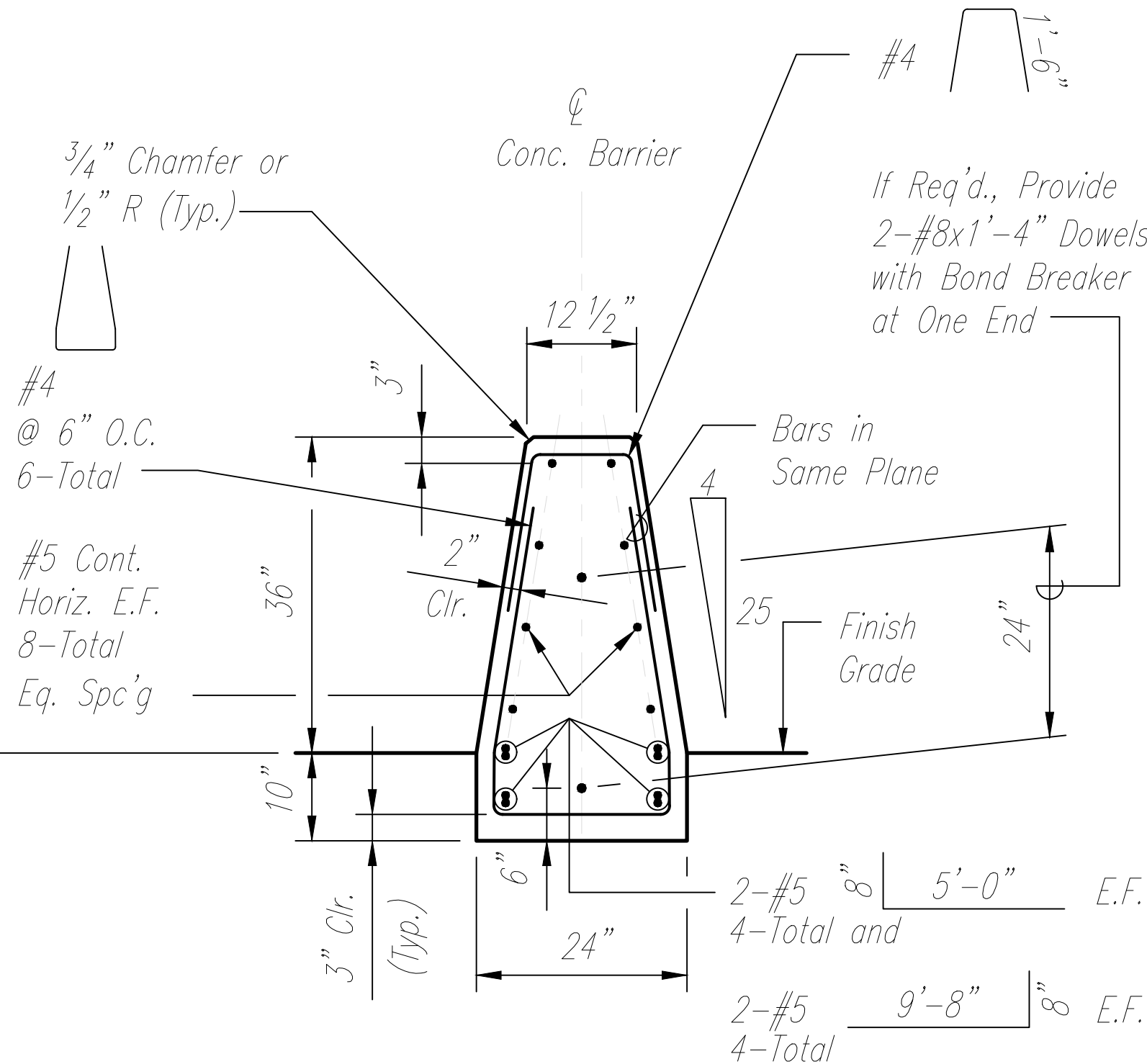
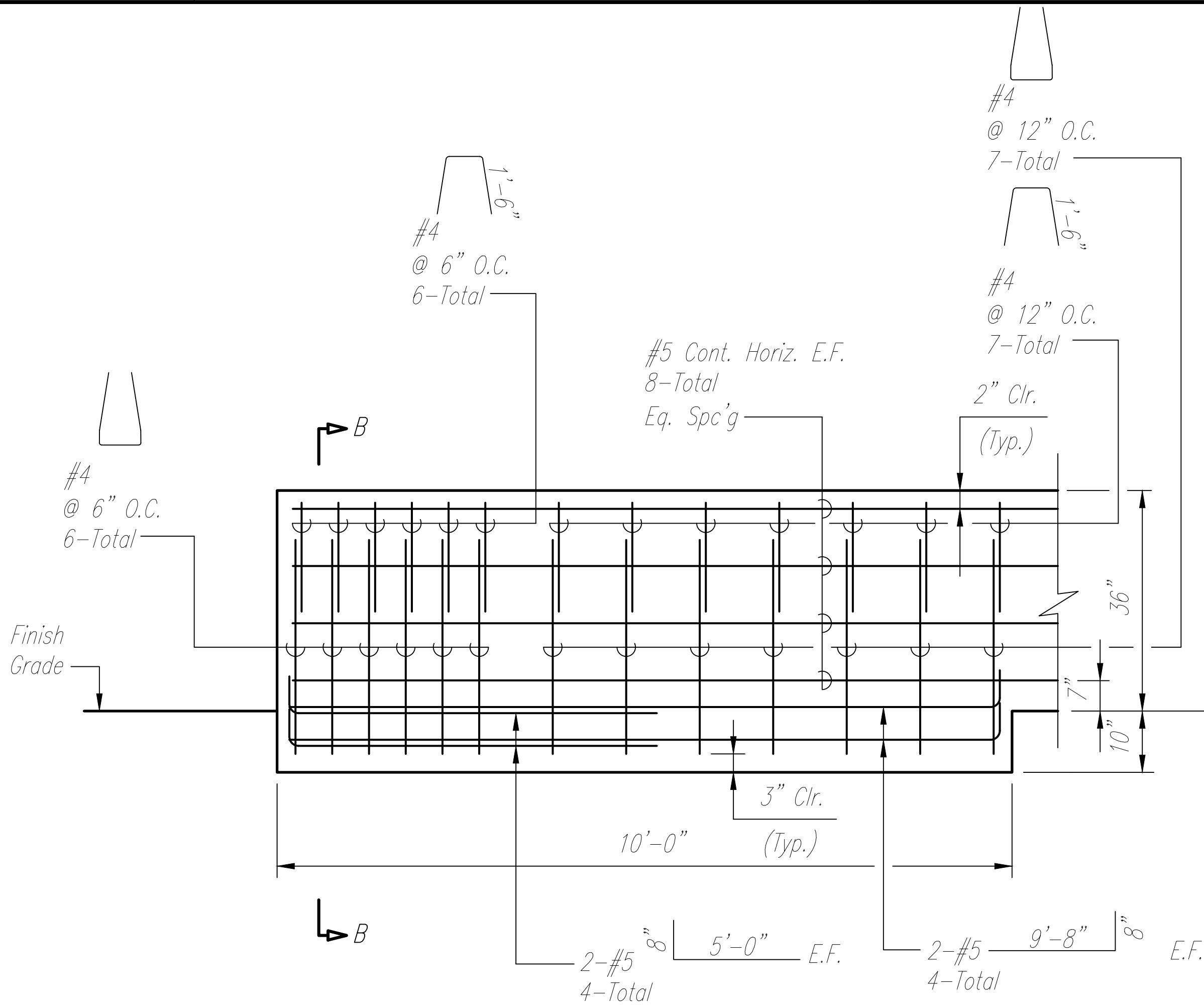


CONCRETE RIGID BARRIER SCHEDULE

| STA. LOCATION | | CONCRETE RIGID BARRIER TYPE |
|---------------|-----------|-------------------------------------|
| FROM | TO | |
| 71+54.30 | 76+45.34 | Type 6A |
| 76+45.34 | 76+60.34 | Transition from Type 6A to Type 4A |
| 78+78.24 | 78+93.24 | Transition from Type 4A to Type 6A |
| 78+93.24 | 85+54.55 | Type 6A |
| 85+69.55 | 88+38.81 | Type 6A |
| 88+38.81 | 88+73.81 | Transition from Type 6A to Type 6GA |
| 88+73.81 | 97+96.27 | Type 6GA |
| 97+96.27 | 98+31.27 | Transition from Type 6GA to Type 6A |
| 98+31.27 | 107+75.31 | Type 6A |
| 107+75.31 | 107+90.31 | Transition from Type 6A to Type 4A |
| 140+35.33 | 143+73.85 | Type 6GA |
| 151+77.11 | 177+70.36 | Type 6A |
| 177+70.36 | 178+05.36 | Transition from Type 6A to Type 6GA |
| 178+05.36 | 186+68.91 | Type 6GA |
| 186+68.91 | 187+03.80 | Transition from Type 6GA to Type 6A |
| 187+03.80 | 187+13.78 | Type 6A |
| 187+13.78 | 187+28.75 | Transition from Type 6A to Type 4A |

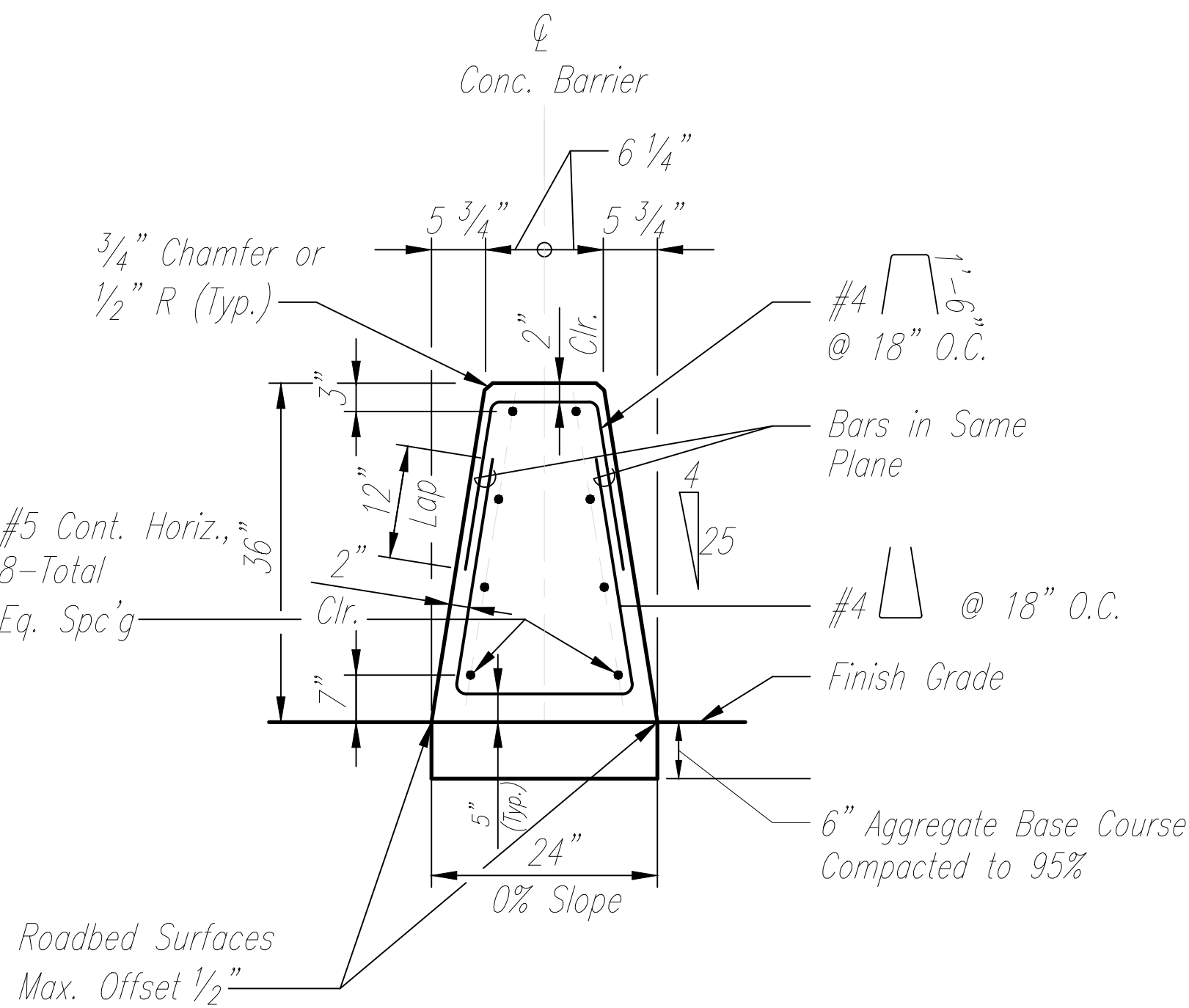


SECTION "B-B"

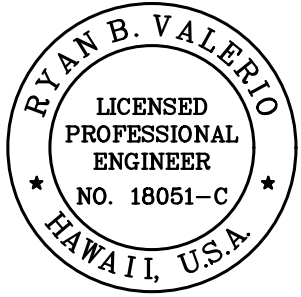
SINGLE SLOPE RIGID BARRIER TYPE 6A END ANCHORAGE
Not to Scale

NOTES:

1. Footing monolithic or doweled with 2-#8x1'-4" @ 2'-0" O.C. The footing is required at single slope rigid barrier ends and at interruptions in rigid barrier.
2. 10" single slope rigid barrier footing extends 10' back from structure.
3. Control point for offset distance located at centerline of concrete barrier.
4. See Roadway Plans for barrier delineation locations.



SINGLE SLOPE RIGID BARRIER TYPE 6A
Not to Scale



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SIGNATURE
R. B. Valero

4/30/24
EXPIRATION DATE
OF LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BARRIER DETAILS - 1

FARRINGTON HIGHWAY
SAFETY IMPROVEMENTS

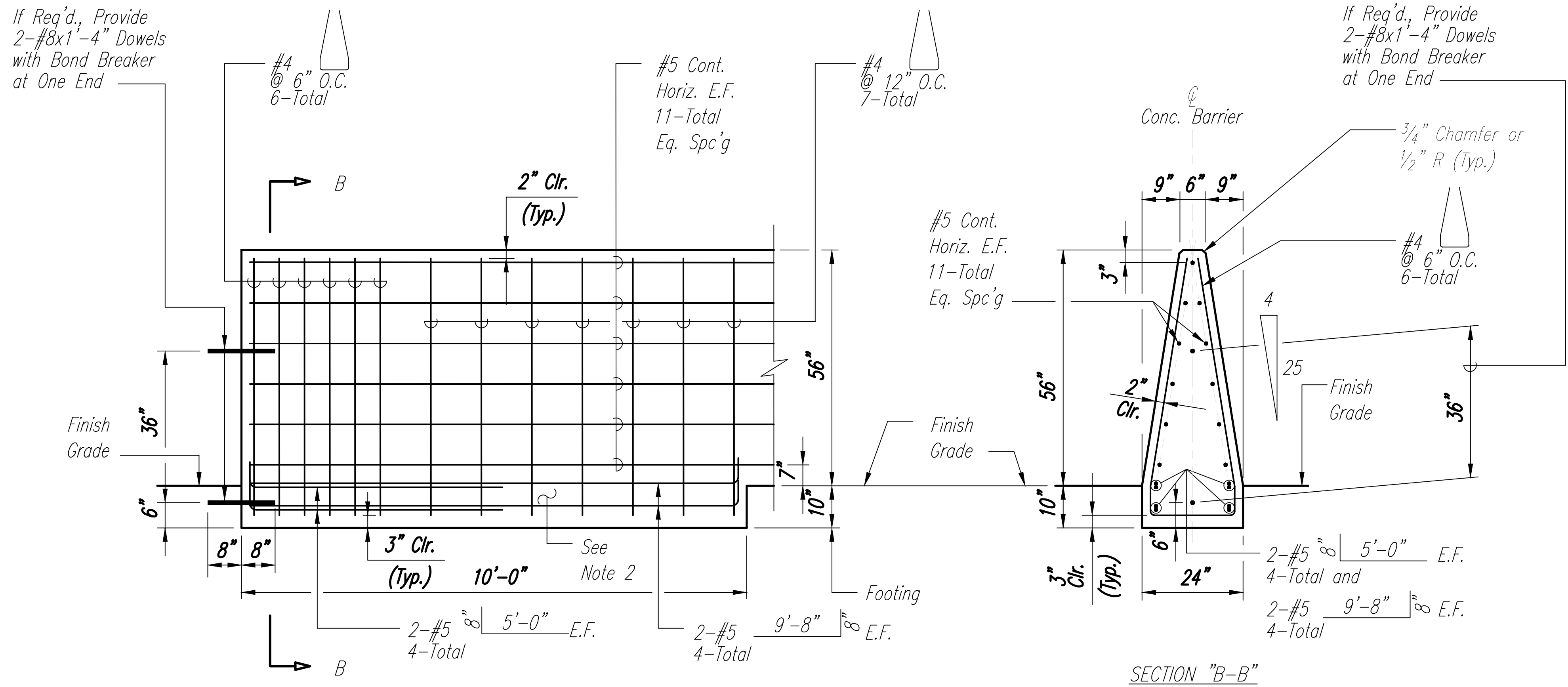
Pohakunui Avenue to Interstate H-1
Federal Aid Project No. HSIP-093-1(031)

Date: November 2021

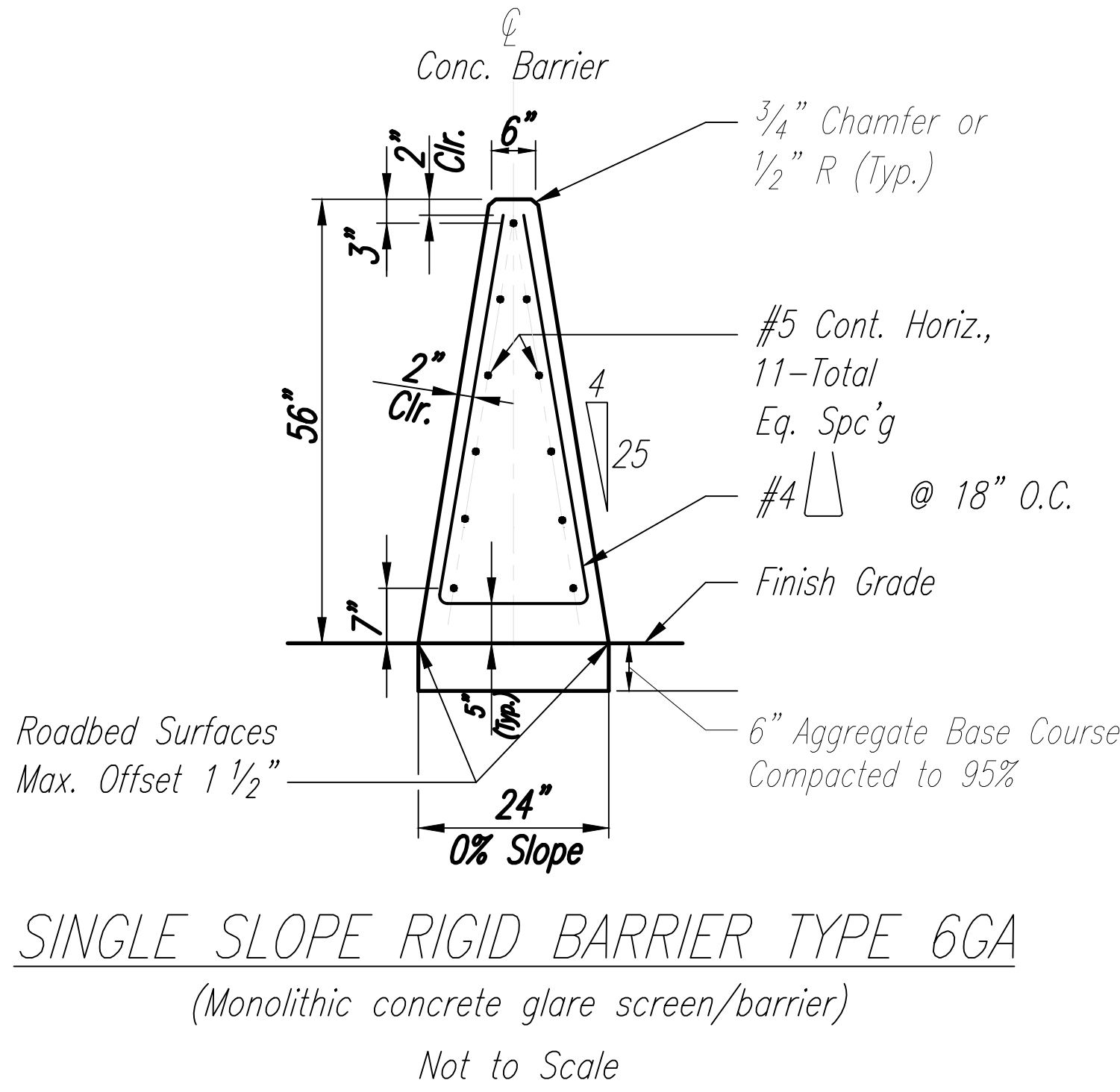
| FED. ROAD DIST. NO. | STATE | FED-AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------------|-------------|-----------|--------------|
| HAWAII | HAW. | HSIP-093-1(031) | 2022 | 40 | 62 |

NOTES:

1. Footing monolithic or doweled with 2-#8x8" @ 2'-0". The footing is required at single slope rigid barrier ends and at interruptions in single slope barrier.
2. Control point for offset distance located at centerline of concrete barrier.
3. See Roadway Plans for barrier delineation locations.



SINGLE SLOPE RIGID BARRIER TYPE 6G
END ANCHORAGE
Not to Scale



SINGLE SLOPE RIGID BARRIER TYPE 6GA
(Monolithic concrete glare screen/barrier)
Not to Scale



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Signature: *R. B. Valero*
Date: 4/30/24

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BARRIER DETAILS - 2
FARRINGTON HIGHWAY
SAFETY IMPROVEMENTS
Pohakunui Avenue to Interstate H-1
Federal Aid Project No. HSIP-093-1(031)
Date: November 2021

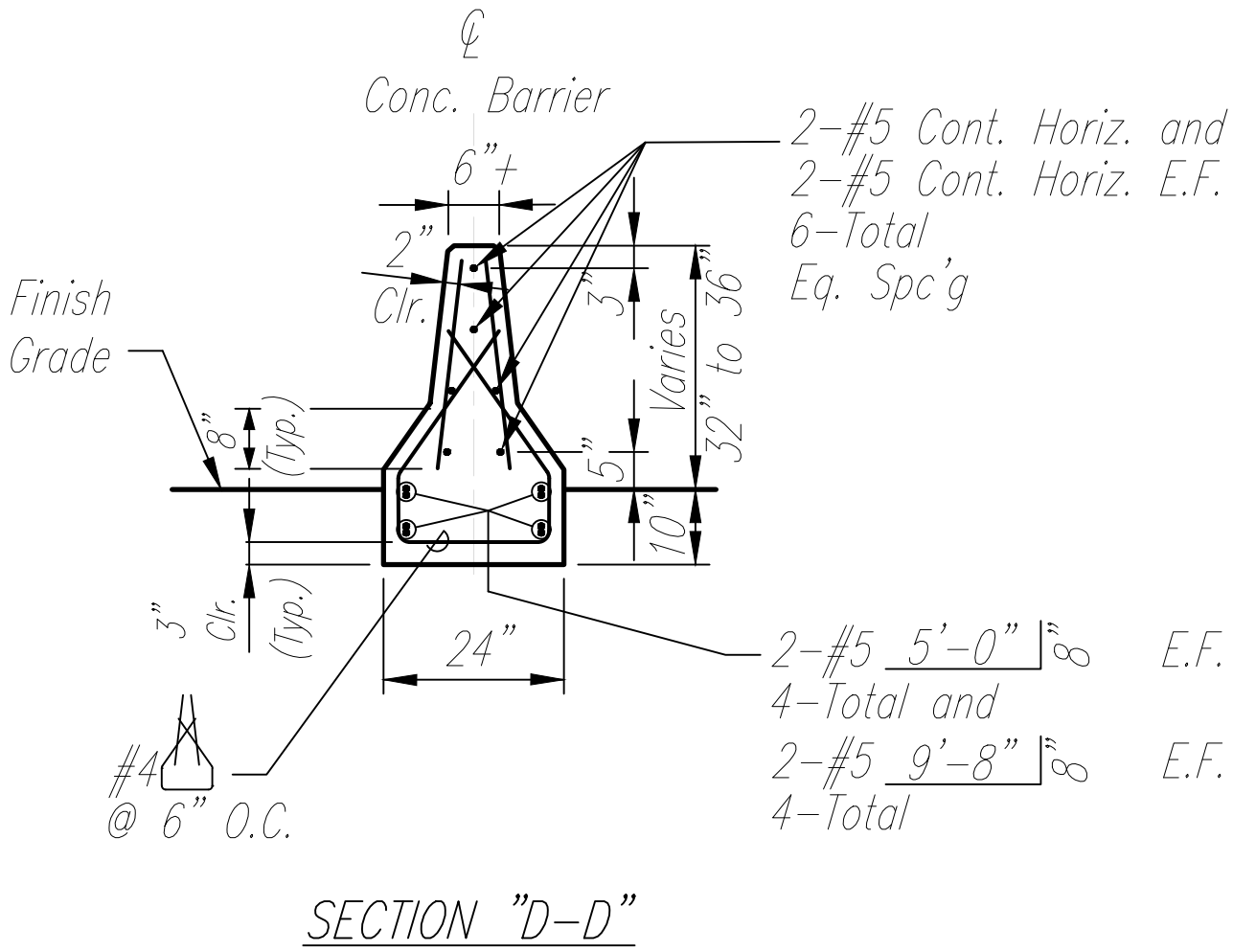
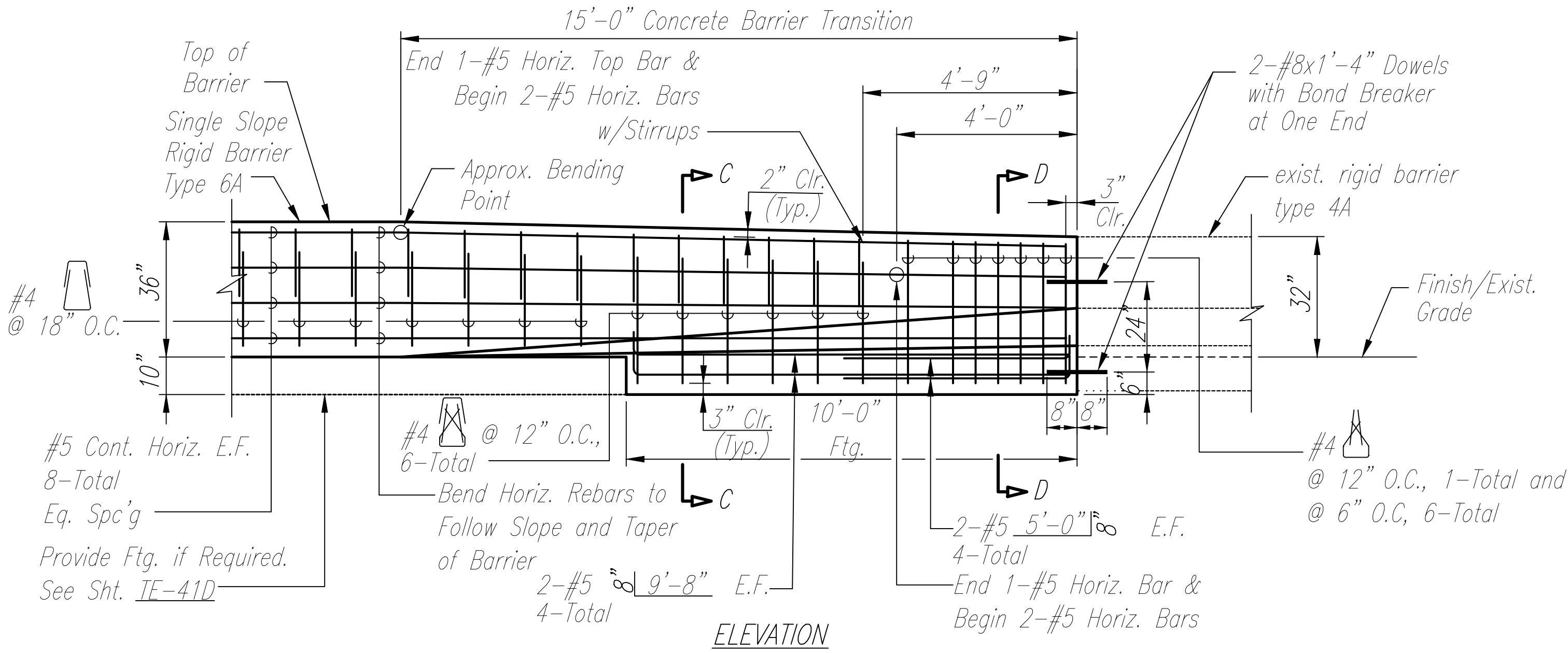
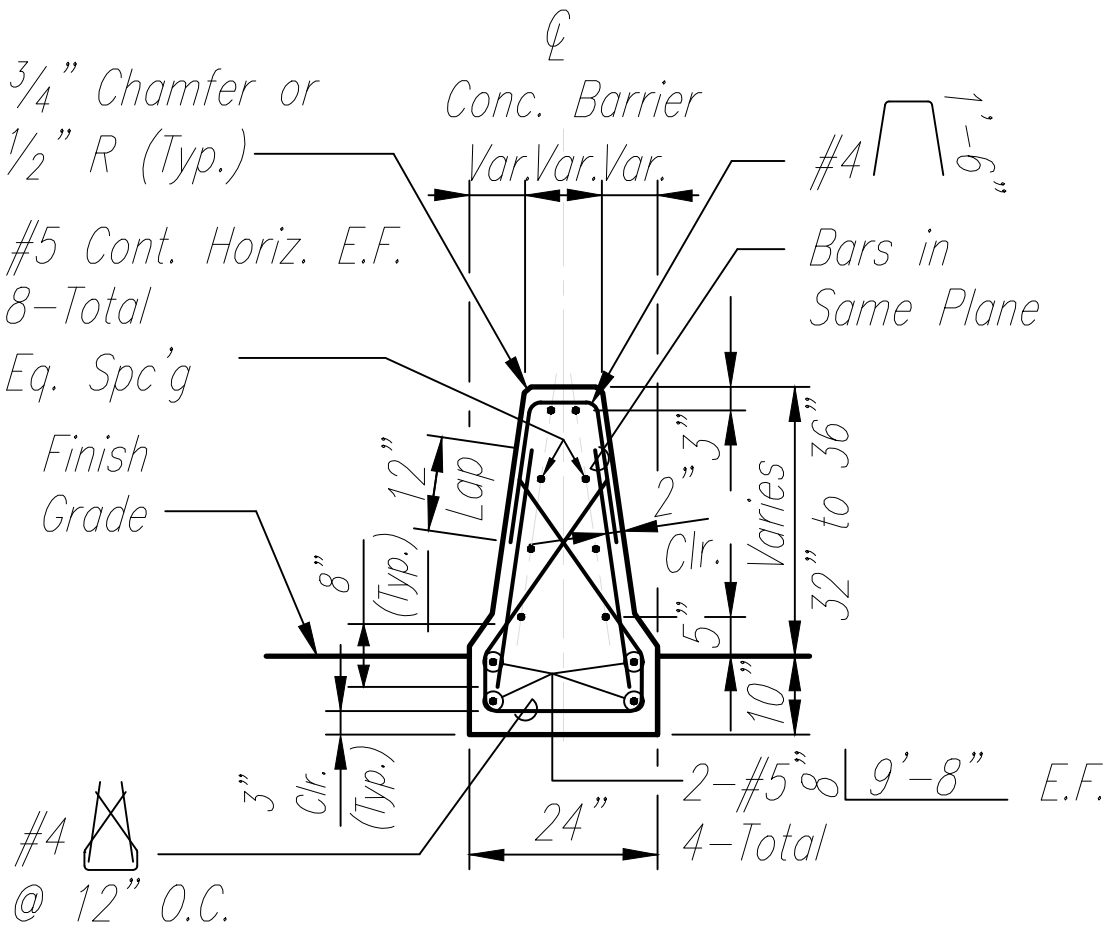
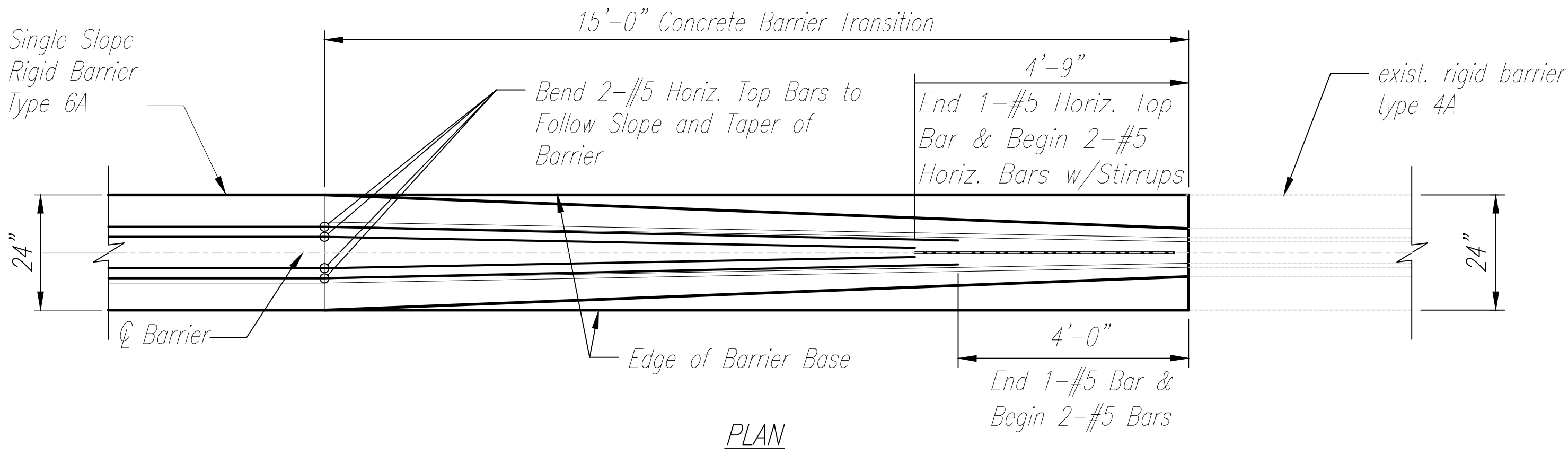
SHEET No. 2 OF 7 SHEETS

| | | |
|---------------|-------------------|------|
| ORIGINAL PLAN | SURVEY PLOTTED BY | DATE |
| NOTE BOOK | DRAWN BY | |
| No. | DESIGNED BY | |
| | QUANTITIES BY | |
| | CHECKED BY | |

| FED. ROAD DIST. NO. | STATE | FED-AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------------|-------------|-----------|--------------|
| HAWAII | HAW. | HSIP-093-1(031) | 2022 | 41 | 62 |

NOTES:

1. Footing monolithic or doweled with 2-#8x1'-4" @ 2'-0" O.C. The footing is required at single slope rigid barrier ends and at interruptions in rigid barrier.
2. 10" single slope rigid barrier footing extends 10' back from structure.



TRANSITION SINGLE SLOPE RIGID BARRIER TYPE 6A
TO RIGID BARRIER TYPE 4A
Not to Scale

| | | |
|---------------|-------------------|------|
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| No. | DESIGNED BY | |
| | QUANTITIES BY | |
| | CHECKED BY | |



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R. B. Valero
SIGNATURE

4/30/24
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OF LICENSE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BARRIER DETAILS - 3
FARRINGTON HIGHWAY
SAFETY IMPROVEMENTS
Pohakunui Avenue to Interstate H-1
Federal Aid Project No. HSIP-093-1(031)

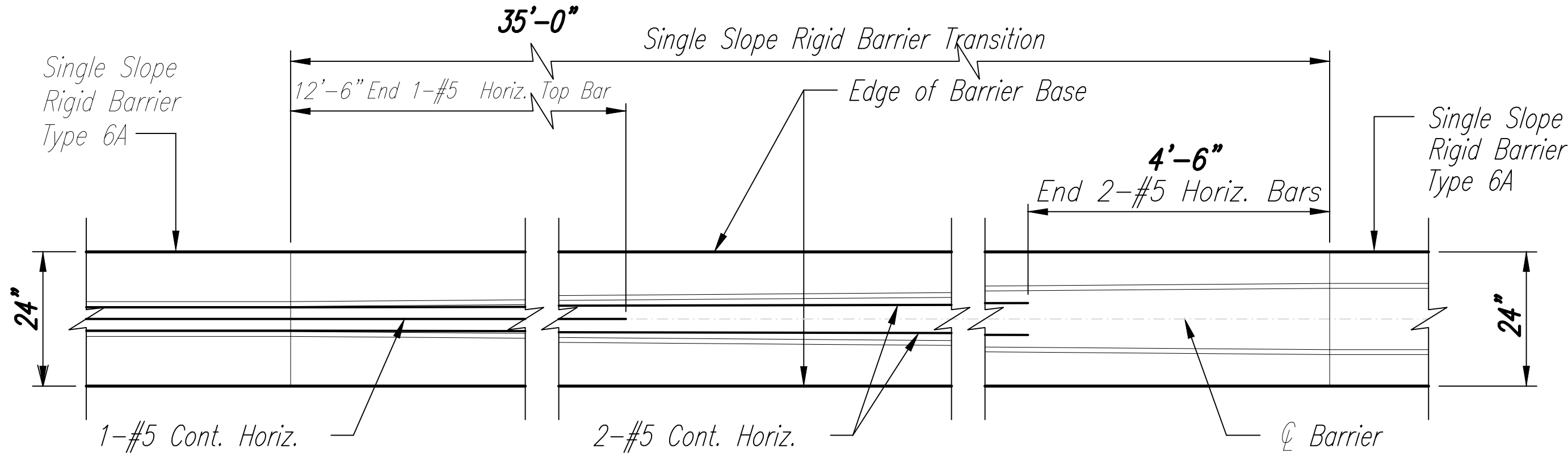
Date: November 2021

SHEET No. 3 OF 7 SHEETS

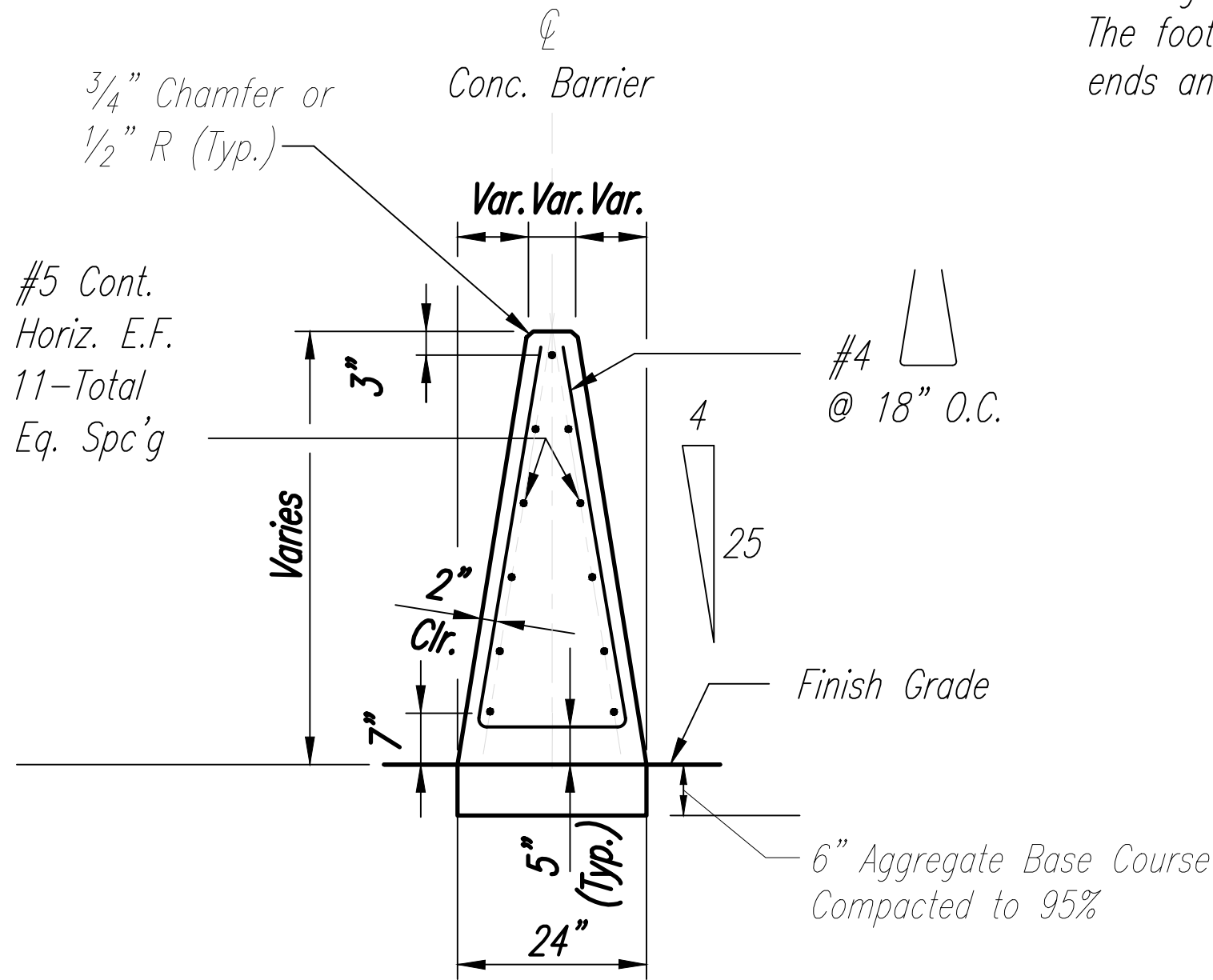
| FED. ROAD DIST. NO. | STATE | FED-AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------------|-------------|-----------|--------------|
| HAWAII | HAW. | HSIP-093-1(031) | 2022 | 42 | 62 |

NOTE:

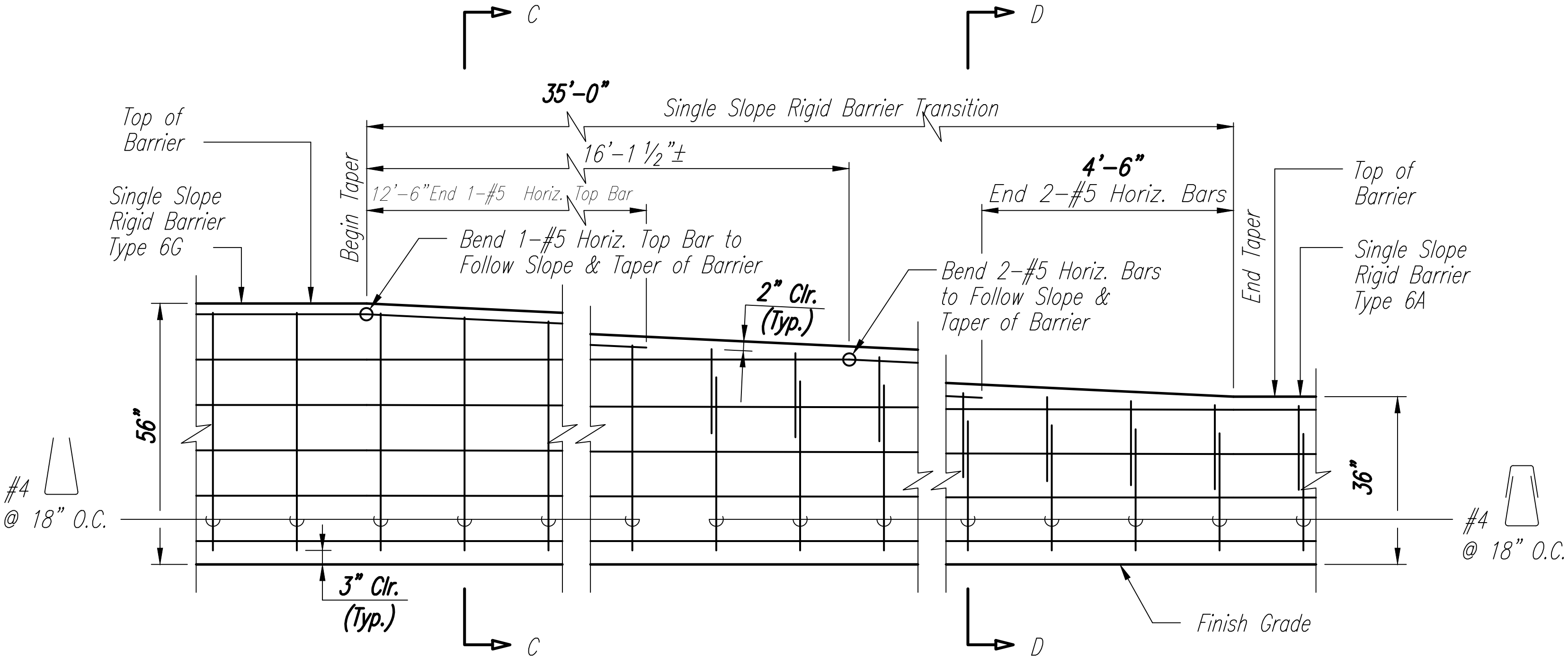
1. Footing monolithic or doweled with 2-#8x8" @ 2'-0. The footing is required at single slope rigid barrier ends and at interruptions in single slope barrier.



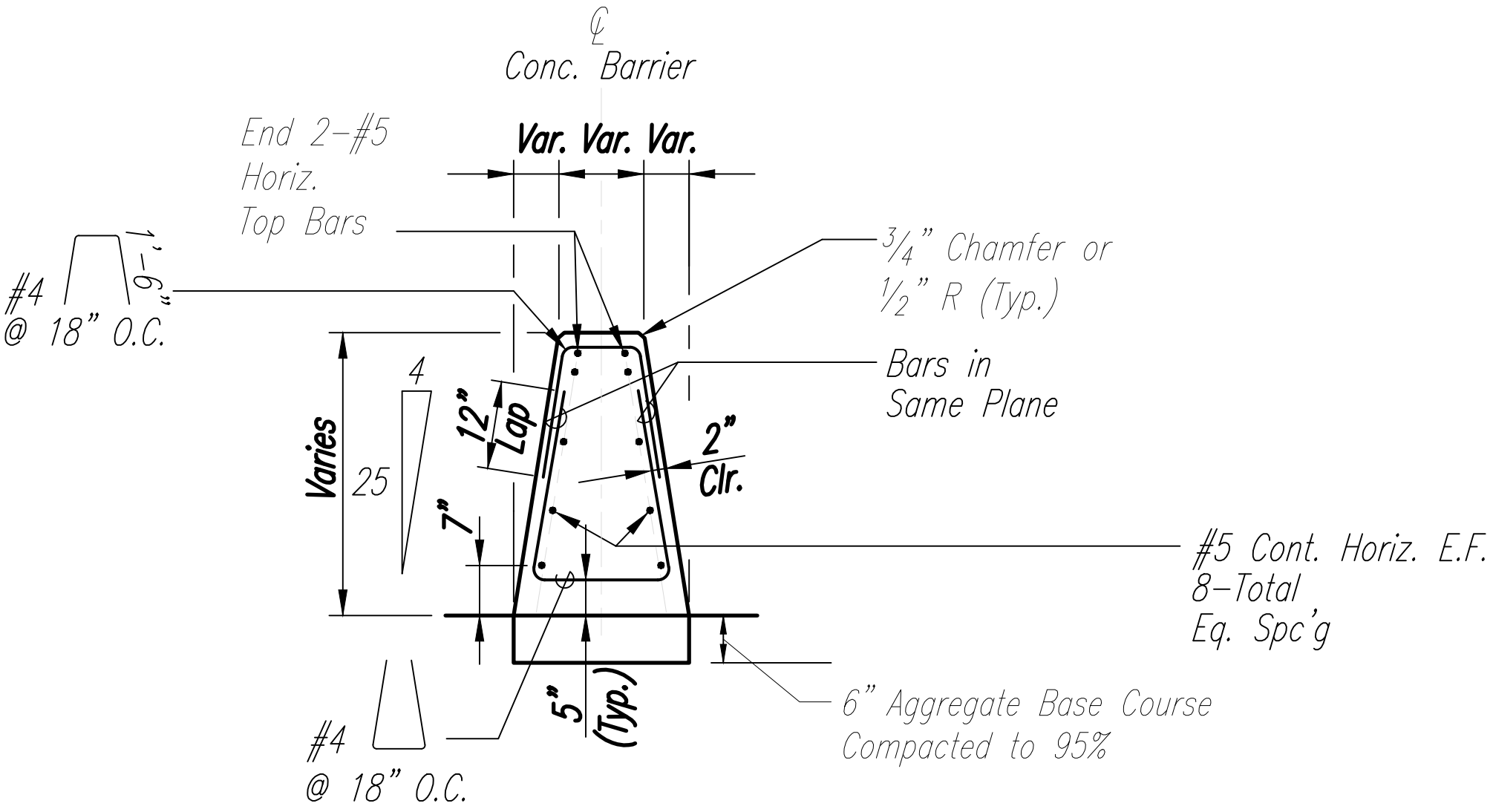
PLAN



SECTION "C-C"



ELEVATION



SECTION "D-D"

TRANSITION SINGLE SLOPE RIGID BARRIER TYPE 6G
TO CONCRETE BARRIER TYPE 6A

Not to Scale

| | | |
|---------------|-------------------|------|
| ORIGINAL PLAN | SURVEY PLOTTED BY | DATE |
| NOTE BOOK | DRAWN BY | |
| | DESIGNED BY | |
| | QUANTITIES BY | |
| | CHECKED BY | |



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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BARRIER DETAILS - 4

**FARRINGTON HIGHWAY
SAFETY IMPROVEMENTS**

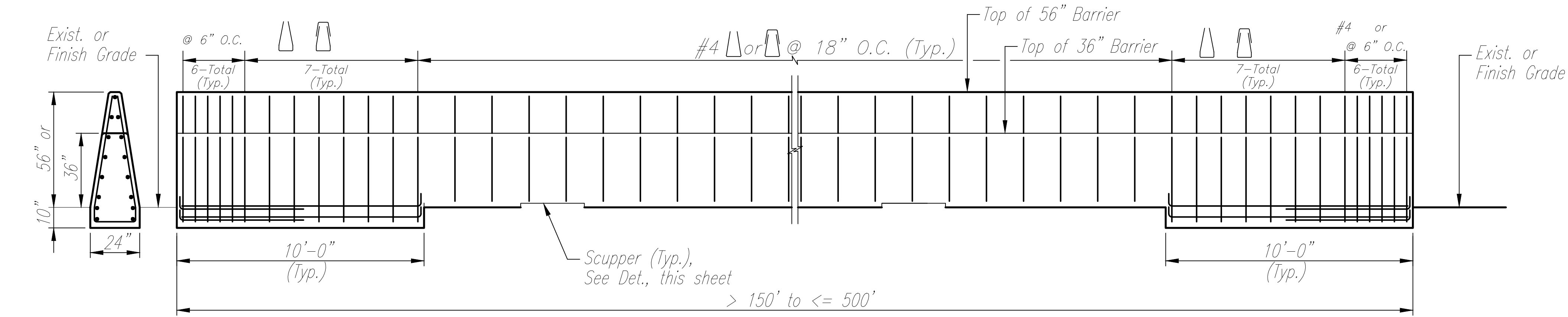
**Pohakunui Avenue to Interstate H-1
Federal Aid Project No. HSIP-093-1(031)**

Date: November 2021

| FED. ROAD DIST. NO. | STATE | FED-AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------------|-------------|-----------|--------------|
| HAWAII | HAW. | HSIP-093-1(031) | 2022 | 43 | 62 |

NOTES:

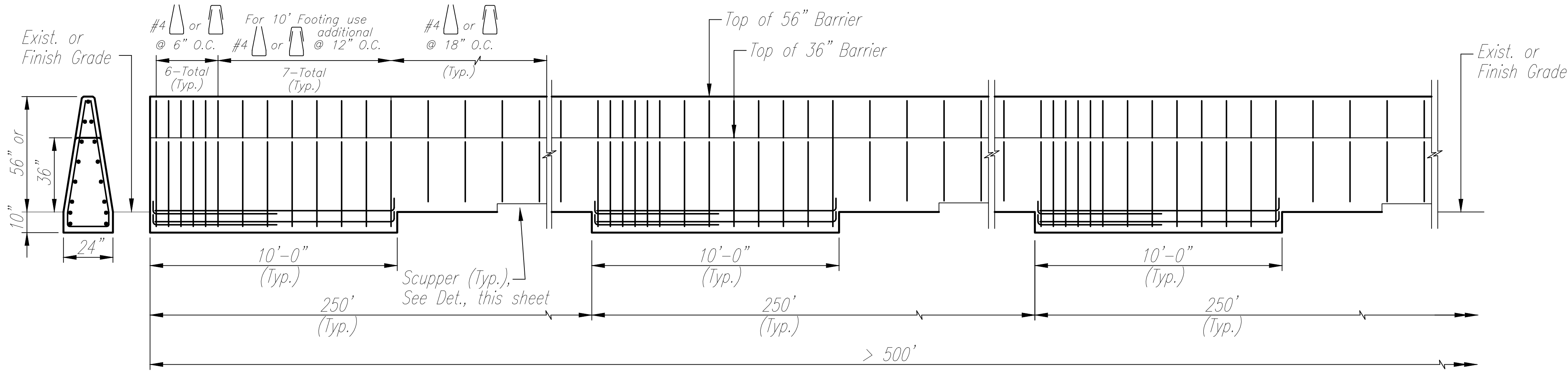
1. Refer to Barrier Details 1-4 for horizontal steel reinforcement details.
2. Construct footing entire length of concrete barrier.
3. 10" footing shall be monolithic with the concrete barrier.
4. When concrete guardrail length is greater than 500 feet, place monolithic 10'x10" footing every 250'.
5. Concrete barrier shall not be placed within 3-feet of fill slope.



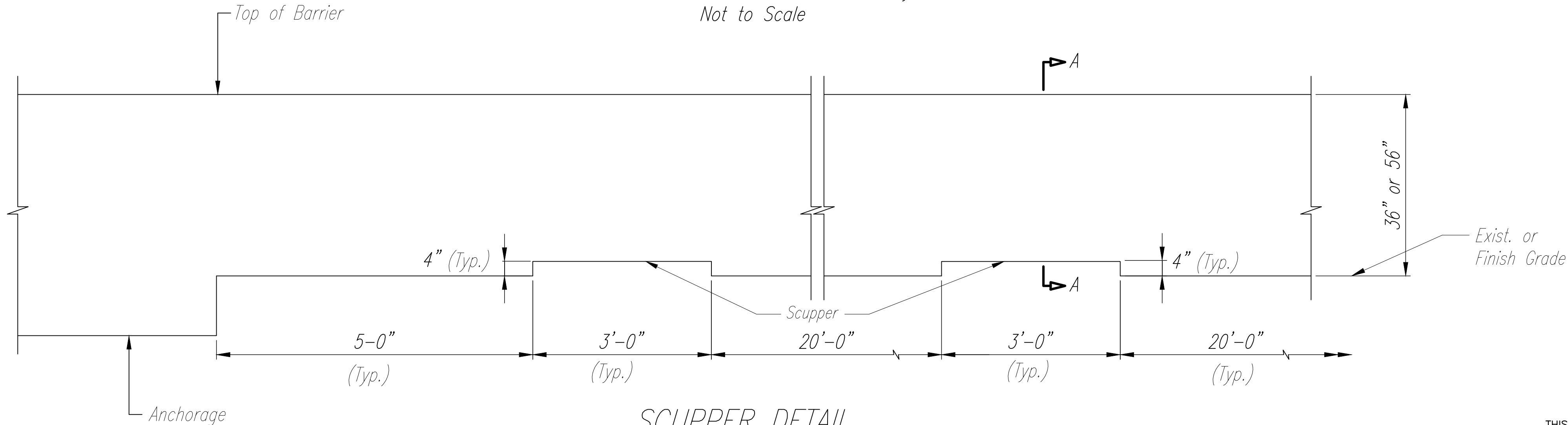
#4 or For 10' Footing, use additional #4 or @ 12\"/>

LENGTH = 150' TO 500'
Horizontal Bars not shown for Clarity
Not to Scale

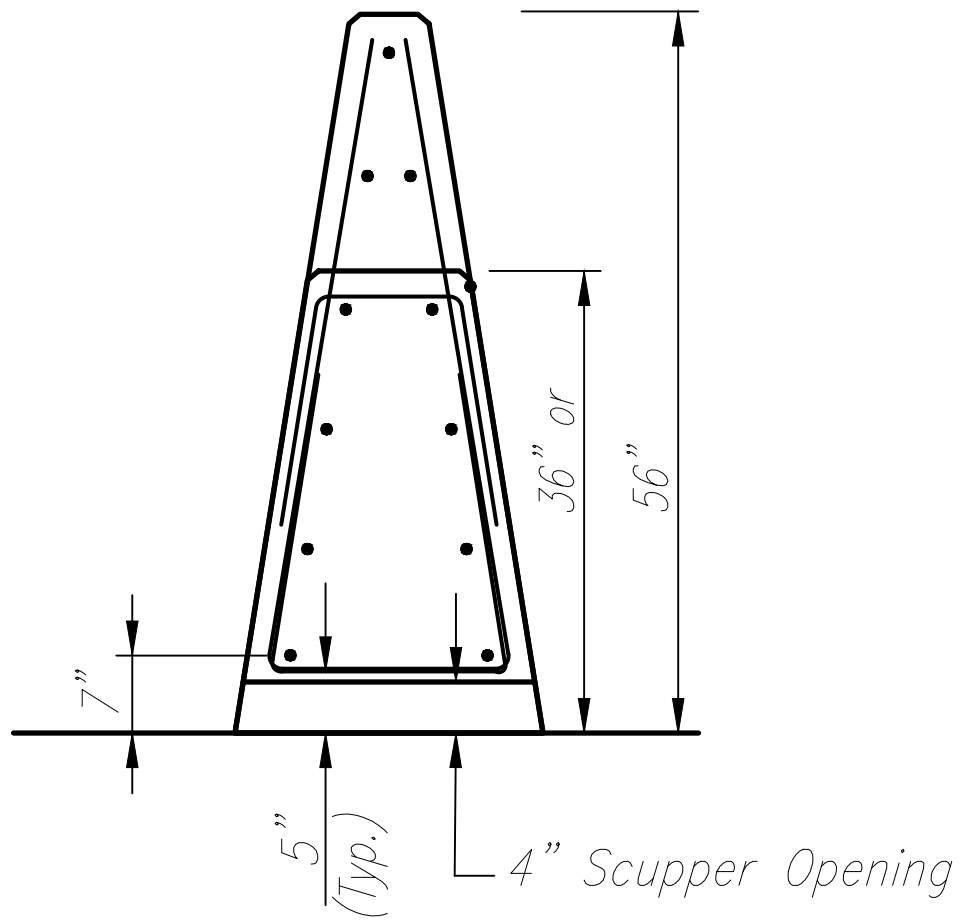
For 10' Footing, use additional #4 or @ 12\"/>



LENGTH > 500'
Horizontal Bars not shown for Clarity
Not to Scale



SCUPPER DETAIL
Not to Scale



SECTION "A-A"

| | |
|-------------------|------|
| SURVEY PLOTTED BY | DATE |
| DRAWN BY | |
| TRACED BY | |
| DESIGNED BY | |
| QUANTITIES BY | |
| CHECKED BY | |

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| ORIGINAL PLAN | No. |
| NOTE BOOK | |



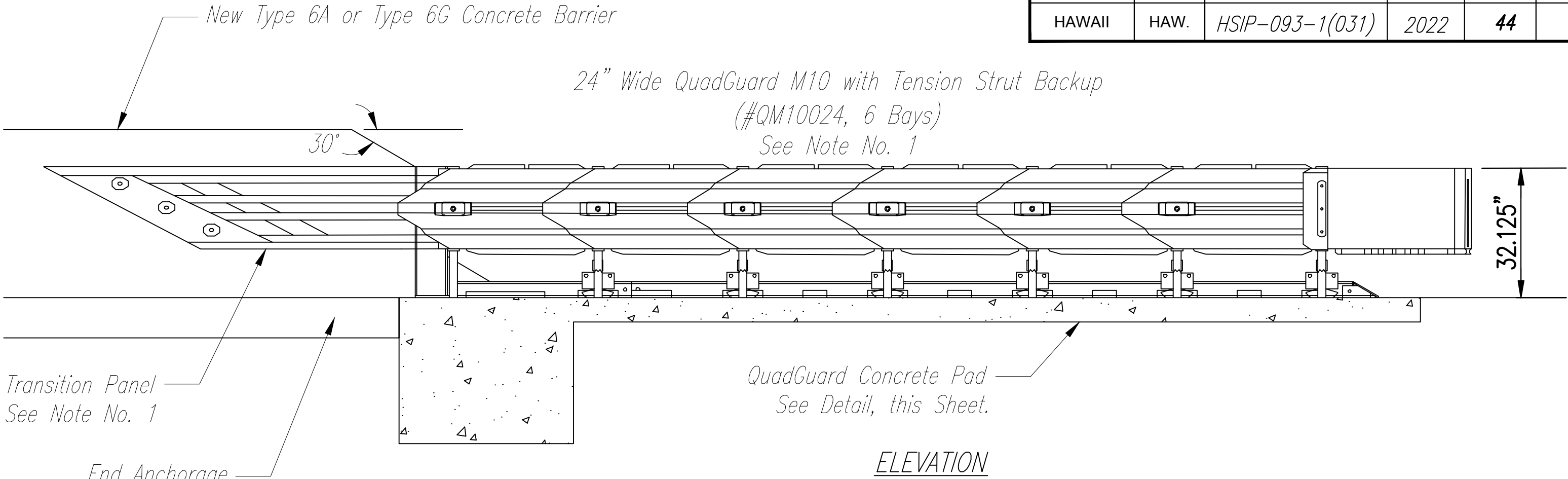
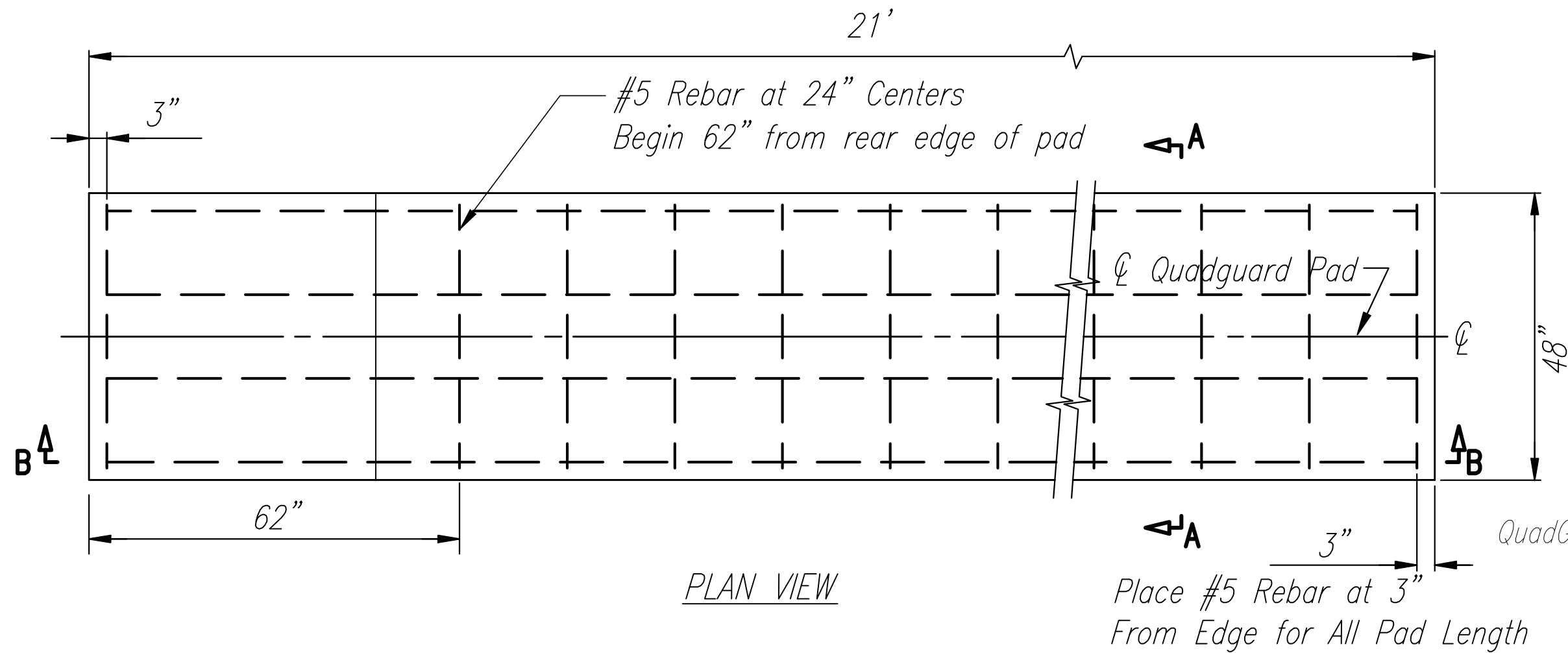
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4/30/24
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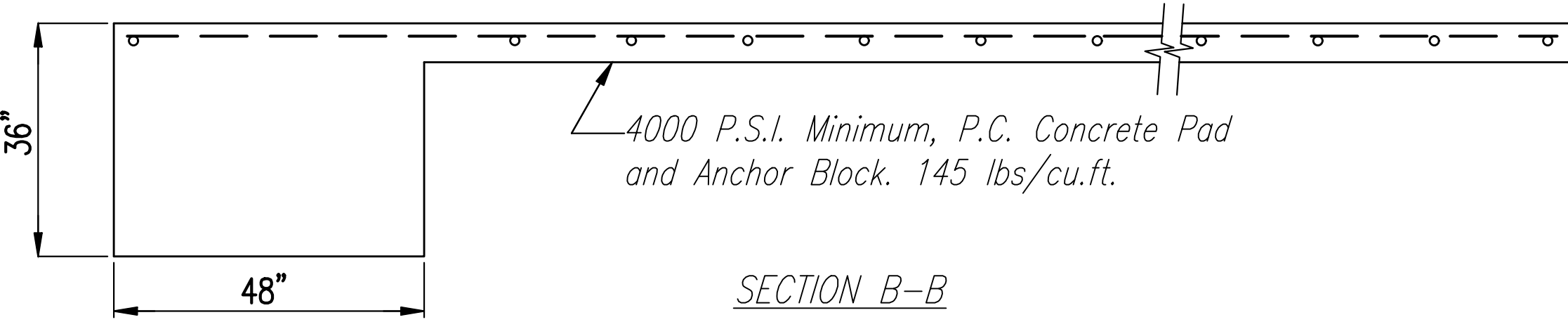
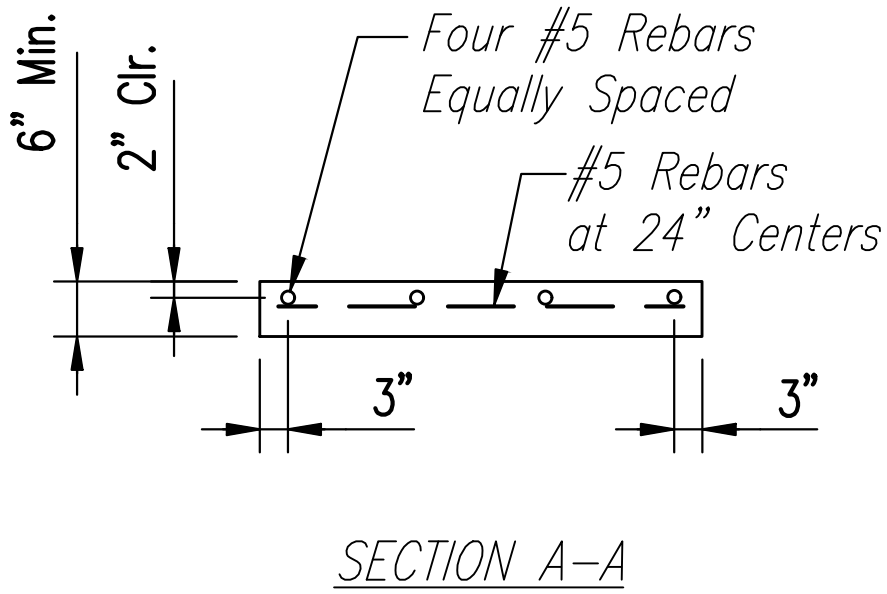
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BARRIER DETAILS - 5
FARRINGTON HIGHWAY
SAFETY IMPROVEMENTS
Pohakunui Avenue to Interstate H-1
Federal Aid Project No. HSIP-093-1(031)
Date: November 2021

| FED. ROAD DIST. NO. | STATE | FED-AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------------|-------------|-----------|--------------|
| HAWAII | HAW. | HSIP-093-1(031) | 2022 | 44 | 62 |

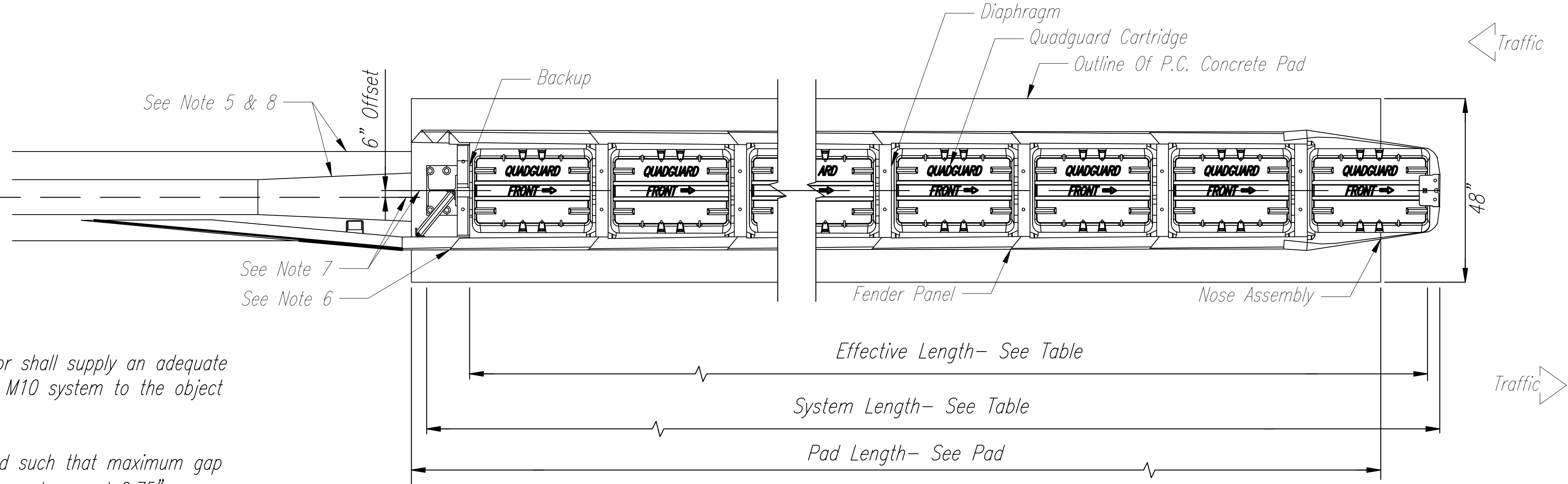


QUADGUARD M10 SYSTEM
Not to Scale



QUADGUARD SYSTEM
CONCRETE PAD, TENSION STRUT, QG
Not to Scale

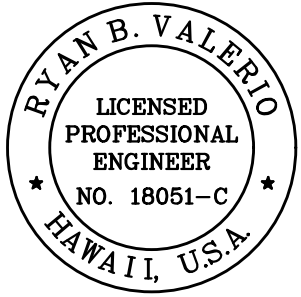
| BAYS | 610 (36") Width | SYSTEM LENGTH | EFFECTIVE LENGTH | PAD LENGTH | MAX DESIGN SPEED | NO. OF CARTRIDGES | |
|------|----------------------|---------------|------------------|------------|------------------|-------------------|---------|
| ** | MODEL NO. (PART NO.) | ft-in | ft-in | ft-in | MPH | TYPE I | TYPE II |
| 3 | QM7024 (618693) | 12'-11" | 11'-8" | 12'-0" | 43 | 3 | 1 |
| 6 | QM10024 (617607) | 21'-11" | 20'-8" | 21'-0" | 62 | 4 | 3 |



NOTES:

- See Manufacturer's Product Description Instruction Manual for QuadGuard limitations, details, and installation.
- Contractor shall coordinate with Manufacturer in the placement of the terminal impact attenuators to ensure proper installation and connection to the rigid barrier in accordance with Manufacturer's recommendation.
- Cross slope of pad shall not exceed 8% , and not vary more than 2% from front to back.
- Object Marker required to cover entire front of Quadguard's nose.
- Information on this sheet is as provided and manufactured by Trinity Highway.
- Where necessary, the contractor shall supply an adequate transition from the Quadguard M10 system to the object being shielded.
- Transition panel shall be angled such that maximum gap from fender panel overlap does not exceed 0.75".
- Caution: Centerline of Quadguard M10 system shall be parallel with Centerline of Barrier $\pm 1'$.
- If barrier base extends beyond backup leg profile or barrier height is over 32" high, trim barrier toe and/or top at 1:4 taper to prevent vehicle contact with blunt end.
- Install Reinforced Concrete Pad Per Manufacturer's Recommendation.

| | |
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| ORIGINAL PLAN | DATE |
| SURVEY PLOTTED BY | |
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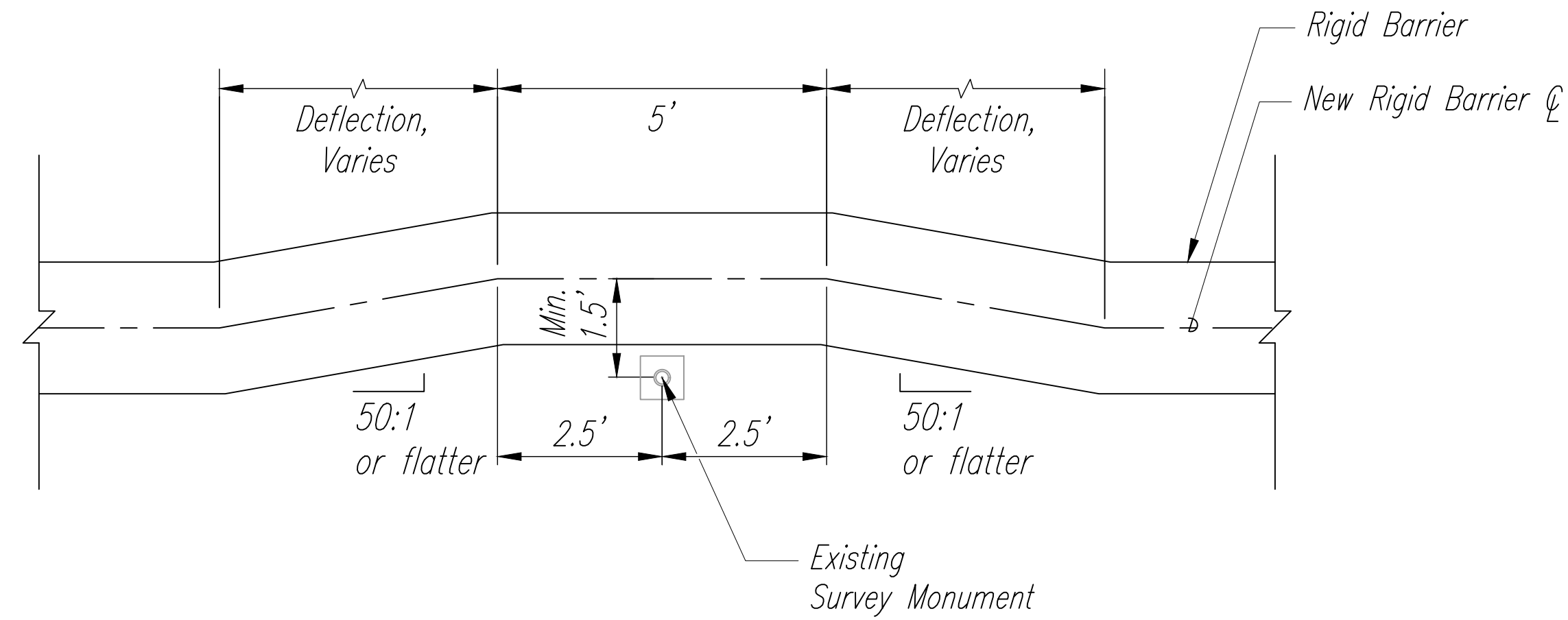


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EXPIRATION DATE OF LICENSE: 4/30/24

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BARRIER DETAILS - 6
FARRINGTON HIGHWAY
SAFETY IMPROVEMENTS
Pohakunui Avenue to Interstate H-1
Federal Aid Project No. HSIP-093-1(031)
Date: November 2021

| FED. ROAD DIST. NO. | STATE | FED-AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------------|-------------|-----------|--------------|
| HAWAII | HAW. | HSIP-093-1(031) | 2022 | 45 | 62 |



RIGID BARRIER DEFLECTION DETAIL
Not to Scale

NOTES:

- Contractor shall field locate the existing survey monuments as noted on the Plans. If the existing survey monument is within 1.5' of the proposed rigid barrier centerline, Contractor shall deflect the barrier alignment, as noted in the detail, to avoid conflict with the existing survey monument.
- Barrier deflection shall be in the direction opposite of the existing survey monument, relative to the original barrier centerline. If the survey monument is located exactly on the centerline, contractor shall deflect the barrier in direction of the higher side slope elevation.

| | | |
|---------------|-------------------|------|
| ORIGINAL PLAN | SURVEY PLOTTED BY | DATE |
| NOTE BOOK | DRAWN BY | |
| No. _____ | TRACED BY | |
| | DESIGNED BY | |
| | QUANTITIES BY | |
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4/30/24
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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

BARRIER DETAILS - 7
FARRINGTON HIGHWAY
SAFETY IMPROVEMENTS
Pohakunui Avenue to Interstate H-1
Federal Aid Project No. HSIP-093-1(031)

Date: November 2021