 (number of saw kerfs) x 2 (number of cables) = 8 feet
      33.5 foot vertical saw kerf x 1 (number of saw kerfs) x 2 (number of cables) = 67 feet
      10 feet taxiway edge to L-867 base x 1 (number of runs) x 2 (number of cables) = 20 feet

      Total number of feet of Number 10 AWG cable used per station = 695 feet

      695 feet Number 10 AWG cable per station x 22 stations = 15,290 feet total secondary cable.

   d. Total Number 10 AWG Cable Primary KW Load.

      From Graph "B", 15,290 feet of Number 10 AWG secondary cable equals 0.677 KW primary load.

   e. Total Number Feet Number 8 AWG Primary Cable.

      22 stations, as show in Station "A" Flexible Pavement, has 21 spaces of 400 feet (separation between L-867 bases). Also, we have 2,500 feet home-run separation.

      21 spaces x 400 feet separation x 2 (number of cables) = 16,800 feet
      2,500 feet (home-run separation) x 2 (number of cables) = 5,000 feet

      Total number feet of Number 8 AWG primary cable = 21,800 feet

   f. Total Number 8 AWG Cable Primary KW Load.

      From Graph "B", 21,800 feet Number 8 AWG primary cable equals 0.608 KW primary load.

   g. Total 6.6 Ampere Primary KW Load.

      Add total KW loads obtained in paragraphs b, d, and f above.

      Paragraph b. = 5.355 KW
      Paragraph d. = 0.677 KW
      Paragraph f. = 0.608 KW

      Total Primary KW load = 6.640 KW

FIGURE 12. CURVES FOR ESTIMATING PRIMARY LOAD FOR TAXIWAY CENTERLINE LIGHTING SYSTEMS

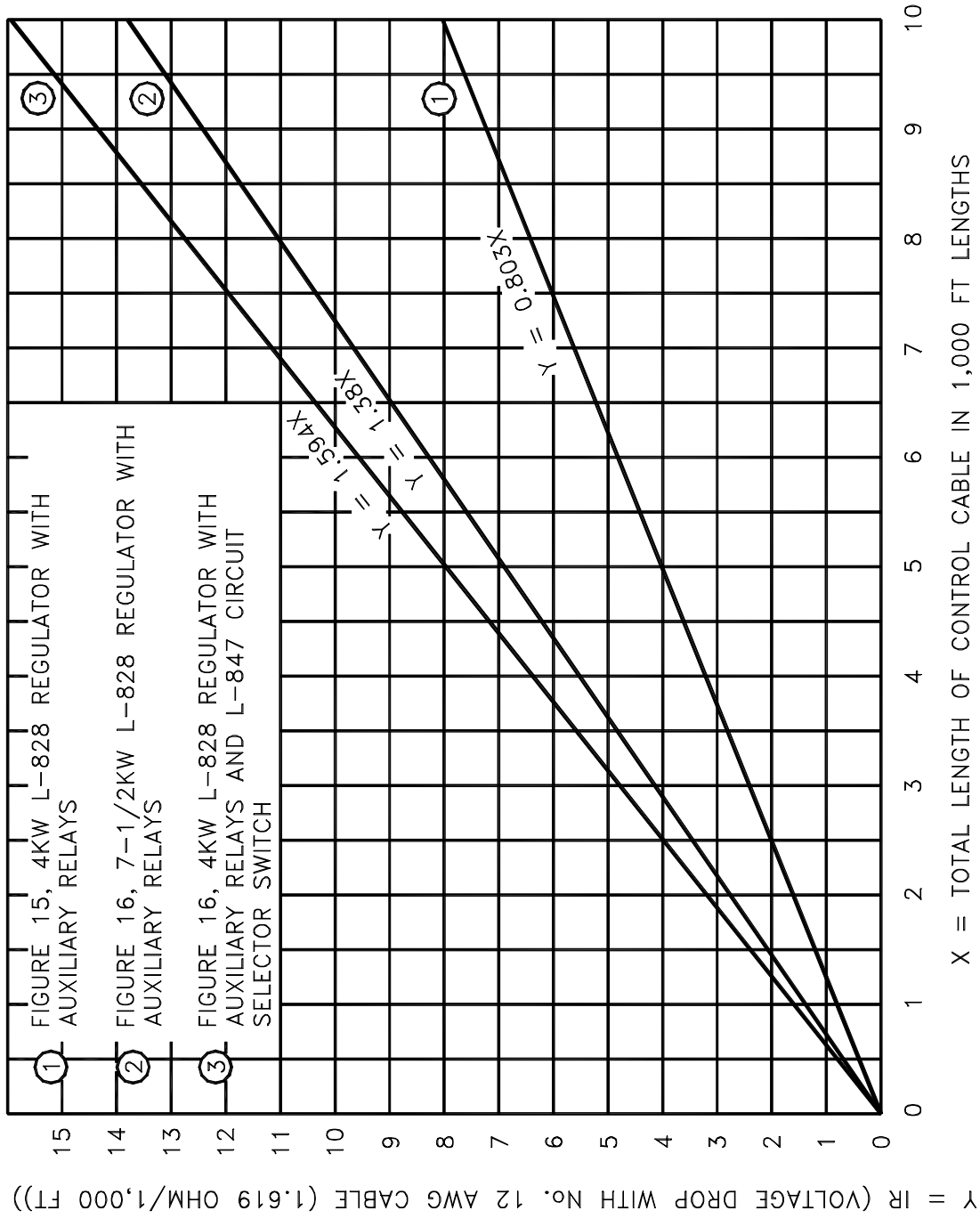
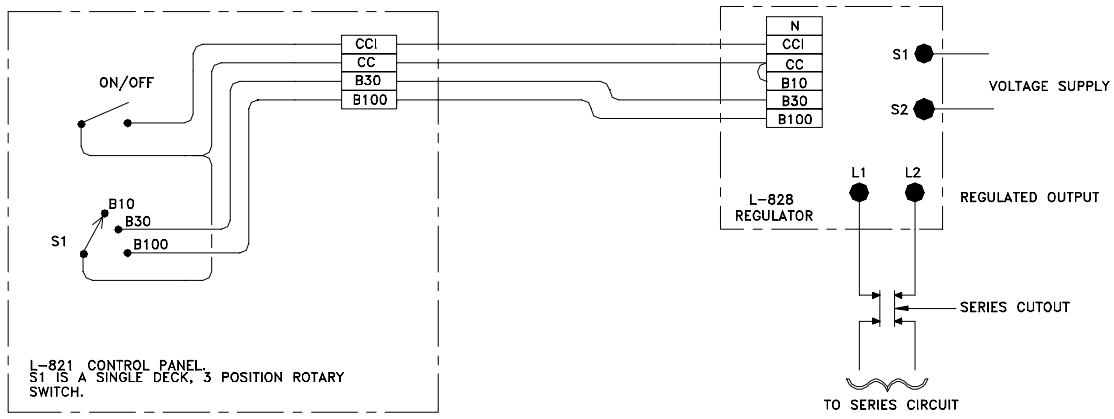
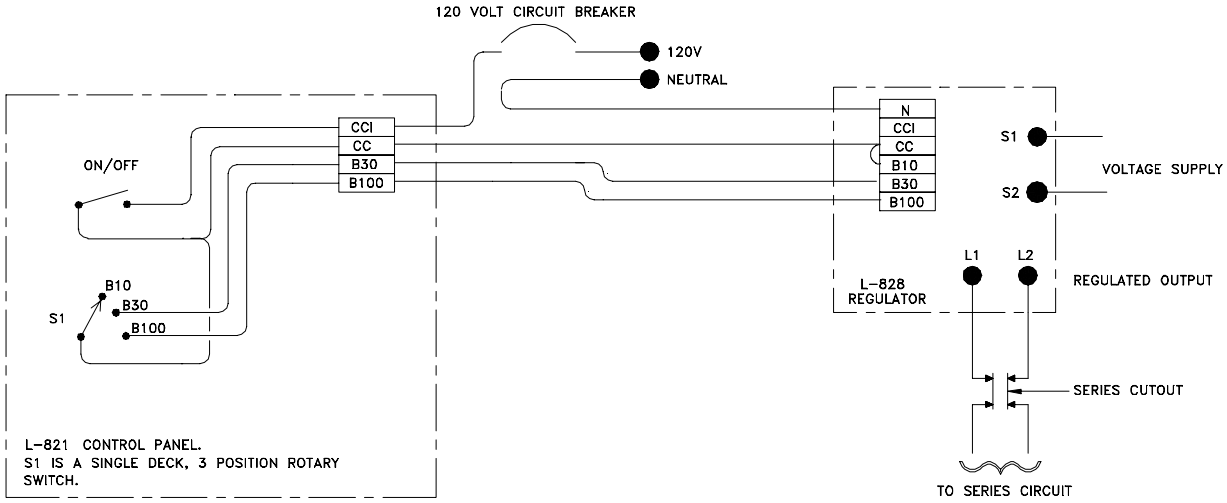


FIGURE 13. CURVES FOR DETERMINING MAXIMUM SEPARATION BETWEEN VAULT AND CONTROL PANEL WITH 120-VOLT AC CONTROL

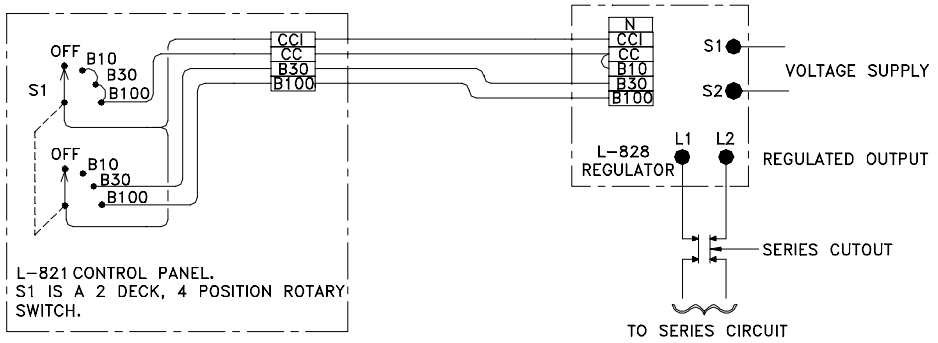


TAXIWAY REGULATOR IN BASIC CONTROL CONFIGURATION USING REGULATOR'S INTERNALLY-SUPPLIED CONTROL VOLTAGE.

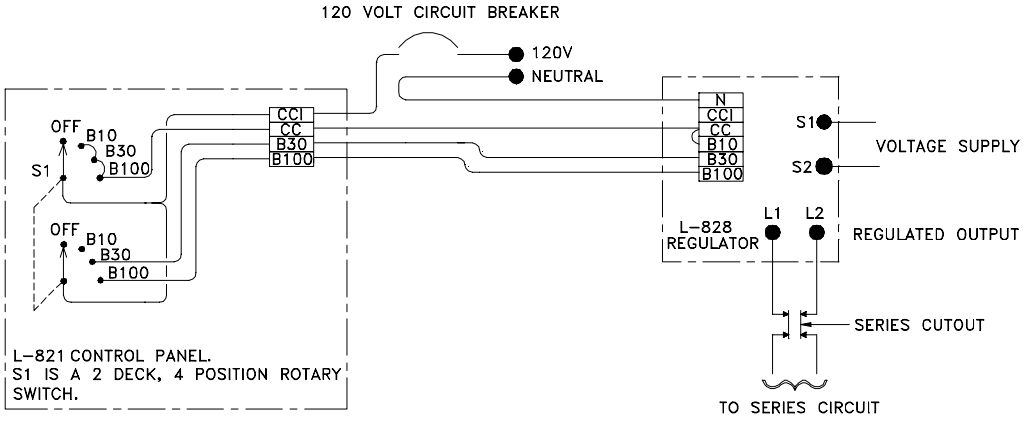


TAXIWAY REGULATOR IN BASIC CONTROL CONFIGURATION USING EXTERNALLY-SUPPLIED CONTROL VOLTAGE.

FIGURE 14. TYPICAL BASIC 120 VAC REMOTE CONTROL SYSTEM



TAXIWAY REGULATOR CONTROL CONFIGURATION USING REGULATOR'S INTERNALLY-SUPPLIED CONTROL VOLTAGE.



TAXIWAY REGULATOR CONTROL CONFIGURATION USING EXTERNALLY-SUPPLIED CONTROL VOLTAGE.

FIGURE 15. ALTERNATIVE 120 VAC REMOTE CONTROL SYSTEM