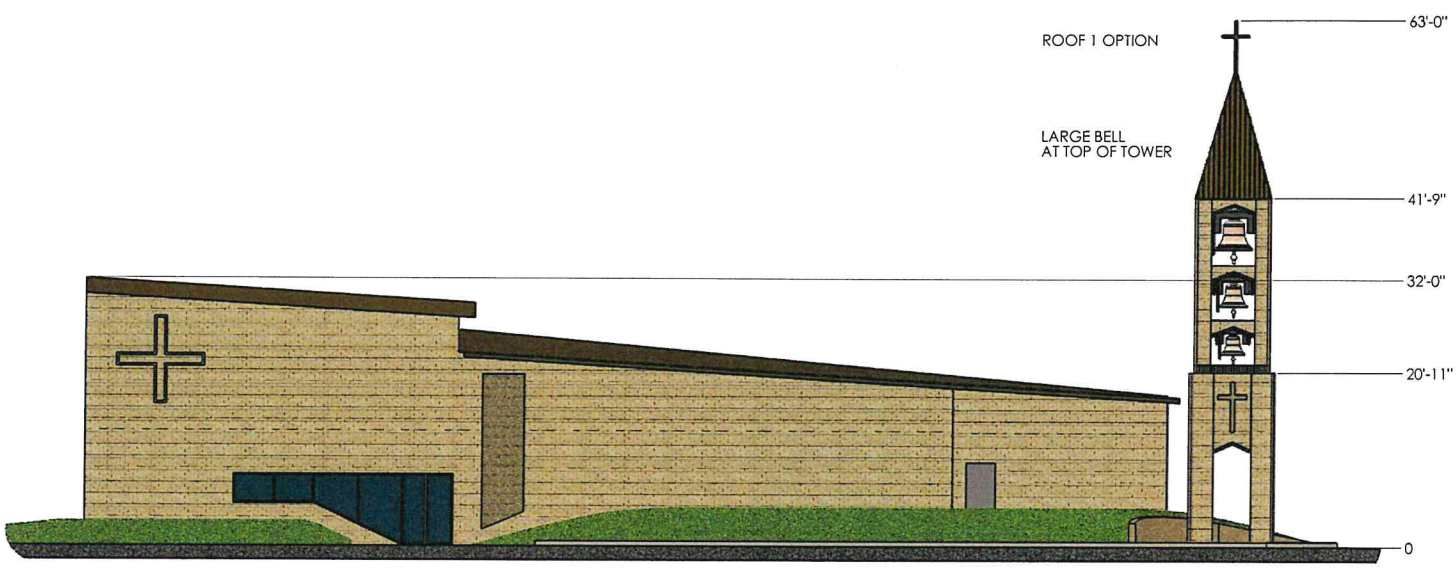

REV	ECO	REV DESCRIPTION	INIT	DFTR
				DAK

DO NOT SCALE UNITS ARE INCHES	STEFFES		This document contains confidential information that is the sole exclusive property of Steffes,LLC. It is not to be used or reproduced in any way detrimental to the interests of Steffes, LLC. All rights reserved.
TOLERANCE (U.N.O.) X.X ±0.1, X.XX ±0.04, X.XXX ±0.031, ANG ±1°	3050 Hwy 22 N | Dickinson, ND 58601 | 701-483-5400		www.steffes.com
Bell Tower Precast 06/03/25		DESCRIPTION	
APPROX. WT. =	MATERIAL	SHT 1 OF 1	PART NUMBER / REV.

GENERAL STRUCTURAL NOTES:

GENERAL DESIGN AND CONSTRUCTION:

(1) All work shall comply with the 2021 International Building Code (IBC 2021).

(2) Design Loads:

Project Location: Dickinson, ND
Wind loads = Per IBC 2021
Ultimate Design wind speed (3-second gust) = 105 mph (Risk Category I)
Exposure Category "C", Iw= 1.0

Weights = As noted on plan

Seismic loads per IBC 2021
Site class = D (Assumed), Ss = 0.056, S1 = 0.039, Ie=1.0
Site coefficient, Fa = 1.6, Site coefficient, Fv = 2.4
Seismic Design Category A

(3) Specific notes and details shall take precedence over General Structural Notes.

(4) The contract structural drawings and specifications represent the finished structure. Unless otherwise indicated, they do not indicate the means or method of construction. The contractor is solely responsible for the protection of the structure during all phases of demolition, construction and installation. Provide all measures necessary to protect the structure, workers or other persons by means of shoring, bracing and job site safety measures.

(5) Verify all actual bin equipment and operating weights compare with that shown on the drawings. If weights and locations differ from that shown, contact the structural engineer to provide for support.

(6) Means-and-methods including temporary bracing and shoring against wind and erection is the responsibility of the contractor.

(7) No area of the structure shall be loaded with construction material or equipment that exceeds final design loading indicated.

(8) Holes, pipes, sleeves, etc. through structural framing and foundations that are not shown on the drawings are not acceptable.

(9) Structural engineer's seal on the plan does not provide for construction inspection.

(10) The cost for additional structural engineering services necessitated by contractor requests for an option or due to errors or omissions in construction shall be the contractor's responsibility.

FOUNDATIONS:

(1) Assumed Geotechnical Design Values - All concrete foundation designs are based on assumed geotechnical design values to be confirmed by a geotechnical engineer. All foundation excavations must be observed and all assumed design values stated below shall be verified in writing by a licensed geotechnical engineer following on-site observation prior to fabricating steel and placing concrete any concrete. All assumed geotechnical design values are as follows:

A.Minimum Soil Bearing Capacity = 1500 psf
B. Backfill Soil Unit Weight (γ) = 110 pcf (dry)
C.Coefficient of Friction (Concrete on Soil): 0.35

(1) All footings shall bear on natural, undisturbed granular soil, or approved compacted/tested engineered fill or compacted rock and fabric at the instruction of a geotechnical engineer. All existing fill material present shall be removed to native soils and replaced with approved engineered granular fill. All bearing material shall be approved by a licensed geotechnical engineer in writing prior to placing concrete.

(3) Clean excavations of snow, water, mud, loose soil and debris prior to placing footing concrete.

(4) Foundations may not be earth formed.

(5) Foundation excavations shall be to proper line and level to insure minimum concrete cover of footing reinforcement for footing depth.

(6) Backfill shall be compacted by mechanical means.

(7) Protect all foundations from the action of water and freezing.

CONCRETE:

(1) Concrete Mix Designs:

Mat Footing are to have a concrete mix design consisting of Portland Type I/II cement (6 sack min.) and a 28-day compressive strength of 4000 psi, 25% max fly ash allowed, 1 1/2" max aggregate size, 4" max slump 0.45 max water-to-cement ratio, no air entrainment. water reducing admixture ok.

Concrete Wall/Piers are to have a concrete mix design consisting of Portland Type I/II cement (6 sack min.) and a 28-day compressive strength of 4500 psi, 25% max fly ash allowed, 3/4" max aggregate size, 4" max slump, 0.45 max water-to-cement ratio, 5% to 7% air entrainment, water reducing admixture ok, mid range plasticizer ok, super plasticizer requires prior approval

(2) Concrete aggregate shall meet ASTM C33 with a maximum shale or deleterious material content of 1%.

(3) Portland cement shall meet ASTM C150 and shall be low Alkali.

(4) Fly Ash of "Type C meeting Class F" may be substituted by weight for cement up to maximum limits indicated in each concrete mix design.

(5) Mid-Range Plasticizer meeting ASTM C494 Type D is acceptable if noted in mix design. Mix is to have a maximum slump as indicated above for the particular mix design prior to adding the Mid-Range. Adjust air content as required by the supplier due to the use of the Mid-Range and its projected effect on the air content. Test for air after Mid-Range addition to achieve range specified. Slump is to be tested to meet that specified above for particular mix design prior to adding Mid-Range Plasticizer and no additional water may be added after slump test.

(6) Air Entraining agents shall meet ASTM C260.

(7) Concrete construction shall conform to the ACI building code requirements for reinforced concrete, ACI 318.

(8) Hot Weather Concreting per ACI 305R and Cold Weather Placement per ACI 306R shall be followed where weather conditions warrant.

(9) Forms shall be left on all walls for a minimum of 2 days or longer as required at the discretion of the contractor.

(10) All concrete reinforcing shall meet ASTM specification A615 Grade 60.

(11) Reinforcing steel shall be bent and placed in accordance with the ACI code. All tension splices shall be class 'B', 40 bar diameter minimum. All compression splices shall be 40 bar diameters (minimum), unless noted otherwise. Lap all corner bars.

(12) Provide adequate support bars and accessories to hold all rebar firmly in place.

(13) All vertical pier bars must be extended to within 2" of the top of piers unless shown otherwise on the drawings.

(14) Concrete cover for reinforcing shall be per ACI 318.

PRELIMINARY FOUNDATION
NOT FOR CONSTRUCTION
FOR BIDDING PURPOSES ONLY
08.19.25

CW STRUCTURAL ENGINEERS

QUEEN OF PEACE BELL TOWER FOUNDATION

DICKINSON, ND

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08.19.2025

GENERAL STRUCTURAL NOTES

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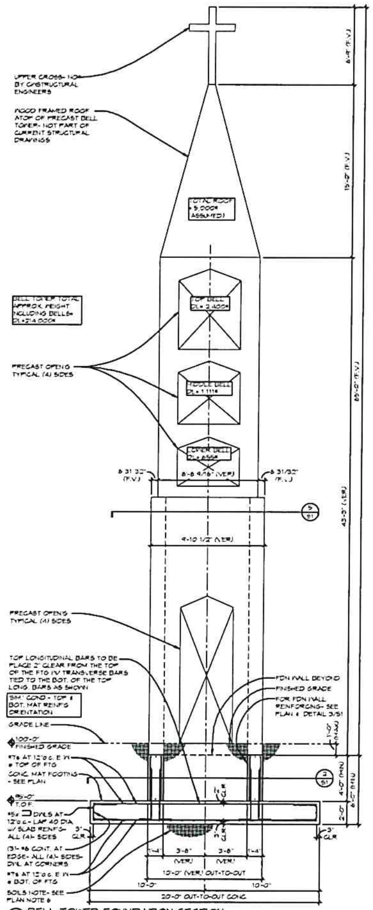
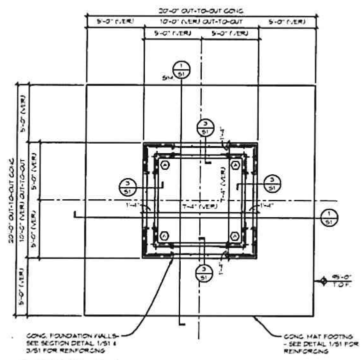
OF 2



1 BELL TOWER FOUNDATION SECTION
SCALE: 1/4"=1'-0"

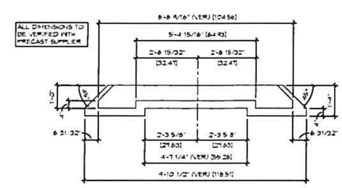


2 BELL TOWER PLAN
SCALE: 1/4"=1'-0"

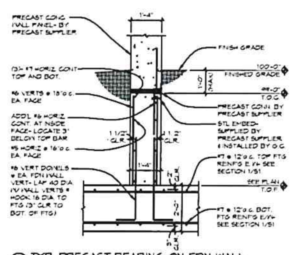
PLAN NOTES:
(1) CENTER CONCRETE MAT FOOTING ON BELL TOWER- SEE FOUNDATION PLAN & BELL TOWER SECTION FOR SIZE & REINFORCING.
(2) X'-X" T.O.F. INDICATES TOP OF FOOTING ELEVATION.
(3) GENERAL CONTRACTOR TO COORDINATE WITH ELECTRICAL CONTRACTOR FOR BUILDING GROUNDING WIRE ATTACHMENT TO FOUNDATION WALL REINFORCING PRIOR TO POURING FOUNDATION WALL.
(4) (4) INDICATES PIER DETAIL- REFER TO PIER DETAIL LOCATED ON SHEET S1 FOR PIER SIZE & REINFORCING.
(5) "F.V." AND "VER." INDICATES THAT DIMENSION IS TO BE FIELD VERIFIED PRIOR TO MATERIAL FABRICATION, CONCRETE CONSTRUCTION, OR STEEL FABRICATION ETC.
(6) SOILS TO BE VERIFIED BY A LICENSED GEOTECHNICAL ENGINEER TO ENSURE BEARING CAPACITY IS AS ASSUMED AS STATED IN GENERAL STRUCTURAL NOTES.

SOIL BEARING CAPACITY NOTE:
Footings are designed for a minimum allowable soil bearing pressure of 1500 psf, an assumed value. Design assumption shall be verified in writing by a licensed geotechnical engineer following on-site observation prior to placing concrete for footings.

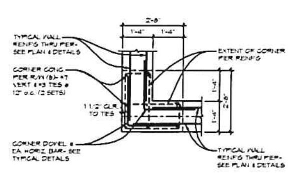
ALL DIMENSIONS TO BE VERIFIED WITH PRECAST SUPPLIER



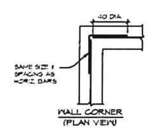
5 PRECAST PLAN
SCALE: NO SCALE



3 TYP. PRECAST BEARING ON FDN WALL
SCALE: 1 1/2"=1'-0"



A PIER REINFORCING DETAIL
SCALE: 1 1/2"=1'-0"



4 TYP. CONCRETE WALL REINFORCING DETAIL
SCALE: NO SCALE

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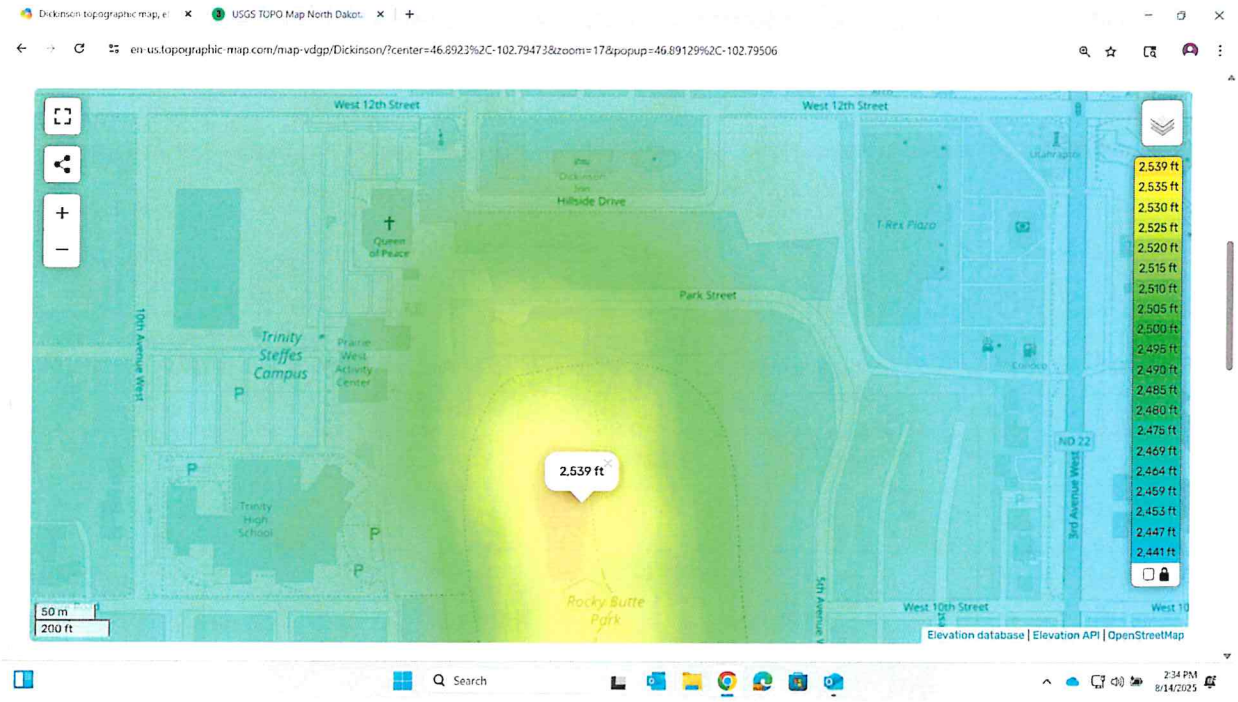
BELL TOWER FOUNDATION SECTION, PLAN & DETAILS

S1
OF 2

Elevation of the base of water tank on Rocky Butte Park 2539’



Elevation of the base of proposed Queen of Peace Bell Tower 2468’

The base of Rocky Butte water tank if 71’ above the base of the proposed Queen of Peace bell tower.