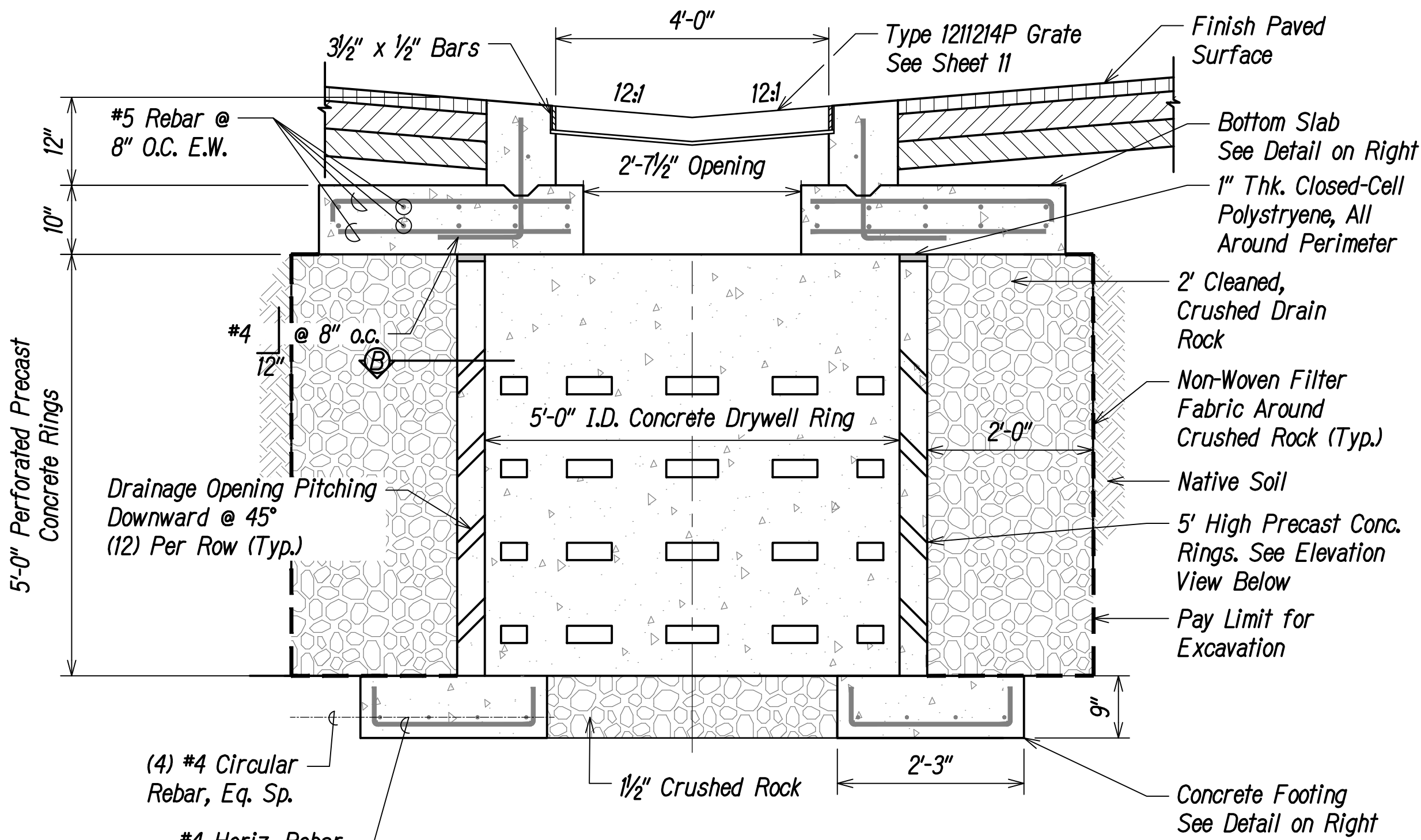
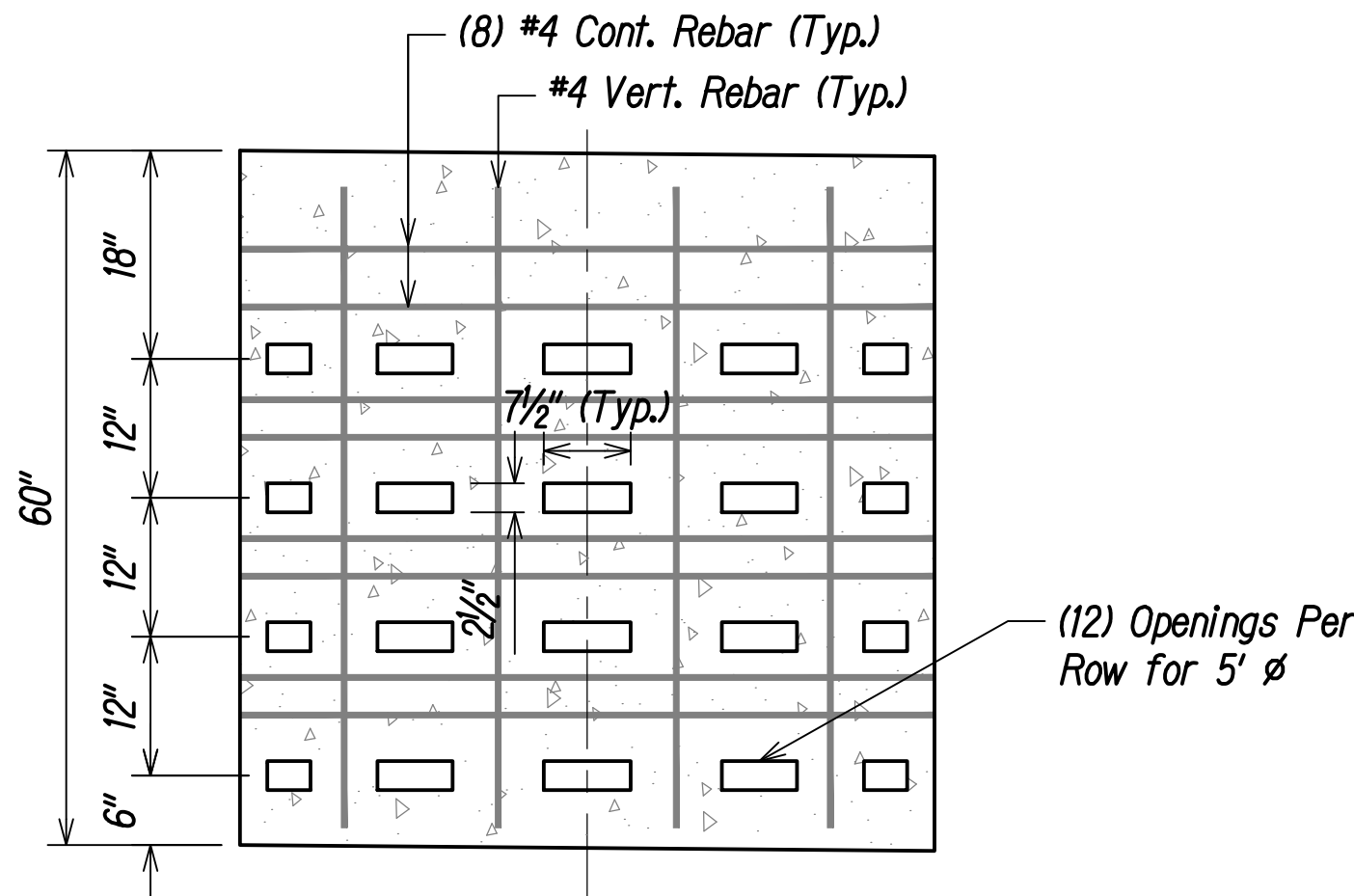


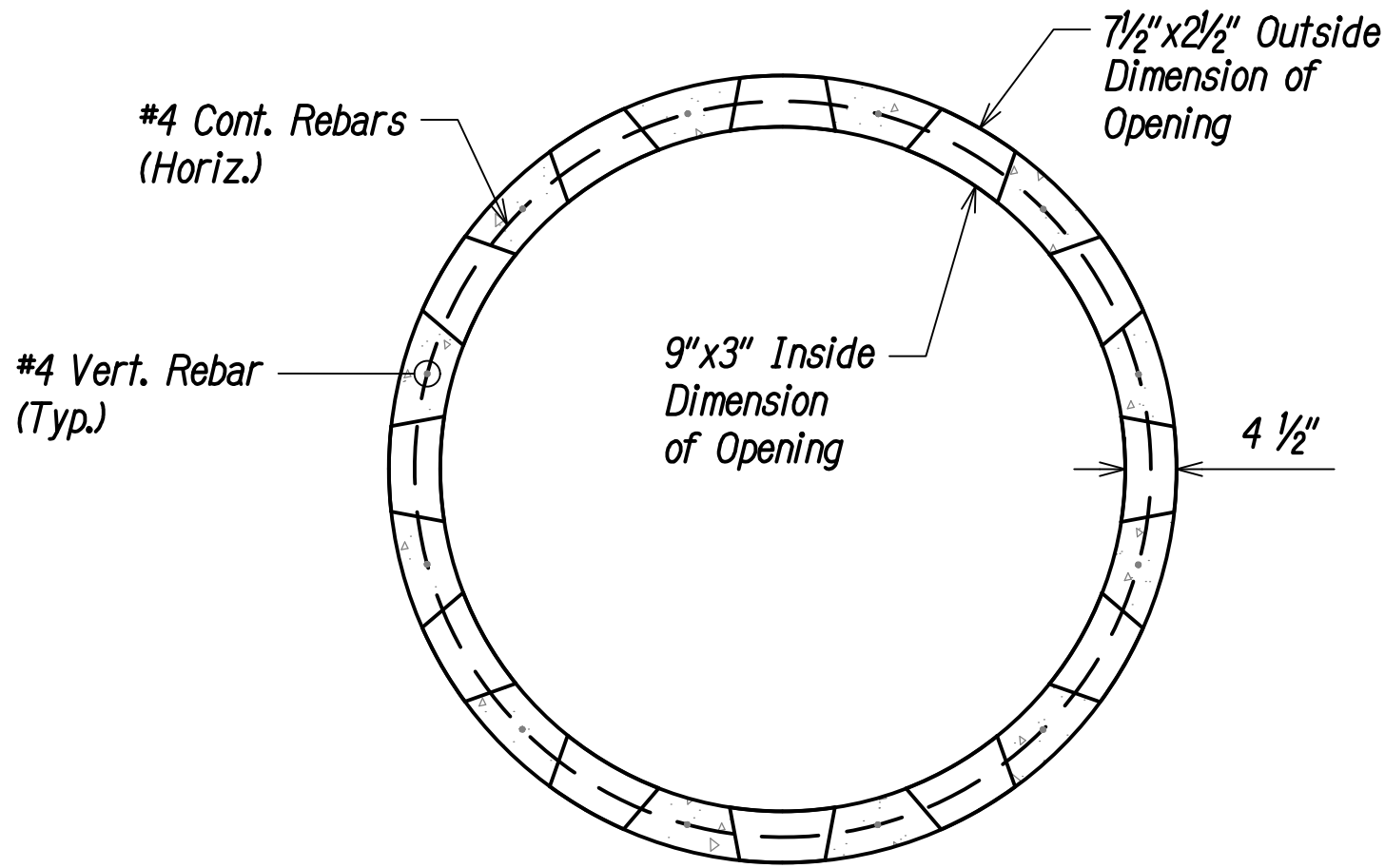
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-011-1(045)	2023	10	114



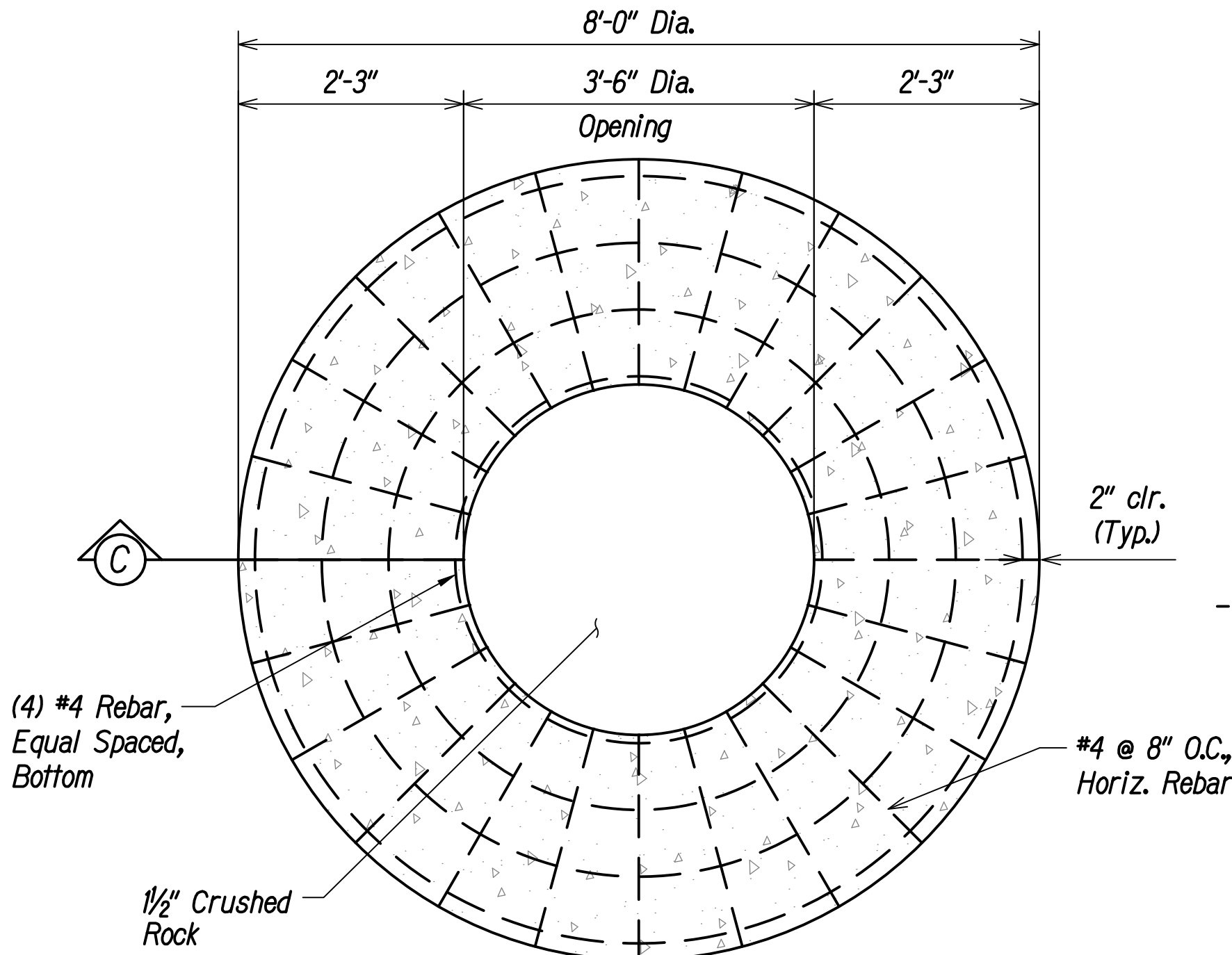
PRECAST CONCRETE SHALLOW DRYWELL
Scale: NTS



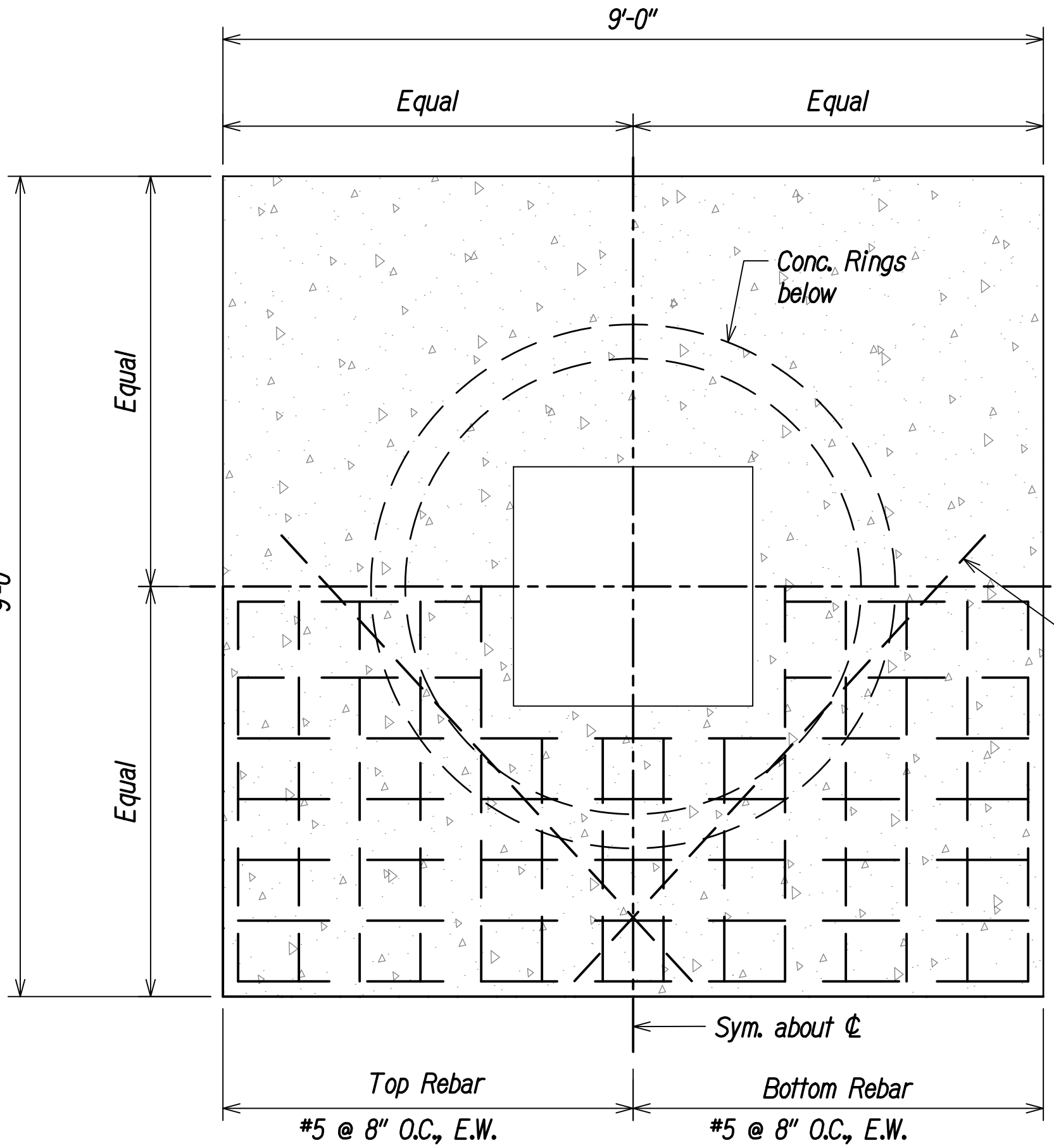
CONCRETE DRYWELL RING DETAIL
Scale: NTS



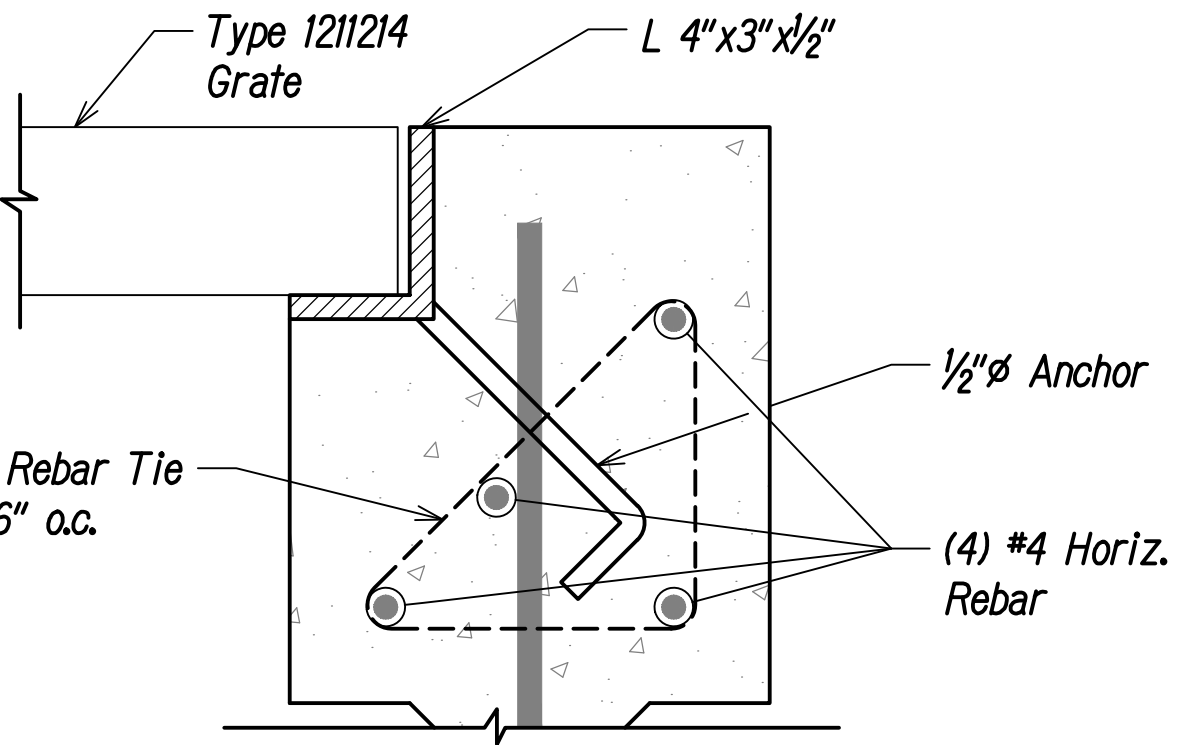
SECTION-B
Scale: NTS



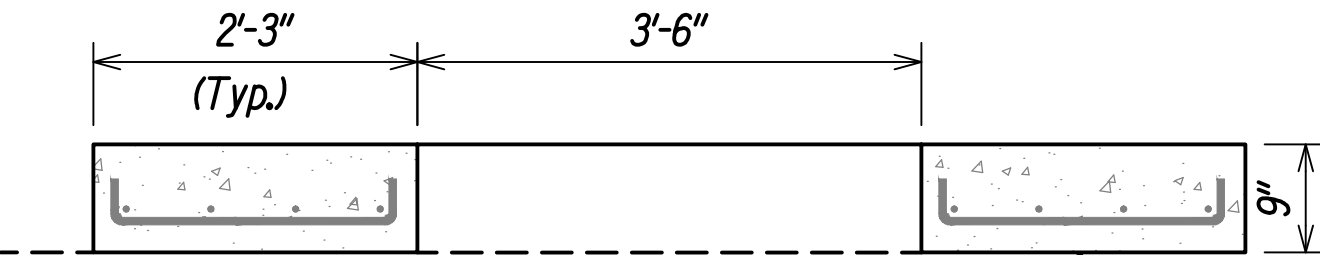
PLAN
FOOTING DETAIL
Scale: NTS



PLAN - BOTTOM SLAB
Scale: NTS

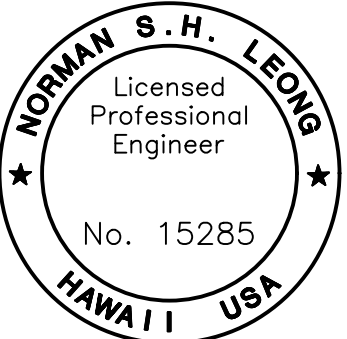


GRATE SEAT DETAIL
Scale: NTS



Footing Shall be Poured on Undisturbed Rock, Contractor Shall Not over Excavate (Notify the Engineer if Material Encountered is Not Firm Rock)

SECTION C

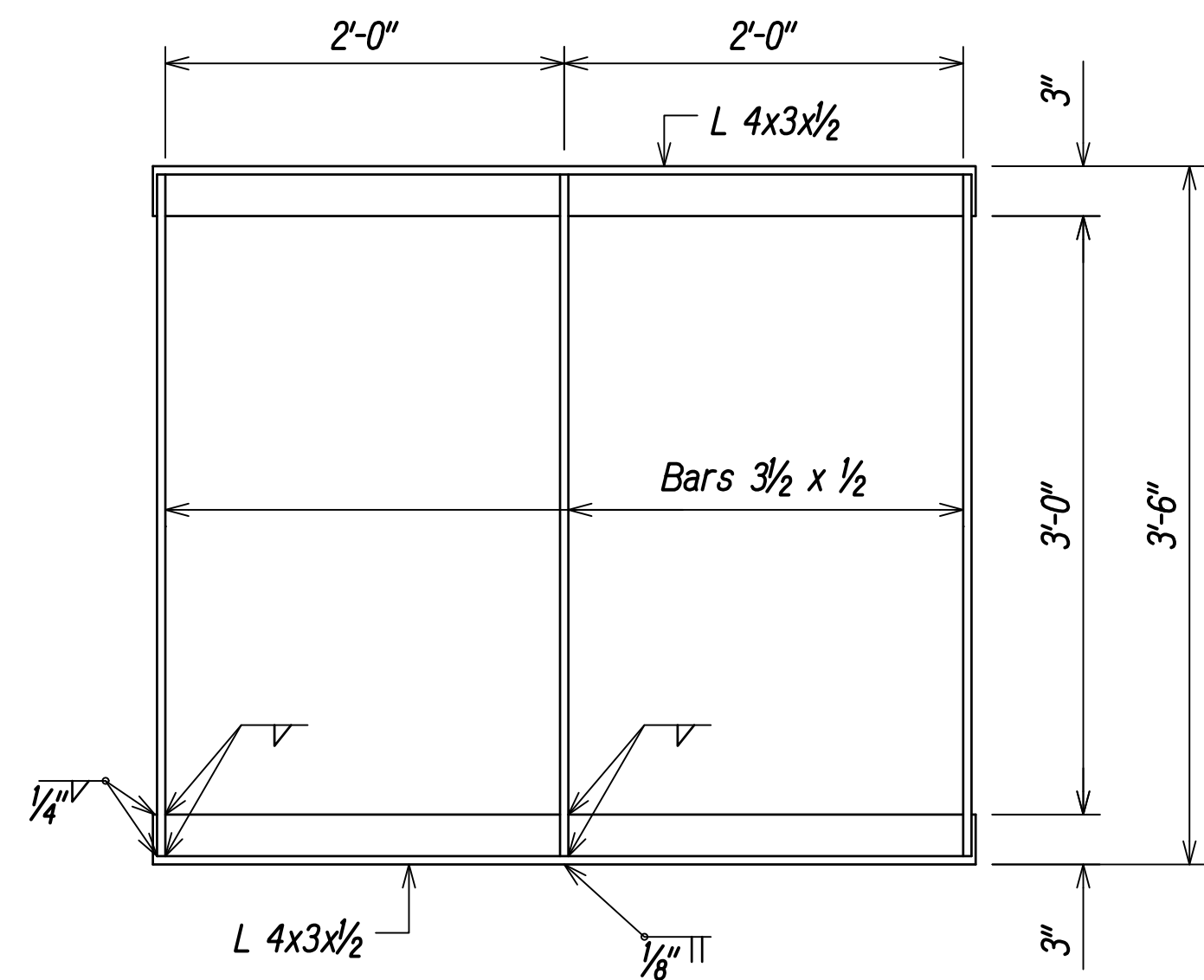


This work was prepared by me or under my supervision and construction of this project will be under my observation.
Norman S.H. Leong
Expiration Date of License 4/24

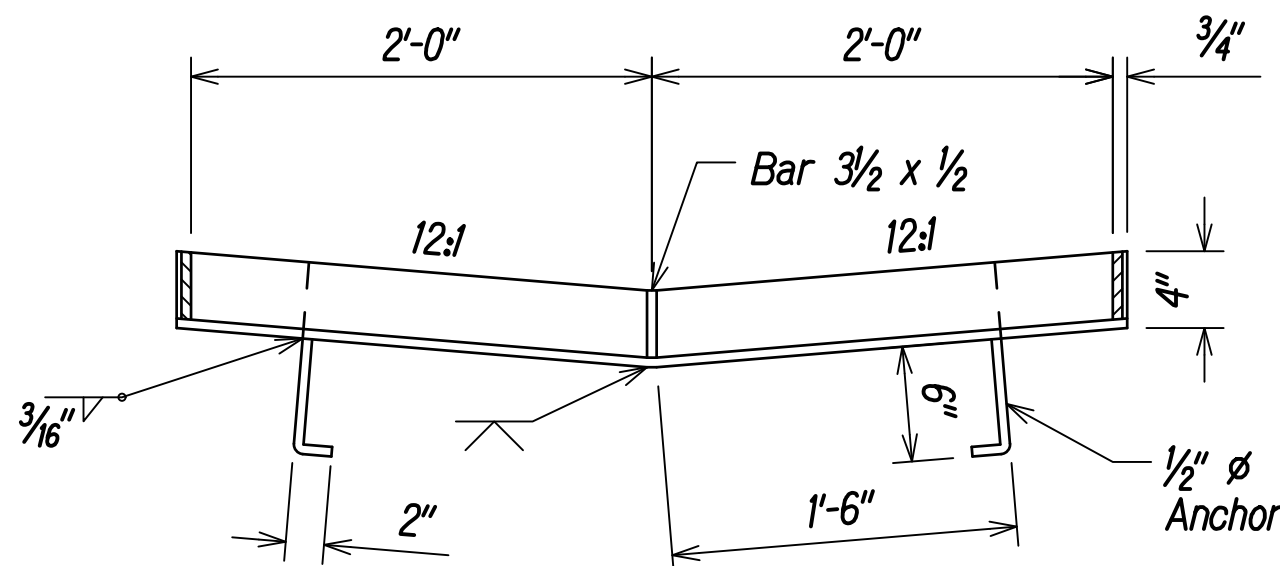
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DRYWELL DETAILS
MAMALAHOA HIGHWAY
SAFETY IMPROVEMENTS
Vicinity of Haleili Street and Bruner Road
Federal-Aid Project No. HSIP-011-1(045)
Scale: NTS
Date: September 2023

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HSIP-011-1(045)	2023	11	114

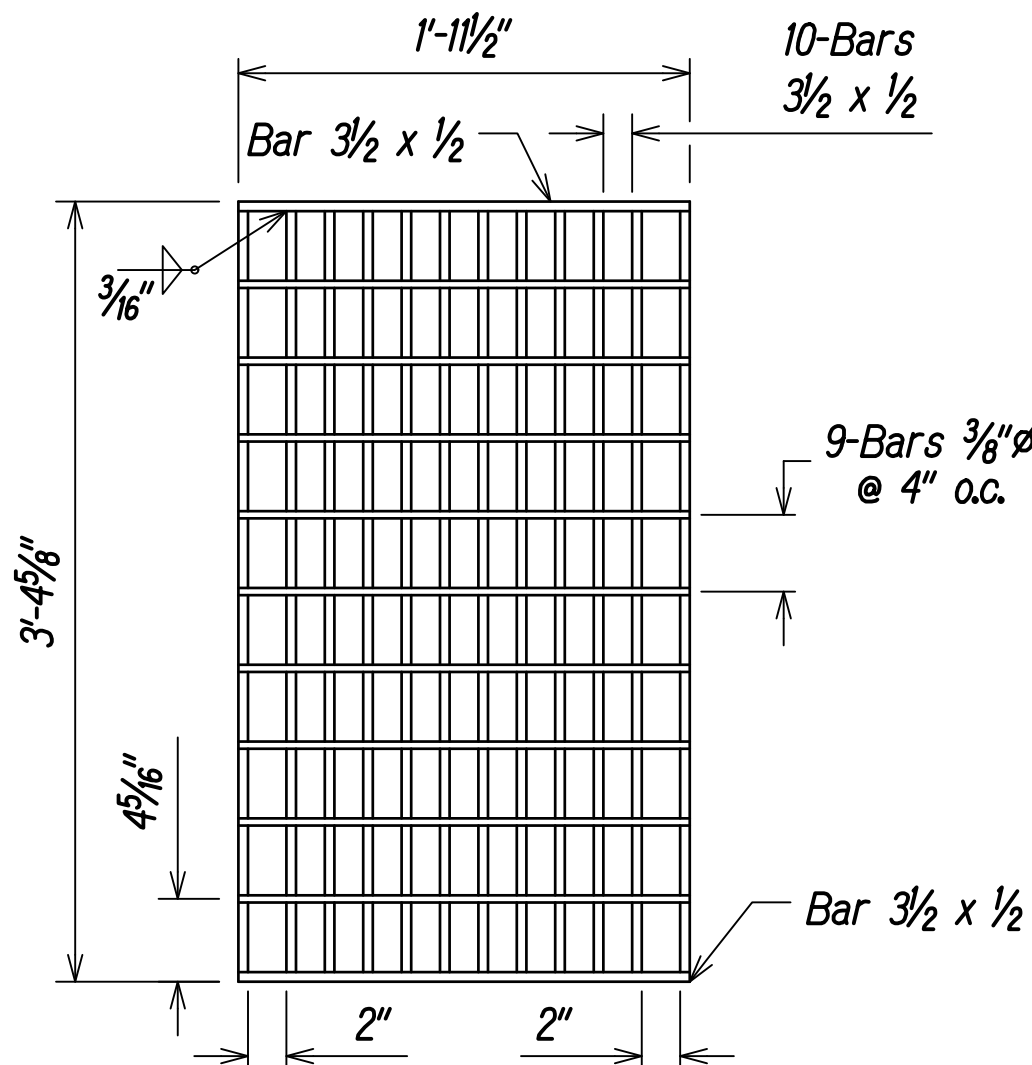


PLAN

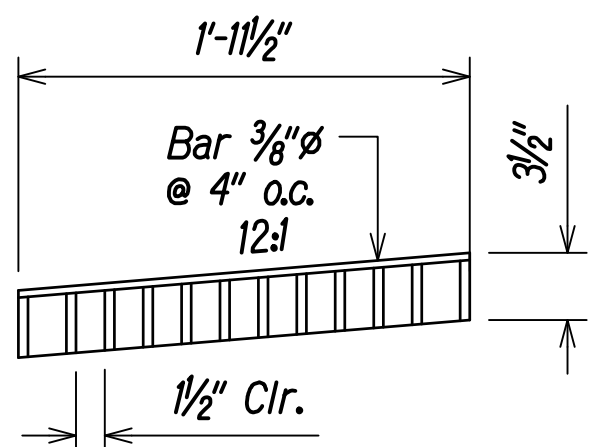


SECTION

TYPE 1211214 STEEL FRAME



PLAN



SECTION

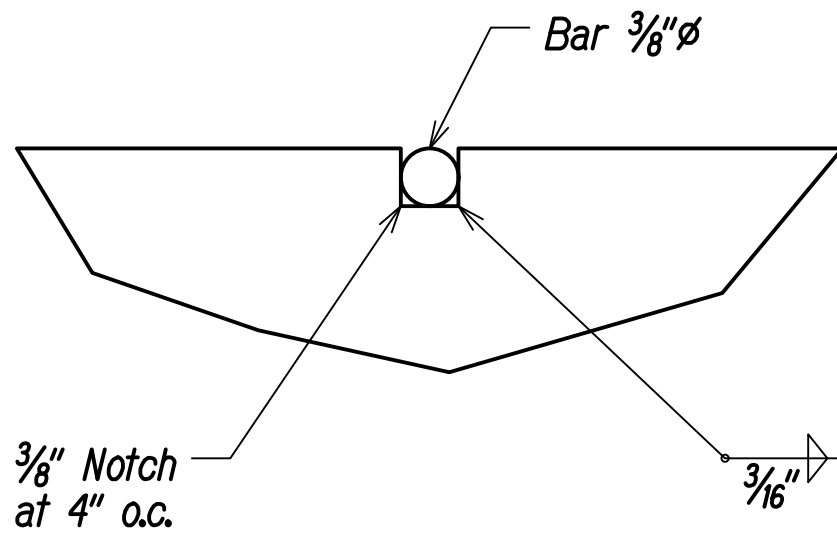
TYPE 1211214P STEEL GRATE

WELDING NOTES:

1. All welds shall be $\frac{3}{8}$ " unless shown otherwise. Grind smooth, all exposed welds.
2. Design Loads:
 - a) Live Loads: (Per AASHTO LRFD Bridge Design)
 - i) Roadway shoulder: HS20
3. All joints shall be fully welded.
4. All welds to be prequalified full penetration, unless otherwise shown.
5. All welding shall be in accordance with current edition of Reinforced Steel Welding Code AWS.

GENERAL NOTES:

1. All welds $\frac{3}{8}$ " unless otherwise noted.
2. Grates and frames shall be zinc coated after fabrication.
3. Anchors shall be ASTM A 307 and zinc coated.



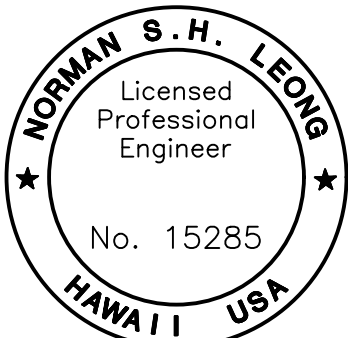
NOTCH DETAIL

GENERAL NOTES:

1. The Contractor shall verify all dimensions and conditions prior to the start of Construction, and shall report any discrepancy in writing to the Engineer before commencement of work.
2. The Contractor shall provide temporary erection bracing and shoring for all structural members as required for structural stability of the structure during all phases of construction.
3. The concrete walk shall conform to ACI 318-08 and shall attain a minimum compressive strength of 4,000 P.S.I. at 28 days unless noted otherwise. Maximum aggregate size shall be $\frac{3}{4}$ inch with a maximum slump of four (4) inches.
4. All Reinforcing Steel shall be Deformed Bars conforming to ASTM A-615, Grade 60. Bends and Hooks shall be to Far Face of intersecting wall or slab.
5. Concrete cover for Reinforcing Bars shall be as follows, unless noted otherwise:
 - a) Concrete cast against earth: 3"
 - b) Concrete exposed to earth: 2"
 - c) Concrete exposed to weather: 1"
6. Grates and Frames shall conform to ASTM A-36 and shall be Hot Dip Galvanized after fabrication. According with ASTM A123.
7. The Concrete Adjustable Grating Seat shall be cast in place.
8. Top of Grating shall be set relative to the adjacent pavement/shoulder elevations.
9. #2 Crushed Rock shall be manufactured from sound durable rock and shall be free from organic matter and other deleterious substances.

SURVEY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	

ORIGINAL PLAN	No.
NOTE BOOK	



This work was prepared by me or under my supervision and construction of this project will be under my observation.

Norman Leong
Expiration Date of License 4/24

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DRYWELL DETAILS

MAMALAHOA HIGHWAY
SAFETY IMPROVEMENTS

Vicinity of Haleili Street and Bruner Road
Federal-Aid Project No. HSIP-011-1(045)

Scale: NTS Date: September 2023