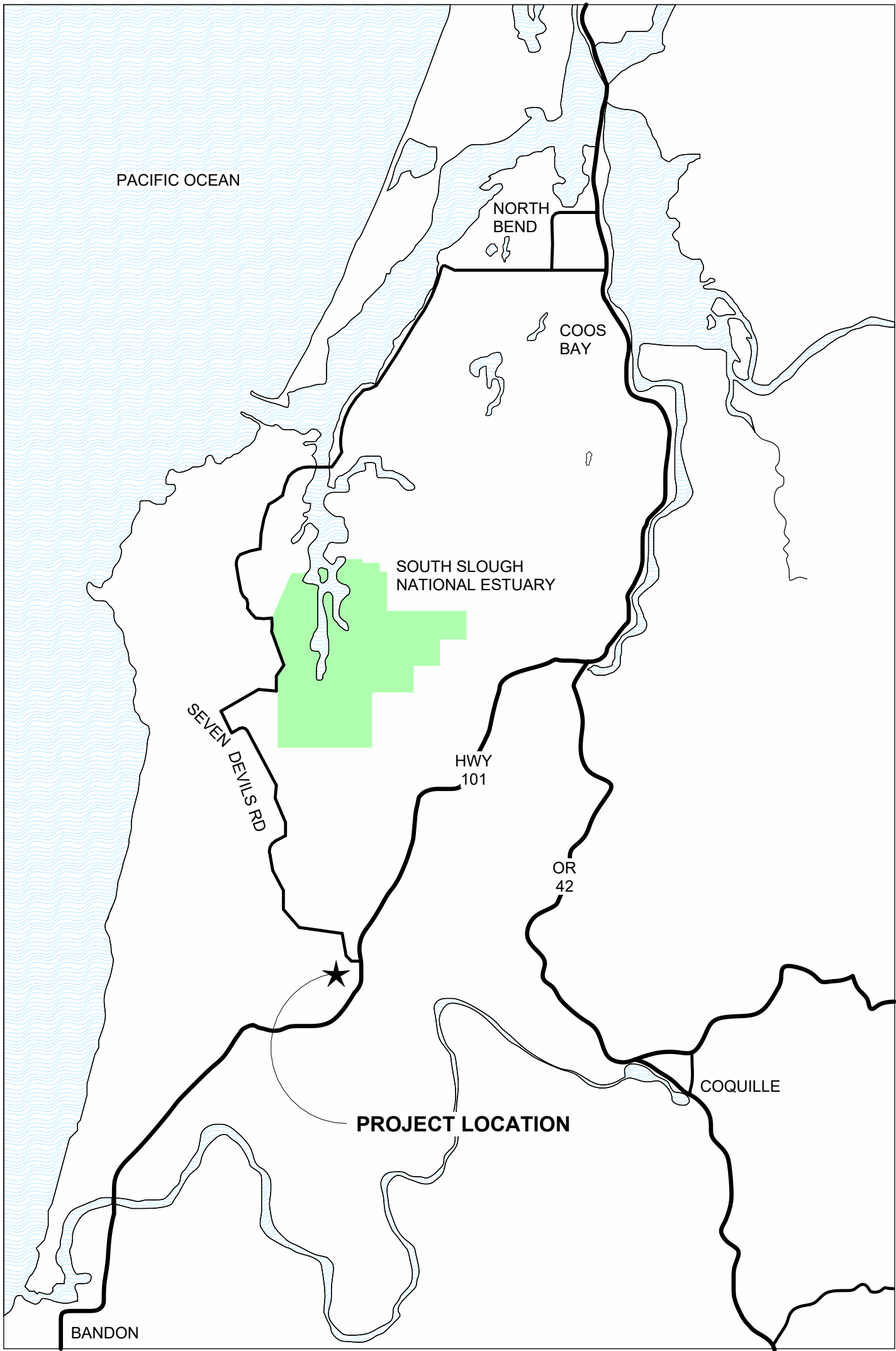


BEAVER HILL PIT STRUCTURE

SLAB REPLACEMENT

COOS COUNTY
56722 HIGHWAY 101
COOS BAY, OR 97420



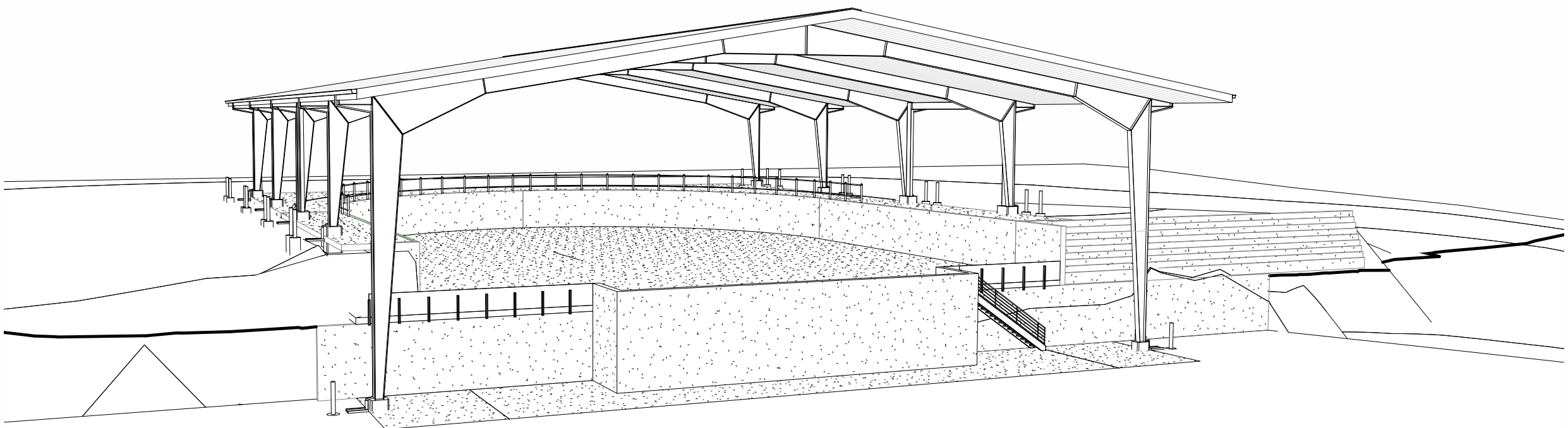
VICINITY MAP
N.T.S.

ABBREVIATIONS

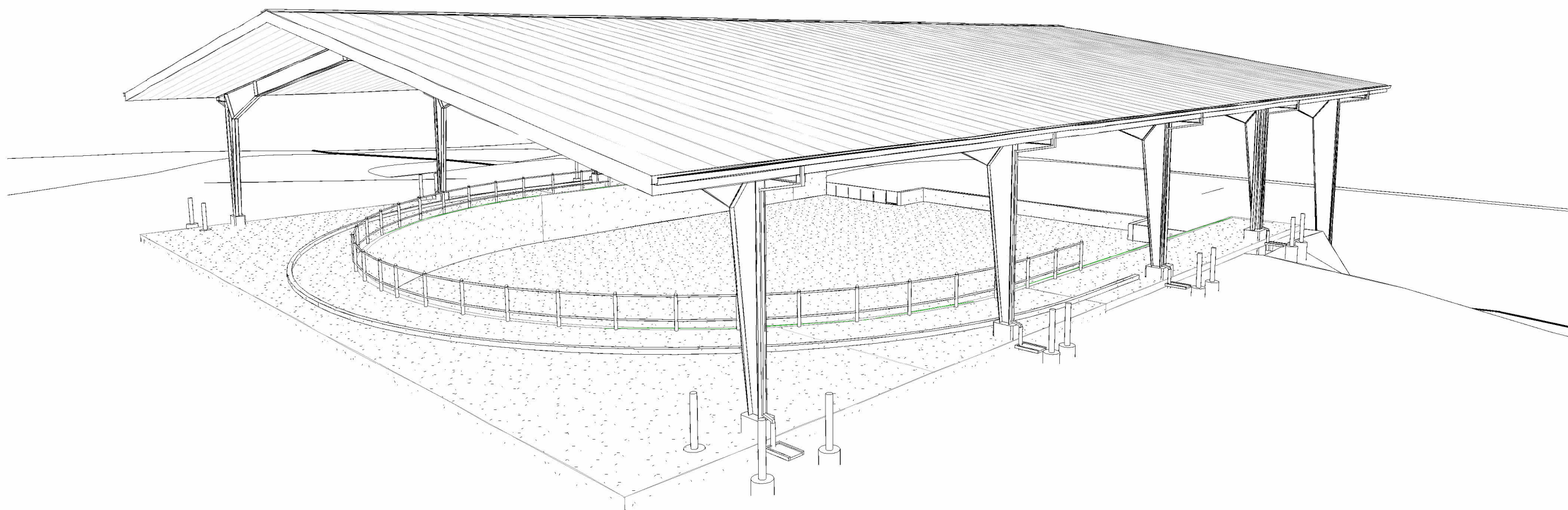
ABBREVIATIONS BELOW ARE FOR ARCHITECTURAL SHEETS ONLY					
∠	ANGLE	GA	GAUGE	PCC	PRECAST CONCRETE
@	AT	GALV	GALVANIZED	PEMB	PRE-ENGINEERED METAL BUILDING
AB	ANCHOR BOLT			PL	PLATE/PROPERTY LINE
AC	ASPHALT CONCRETE			PLYWD	PLYWOOD
ADD	ADDITIONAL	H	HEIGHT	PM	PROTECTED METAL
ALT	ALTERNATE	HM	HOLLOW METAL	PRE FAB	PREFABRICATED
APPROX	APPROXIMATE	HT	HEIGHT	PRE FIN	PRE-FINISHED
ARCH	ARCHITECTURAL				
				QTY	QUANTITY
BLDG	BUILDING	ID	INSIDE DIAMETER		
BM	BEAM/BENCH MARK	IN	INCHES		
BOT	BOTTOM	INT	INTERIOR		
				RAD	RADIUS
CIP	CAST IN PLACE	JST	JOIST	RC	REINFORCED CONCRETE
CJ	CONTROL JOINT/CONSTRUCTION JOINT	JT	JOINT	RD	ROOF DRAIN
COL	COLUMN			REC	RECESSED
CONC	CONCRETE			REINF	REINFORCING
CONST	CONSTRUCTION			REQ'D	REQUIRED
CONT	CONTINUOUS				
		L	LENGTH	SCHD	SCHEDULE
D	DEPTH	LF	LINEAR FOOT	SECT	SECTION
DIA	DIAMETER	LG	LONG	SOG	SLAB ON GRADE
DIM	DIMENSION	LWG	LONGITUDINAL	SPEC	SPECIFICATION
DS	DOWNSPOUT			STD	STANDARD
DWL	DOWEL				
(E)	EXISTING			THK	THICK
EA	EACH	MAX	MAXIMUM	TOB	TOP OF BEAM
EF	EACH FACE	MECH	MECHANICAL	TOC	TOP OF CURB/TOP OF CONCRETE
EJ	EXPANSION JOINT	MEMB	MEMBRANE	TOF	TOP OF FOOTING
EL	ELEVATION	MFR	MANUFACTURER	TOJ	TOP OF JOIST
ELEC	ELECTRICAL	MIN	MINIMUM	TOS	TOP OF SLAB
ELEV	ELEVATION/ELEVATION	NA	NOT APPLICABLE	TOW	TOP OF WALL
EMBED	EMBEDDED	NIC	NOT IN CONTRACT	TPG	TOPPING
EQ	EQUAL	NO	NUMBER	TYP	TYPICAL
EW	EACH WAY	NOM	NOMINAL		
		NTS	NOT TO SCALE		
		NWC	NORMAL WEIGHT CONCRETE	UG	UNDERGROUND
				UNO	UNLESS NOTED OTHERWISE
FA	FIELD ADJUSTABLE	O/	OVER	W	WIDE FLANGE STEEL BEAM
FV	FIELD VERIFY	OA	OVERALL	W/	WITH
FIN	FINISH	OC	ON CENTER	W/O	WITHOUT
FLR	FLOOR	OD	OUTSIDE DIAMETER	WWF	WELDED WIRE FABRIC
FT	FEET	OPNG	OPENING		
FTG	FOOTING	OPP	OPPOSITE		

SHEET INDEX

GENERAL	
G1.0	TITLE SHEET, VICINITY MAP
ARCHITECTURE	
A2.1	FLOOR PLAN
A3.1	SECTIONS & ELEVATIONS
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STRUCTURAL	
S1.1	STRUCTURAL GENERAL NOTES, LEGENDS, & ABBREVIATIONS
S1.2	STRUCTURAL GENERAL NOTES CONTINUED
S2.1	STRUCTURAL GROUND LEVEL FOUNDATION PLAN
S4.1	STRUCTURAL FOUNDATION DETAILS



2 VIEW FROM SE



1 VIEW FROM SW

HGE
ARCHITECTS.

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REGISTERED ARCHITECT
2840
JOSEPH A. SLACK
COOS BAY, OREGON
STATE OF OREGON

PROJECT NO.: 19-48.1

BEAVER HILL PIT
SLAB REPLACEMENT

COOS COUNTY SOLID WASTE DISPOSAL TRANSFER STATION
55722 HIGHWAY 101, COOS BAY, OREGON

BIDDING

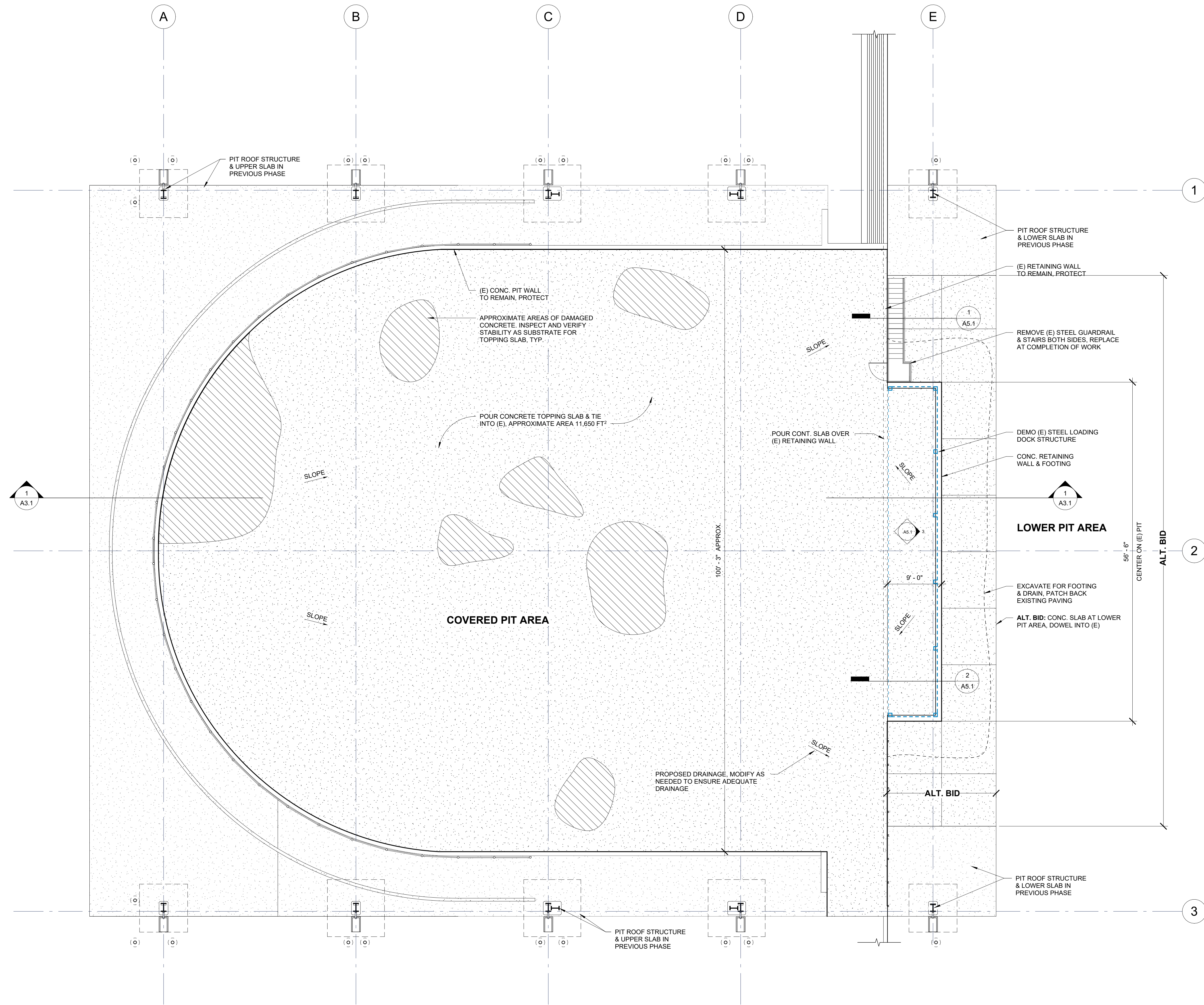
REVISIONS:
DATE DESCRIPTION

DATE: JULY 2025

SHEET TITLE:
TITLE SHEET,
VICINITY MAP

G1.0

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TRUE PLAN
NORTH NORTH
1
1/8" = 1'-0"
SLAB PLAN

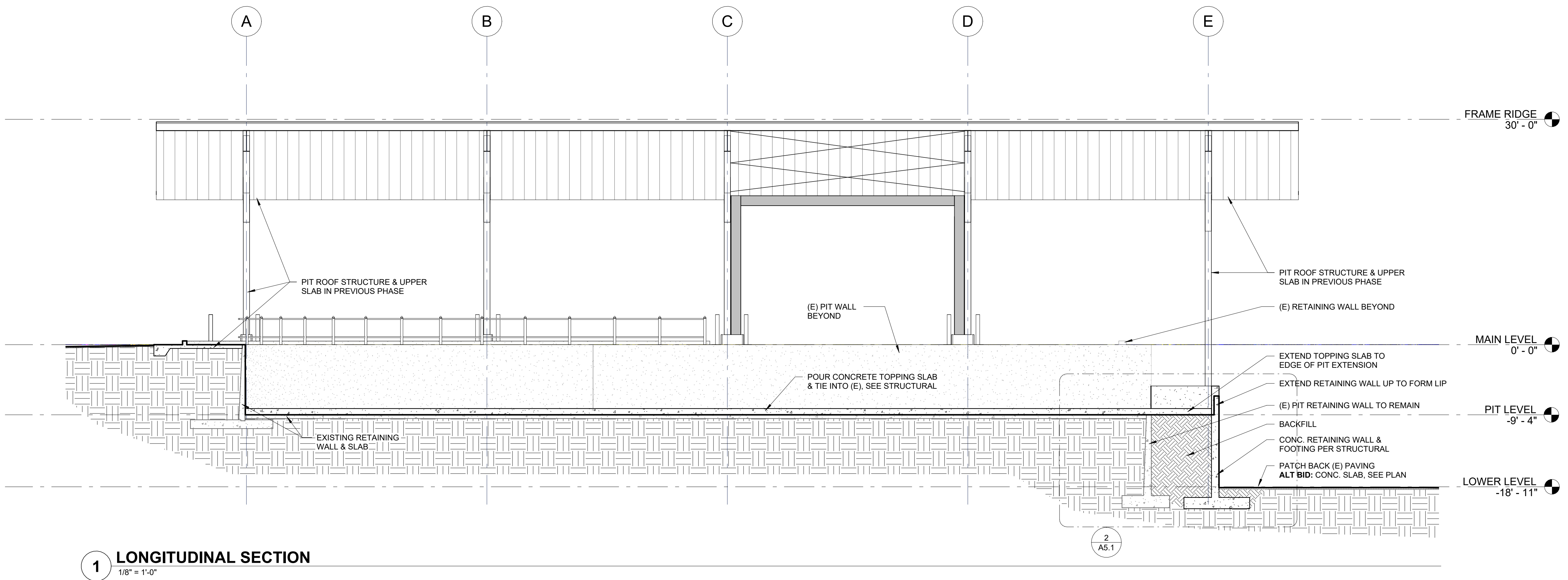
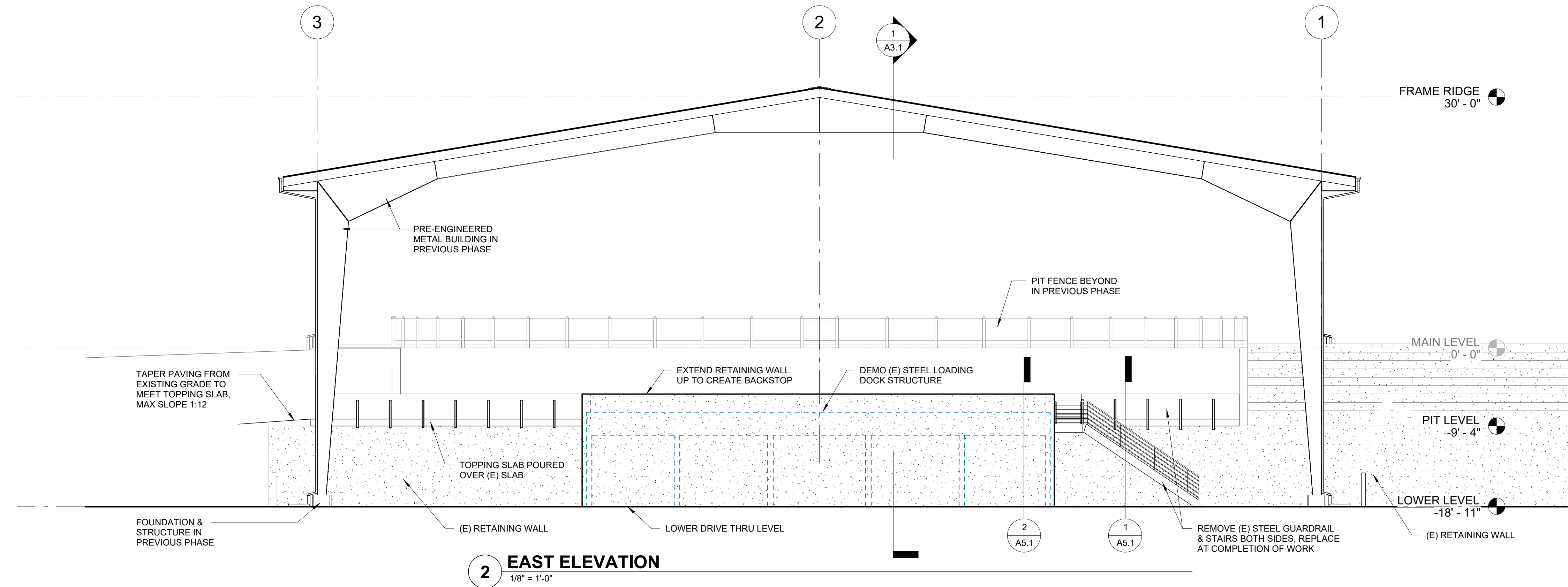
BIDDING

REVISIONS:	#	DATE	DESCRIPTION

DATE: JULY 2025

SHEET TITLE:
FLOOR PLAN

A2.1



PROJECT NO.: 19.48.1

**BEAVER HILL PIT
SLAB REPLACEMENT**

COOS COUNTY SOLID WASTE DISPOSAL TRANSFER STATION
55722 HIGHWAY 101, COOS BAY, OREGON

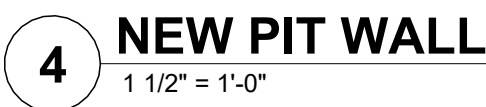
BIDDING

REVISIONS:
DATE DESCRIPTION

DATE: JULY 2025

SHEET TITLE:
**SECTIONS &
ELEVATIONS**

A3.1



STRUCTURAL - GENERAL NOTES

GENERAL REQUIREMENTS

GOVERNING CODE: The design and construction of this project is governed by the "Oregon Specialty Structural Code (OSSC)", 2022 Edition, hereafter referred to as the IBC, as adopted and modified by the County of Coos, Oregon understood to be the Authority Having Jurisdiction (AHJ).

NARRATIVE: DCI Engineer's scope includes a concrete foundation system to support a lightweight manufactured steel building by others.

REFERENCE STANDARDS: Refer to Chapter 35 of 2018 IBC. Where other Standards are noted in the drawings, use the latest edition of the standard unless a specific date is indicated. Reference to a specific section in a code does not relieve the contractor from compliance with the entire standard.

DEFINITIONS: The following definitions cover the meanings of certain terms used in these notes:

- "Architect/Engineer" — The Architect of Record and the Structural Engineer of Record.
- "Structural Engineer of Record" (SER) — The structural engineer who is licensed to stamp & sign the structural documents for the project. The SER is responsible for the design of the Primary Structural System.
- "Submit for review" - Submit to the Architect/Engineer for review prior to fabrication or construction.
- "Per Plan" — Indicates references to the structural plans, elevations and structural general notes.
- "Specialty Structural Engineer" (SSE) — A professional engineer (PE or SE), licensed in the State where the project is located, (typically not the SER), who performs specialty structural engineering services for selected specialty-engineered elements identified in the Contract Documents, and who has experience and training in the Specialty. Documents stamped and signed by the SSE shall be completed by or under the direct supervision of the SSE.
- "Bidder-designed" — Components of the structure that require the general contractor, subcontractor, or supplier who is responsible for the design, fabrication and installation of specialty-engineered elements identified in the Contract Documents to retain the services of an SSE. Submittals of "Bidder-designed" elements shall be stamped and signed by the SSE.

SPECIFICATIONS: Refer to the project specifications issued as part of the contract documents for information supplemental to these drawings.

OTHER DRAWINGS: Refer to the architectural, mechanical, electrical, civil and plumbing drawings for additional information including but not limited to: dimensions, elevations, slopes, door and window openings, non-bearing walls, stairs, finishes, drains, waterproofing, railings, curbs, depressions, mechanical unit locations, and other nonstructural items.

STRUCTURAL DETAILS: The structural drawings are intended to show the general character and extent of the project and are not intended to show all details of the work. Use entire detail sheets and specific details referenced in the plans as "typical" wherever they apply. Similarly, use details on entire sheets with "typical" in the name wherever they apply.

STRUCTURAL RESPONSIBILITIES: The structural engineer (SER) is responsible for the strength and stability of the primary structure in its completed form.

COORDINATION: The Contractor is responsible for coordinating details and accuracy of the work; for confirming and correlating all quantities and dimensions; for selecting fabrication processes; for techniques of assembly; and for performing work in a safe and secure manner.

MEANS, METHODS and SAFETY REQUIREMENTS: The contractor is responsible for the means and methods of construction and all job-related safety standards such as OSHA and DOSH (Department of Occupational Safety and Health). Contractor is responsible to adhere to OSHA regulations regarding steel erection items specifically addressed in the latest OSHA regulations. Bolting and field welding at all member connections is to be completed prior to the release of the member from the hoisting mechanism unless reviewed and approved by the General Contractor's temporary bracing and shoring design engineer.

BRACING/SHORING DESIGN ENGINEER: The contractor shall at his discretion employ an SSE, a registered professional engineer for the design of any temporary bracing and shoring.

TEMPORARY SHORING, BRACING: The contractor is responsible for the strength and stability of the structure during construction and shall provide temporary shoring, bracing and other elements required to maintain stability until the structure is complete. It is the contractor's responsibility to be familiar with the work required in the construction documents and the requirements for executing it properly.

CONSTRUCTION LOADS: Loads on the structure during construction shall not exceed the design loads as noted in DESIGN CRITERIA & LOADS below or the capacity of partially completed construction as determined by the Contractor's SSE for Bracing/Shoring.

CHANGES IN LOADING: The contractor has the responsibility to notify the SER of any architectural, mechanical, electrical, or plumbing load imposed onto the structure that differs from, or that is not documented on the original Contract Documents (architectural / structural / mechanical / electrical or plumbing drawings). Provide documentation of location, load, size and anchorage of all undocumented loads in excess of 400 pounds. Provide marked-up structural plan indicating locations of any new equipment or loads. Submit plans to the Architect/Engineer for review prior to installation.

NOTE PRIORITIES: Plan and detail notes and specific loading data provided on individual plans and detail drawings supplements information in the Structural General Notes.

DISCREPANCIES: In case of discrepancies between the General Notes, Specifications, Plans/Details or Reference Standards, the Architect/Engineer shall determine which shall govern. Discrepancies shall be brought to the attention of the Architect/Engineer before proceeding with the work. Should any discrepancy be found in the Contract Documents, the Contractor will be deemed to have included in the price the most expensive way of completing the work, unless prior to the submission of the price, the Contractor asks for a decision from the Architect as to which shall govern. Accordingly, any conflict in or between the Contract Documents shall not be a basis for adjustment in the Contract Price.

SITE VERIFICATION: The contractor shall verify all dimensions and conditions at the site. Conflicts between the drawings and actual site conditions shall be brought to the attention of the Architect/Engineer before proceeding with the work.

ADJACENT UTILITIES: The contractor shall determine the location of all adjacent underground utilities prior to earthwork, foundations, shoring, and excavation. Any utility information shown on the drawings and details is approximate and not necessarily complete.

ALTERNATES: Alternate products of similar strength, nature and form for specified items may be submitted with adequate technical documentation (proper test report, etc.) to the Architect/Engineer for review. Alternate materials that are submitted without adequate technical documentation or that significantly deviate from the design intent of materials specified may be returned without review. Alternates that require substantial effort to review will not be reviewed unless authorized by the Owner.

DESIGN CRITERIA AND LOADS

OCCUPANCY:	Risk Category of Building per 2018 IBC Table 1604.5 =	II
------------	---	----

WIND DESIGN:	MAIN WIND FORCE RESISTING SYSTEM	
	Ultimate Design Wind Speed, V _{ULT} (MPH)	120
	Exposure Category	C
	Internal Pressure Coefficient	C _{pi} = +/- 0.00
	Topographic Factor	K _{zt} = 1.0
	Wind Analysis:	By SSE

SEISMIC DESIGN:	Seismic Design Category:	SDC = E	
		Lateral	Longitudinal
	Seismic Force Resisting System	SOMF	SOCBF
	Response Modification Factor:	R = 3.25	3.50
	System Over strength Factor:	Omega _o = 2.0	2.50
	Deflection Amplification Factor:	C _o = 3.25	3.00
	Site Classification per IBC 1613.3.2 & ASCE 7-16, Ch. 20		
	Site Class =	D	
	Seismic Importance Factor per ASCE 7-16 Table 1.5-2	I _e = 1.0 (4)	
	Spectral Response Acceleration (Short Period)	S _s = 2.07 g	
	Spectral Response Acceleration (1-Second Period)	S ₁ = 0.935 g	
	Spectral Design Response Coefficient (Short Period)	S _{ns} = 1.38 g	
	Spectral Design Response Coefficient (1-Second Period)	S _{ni} = N/A	
	Redundancy Factor	rho = 1.3	1.3
	Design Base Shear (KIPS)	0.46*W	0.43*W

SNOW LOAD: (1)	Flat Roof Snow Load, (PSF)	p = 20 (2)
	Snow Drift Loading required by Authority Having Jurisdiction?	Yes
	Snow Load Importance Factor	I _s = 1.0 (3) (4)
	Ground Snow Load, (PSF)	p _g = 19.00
	Snow Exposure Factor	C _e = 0.90
	Thermal Factor	C _t = 1.00

- Snow Load is un-reducible and includes 5 psf rain-on-snow surcharge where ground snow load is greater than zero and 20 psf or less per ASCE 7-16 Section 7.10.
- Snow Load based on SEA0.
- Snow Load Importance Factor per ASCE 7-16 Table 1.5-2.

DEFERRED SUBMITTALS

BIDDER-DESIGNED ELEMENTS

Submit "Bidder-Designed" submittals to the Architect and SER for review. The deferred submittals shall also be submitted to the city for approval, if required by the city.

Design of prefabricated, "bidder designed", manufactured, pre-engineered, or other fabricated products shall be completed with the following requirements:

- Design considers tributary dead, live, wind and earthquake loads in combinations required by IBC.
- Design within the Deflection Limits noted herein and as specified or referenced in the IBC.
- Design shall conform to the specifications and reference standards of the governing code.
- Submittal shall include:
 - Calculations prepared, stamped and signed by the SSE demonstrating code conformance.
 - Engineered component design drawings are prepared, stamped and signed by the SSE.
 - Product data, technical information and manufacturer's written requirements and Agency approvals as applicable.
 - SSE may submit to the Architect/Engineer, a request to utilize relevant alternate design criteria of similar nature and generally equivalency which is recognized by the Code and acceptable to the Authority Having Jurisdiction. Submit adequate documentation of design.

GENERAL CONTRACTOR'S PRIOR REVIEW: Once the contractor has completed his review of the SSE component drawings, the SER will review the submittal for general conformance with the design of the building and will stamp the submittal accordingly. Review of the Specialty Structural Engineer's (SSE) shop drawings (component design drawings) is for compliance with design criteria and compatibility with the design of the primary structure and does not relieve the SSE of responsibility for that design. All necessary bracing, ties, anchorage, proprietary products shall be furnished and installed per manufacturer's instructions or the SSE's design drawings and calculations. These elements include but are not limited to:

Structural Deferred Submittals: Deferred submittals are required to be submitted to the city for approval under a separate application. These elements include but are not limited to:

- Pre-Engineered Steel Structures (Metal Buildings)

INSPECTIONS, QUALITY ASSURANCE VERIFICATIONS AND TEST REQUIREMENTS

INSPECTIONS: Foundations, footings, under slab systems and framing are subject to inspection by the Building Official in accordance with IBC 110.3. Contractor shall coordinate all required inspections with the Building Official.

SPECIAL INSPECTIONS, VERIFICATIONS and TESTS: Special Inspections, Verifications and Testing shall be done in accordance with IBC Chapter 17, the STATEMENT and SCHEDULES OF SPECIAL INSPECTIONS listed in these drawings.

STRUCTURAL OBSERVATION:

Structural Observation for this project is not required per IBC Section 1704.6.

SPECIAL INSPECTION AGENCY and SPECIAL INSPECTORS: Owner shall retain a WABO accredited Special Inspections agency to provide Special Inspections for the project. Special Inspectors shall be qualified persons per IBC 1704.2.1.

STATEMENT OF SPECIAL INSPECTIONS, Special Inspections and Testing per IBC Sections 1704 and 1705 are required for the following:

FABRICATION SHOP INSPECTION: Where off-site Fabrication of gravity LOAD BEARING MEMBERS & ASSEMBLIES is performed, Special Inspector shall verify that the fabricator complies with IBC 1704.2.5.

STRUCTURAL STEEL per IBC 1704.2.5.1

A qualified Special Inspector of an "approved agency" providing Quality Assurance (QA) Special Inspections for the project shall review and confirm the Fabricator and Erector's Quality Control (QC) procedures for completeness and adequacy relative to AISC 360-10 Chapter N, the AISC 303 Code of Standard Practice, AWS D1.1-2010 Structural Welding Code, and 2015 IBC code requirements for the fabricator's scope of work.

Waiver of Special Inspection - Fabricator Approval Verification per IBC Section 1704.2.5.2: Special Inspections at the Shop may be waived when Fabricator has been audited for Quality Control by an approved inspection agency and is currently registered or otherwise accepted by the Authority Having Jurisdiction (AHJ) per IBC 1704.2.5.2 to perform both Quality Control (QC) and Quality Assurance (QA) inspections. Fabricator is approved to perform fabrication without Special Inspections and shall at the completion of fabrication provide a "Certificate of Compliance" to the Authority Having Jurisdiction stating that the work was performed in accordance with the approved Construction Documents.

- QA Agency providing Special Inspections shall provide personnel meeting the minimum qualification requirements for Inspection and Nondestructive Testing NDT per AISC 360-10 Section N4.
- For Special Inspections of Steel Seismic Force Resisting Systems, QA Agency personnel shall meet the minimum qualification requirements for Inspection and Nondestructive Testing NDT per AISC 341-10 Sections J3 and J4.
 - QA Agency shall submit qualification documents per AISC 341-10 section J2 on projects subject to Special Inspections on Seismic Force Resisting Systems with R > 3.
 - NDT personnel shall be qualified per AISC 341-10 Section J4.
 - Provide QA Inspections per AISC 341-10 Section J5 through J10 as applicable.
- Verify Fabricator and Erector Quality Control Program per AISC 360-10 Section N2.
- Inspection Tasks for Bolting per AISC 360-10 Section N5.6
 - Prior to Bolting per AISC 360-10 Table N5.6-1and AISC 341-10 Table J7-1 of the SFRS. Not required for snug-tight joints.
 - During Bolting per AISC 360-10 Table N5.6-2 and AISC 341-10 Table J7-2 of the SFRS. Not required for snug-tight joints.
 - After Bolting per AISC 360-10 Table N5.6-3 and AISC 341-10 Table J7-3 of the SFRS.
- Additional Inspection tasks per AISC 360-10 Section N5.7 and AISC 341-10 Table J8-1 of the SFRS.

SOILS & FOUNDATION CONSTRUCTION per IBC Section 1705.6

- Periodic inspection of soils earthwork per Table 1705.6 is required for:
 - Footing soil bearing surfaces prior to placing any reinforcing steel
 - Excavation depth and bearing layer prior to placing any reinforcing steel.

POST-INSTALLED ANCHORS TO CONCRETE and MASONRY: shall comply with IBC Section 1703. Inspections shall be in accordance with the requirements set forth in the approved ICC Evaluation Report and as indicated by the design requirements specified on the drawings. Refer to the POST INSTALLED ANCHORS section of these notes for anchors that are the basis of the design. Special inspector shall verify anchors are as specified in the POST INSTALLED ANCHORS section of these notes or as otherwise specified on the drawings. Substitutions require approval by the SER and require substantiating calculations and current 2012 IBC-recognized ICC Evaluation Services (ES) Report. Special Inspector shall document in their Special Inspection Report compliance with each of the elements required within the applicable ICC Evaluation Services (ES) Report.

INSPECTION SUBMITTALS: Special inspection reports shall be provided on a weekly basis. Final special inspection reports will be required by each special inspection firm per IBC 1704.2.4. Submit copies of all inspection reports to the Architect/Engineer and the Authority Having Jurisdiction for review.

CONTRACTOR RESPONSIBILITY: Prior to issuance of the building permit, the Contractor is required to provide the Authority Having Jurisdiction a signed, written acknowledgement of the Contractor's responsibilities associated with the above Statement of Special Inspections addressing the requirements listed in IBC Section 1704.4. Contractor is referred to IBC Sections 1705.12.5 and 1705.12.6 for architectural and MEP building systems that may be subject to additional inspections (based on the building's designated Seismic Design Category listed in the CRITERIA), including anchorage of HVAC ductwork containing hazardous materials, piping systems and mechanical units containing flammable, combustible or highly toxic materials, electrical equipment used for emergency or standby power, exterior wall panels and suspended ceiling systems.

PREFABRICATED CONSTRUCTION: All prefabricated construction shall conform to IBC Section 1703.

SOILS AND FOUNDATIONS

REFERENCE STANDARDS: Conform to IBC Chapter 18 "Soils and Foundations."

GEOTECHNICAL REPORT: Recommendations contained in Geotechnical Report by PLSA Engineering & Surveying dated July 01, 2020 were used for design.

CONTRACTOR'S RESPONSIBILITIES: Contractor shall be responsible to review the Geotechnical Report and shall follow the recommendations specified therein including, but not limited to, subgrade preparations, pile installation procedures, ground water management and steep slope Best Management Practices."

GEOTECHNICAL SUBGRADE INSPECTION: The Geotechnical Engineer shall inspect all sub-grades and prepared soil bearing surfaces, prior to placement of foundation reinforcing steel and concrete. Geotechnical Engineers shall provide a letter to the owner stating that soils are adequate to support the "Allowable Foundation Bearing Pressure(s)" shown below.

DESIGN SOIL VALUES:

Allowable Foundation Bearing Pressure	1500 PSF
Passive Lateral Pressure (assumed)	375 PSF/FT
Active Lateral Pressure (unrestrained, assumed)	50 PSF/FT
Coefficient of Sliding Friction (assumed)	0.35

FOUNDATIONS and FOOTINGS: Foundations shall bear on either on competent native soil or compacted structural fill as per the geotechnical report. Exterior perimeter footings shall bear not less than 36 inches below finish grade, unless otherwise specified by the geotechnical engineer and/or the building official.

FOOTING DEPTH: Tops of footings shall be as shown on plans with vertical changes as indicated with steps in the footings; locations of steps shown as approximate and shall be coordinated with the civil grading plans to ensure that the exterior perimeter footings bear no less than 36 inches below finish grade, or as otherwise indicated by the geotechnical engineer or building official.

SLABS-ON-GRADE: All slabs-on-grade shall bear on compacted structural fill or competent native soil per the geotechnical report. All moisture sensitive slabs-on-grade or those subject to receive moisture sensitive coatings/covering shall be provided with an appropriate capillary break and vapor barrier/retardant over the subgrade prepared and installed as noted in the geotechnical report, barrier manufacturer's written recommendations and coordinated with the finishes specified by the Architect.

CAST-IN-PLACE CONCRETE

REFERENCE STANDARDS: Conform to:

- ACI 301-16 "Specifications for Structural Concrete"
- IBC Chapter 19 "Concrete"
- ACI 318-14 "Building Code Requirements for Structural Concrete"
- ACI 117-10 "Specifications for Tolerances for Concrete Construction and Materials"

FIELD REFERENCE: The contractor shall keep a copy of ACI Field Reference manual, SP-15, "Standard Specifications for Structural Concrete (ACI 301) with Selected ACI and ASTM References."

CONCRETE MIXTURES: Conform to ACI 301 Section 4 "Concrete Mixtures" and IBC Section 1904.2.

MATERIALS: Conform to ACI 301 Section 4.2.1 "Materials" for requirements for cementitious materials, aggregates, mixing water and admixtures.

SUBMITTALS: Provide all submittals required by ACI 301 Section 4.1.2. Submit mix designs for each mix in the table below. Substantiating strength results from past tests shall not be older than 24 months per ACI 318 Section 5.3.

TABLE OF MIX DESIGN REQUIREMENTS

Member Type/Location	Strength f'c (psi)	Test Age (days)	Maximum Aggregate	Exposure Class	Max W/C Ratio	Air Content	Notes (1 to 8 Typical UNO)
Footings	3000	28	1"	-	-	-	-
Interior Slabs on Grade	4500	28	1"	-	0.45	-	-

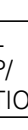
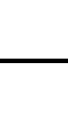
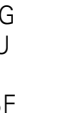
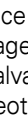
Table of Mix Design Requirements Notes:

- W/C Ratio: Water—cementitious material ratios shall be based on the total weight of cementitious materials. Maximum ratios are controlled by strength noted in the Table of Mix Design Requirements and durability requirements given in ACI 318 Section 19.3.
- Cementitious Materials:
 - The use of fly ash, other pozzolans, silica fume, or slag shall conform to ACI 318 Sections 19.3.2 and 26.4.2.2. Maximum amount of fly ash shall be 25% of total cementitious content unless reviewed and approved otherwise by SER.
 - For concrete used in elevated floors, minimum cementitious-materials content shall conform to ACI 301 Table 4.1.2.9. Acceptance of lower cement content is contingent on providing supporting data to the SER for review and acceptance.
 - Cementitious materials shall conform to the relevant ASTM standards listed in ACI 318 Section 26.4.1.1.(a).
- Air Content: Conform to ACI 318 Section 19.3.3.1. Minimum standards for exposure class are noted in the table. If freezing and thawing class is not noted, air content given is that required by the SER. Tolerance is ±1-%. Air content shall be measured at point of placement.
- Aggregates shall conform to ASTM C33.
- Slump: Conform to ACI 301 Section 4.2.2.2. Slump shall be determined at point of placement.
- Chloride Content: Conform to ACI 318 Table 19.3.2.1.
- Non- chloride accelerator: Non-chloride accelerating admixture may be used in concrete placed at ambient temperatures below 50°F at the contractor's option.
- ACI 318, Section 19.3.1.1 exposure classes shall be assumed to be F0 unless different exposure classes are listed in the Table of Mix Design Requirements that modify these base requirements.

FORMWORK & RESHORING: Conform to ACI 301 Section 2 "Formwork and Form Accessories." Removal of Forms shall conform to Section 2.3.2 except strength indicated in Section 2.3.2.5 shall be 0.75 f' c.

MEASURING, MIXING, AND DELIVERY: Conform to ACI 301 Section 4.3.

HANDLING, PLACING, CONSTRUCTING AND CURING: Conform to ACI 301 Section 5. In addition, hot weather concreting shall conform to ACI 305.1-06 and cold weather concreting shall conform to ACI 306.1-90.

DRAWING LEGEND			
MARK	DESCRIPTION	MARK	DESCRIPTION
F2.0	FOOTING SYMBOL (REFER TO SPREAD FOOTING SCHEDULE)	I	INDICATES WIDE FLANGE COLUMN
	PILE CAP SYMBOL (REFER TO PILE CAP SCHEDULE)		INDICATES HOLLOW STRUCTURAL SECTION (HSS) COLUMN OR TUBE STEEL (TS) COLUMN
	TILT-UP/PRECAST CONCRETE WALL CONNECTION SYMBOL (REFER TO CONNECTION DETAIL)		INDICATES HOLLOW STRUCTURAL SECTION (HSS) COLUMN OR STEEL PIPE COLUMN
2W4	SHEAR WALL SYMBOL (REFER TO SHEAR WALL SCHEDULE)		INDICATES WOOD POST
	REVISION TRIANGLE		INDICATES BUNDLED STUDS
	TILT-UP/PRECAST CONCRETE WALL PANEL NUMBER (REFER TO TILT-UP/PRECAST CONCRETE WALL ELEVATIONS)		INDICATES CONCRETE COLUMN
	CMU WALL REINFORCING SYMBOL (REFER TO CMU WALL REINFORCING SCHEDULE)		INDICATES PRECAST CONCRETE COLUMN
	CONTINUITY PLATE LENGTH (REFER TO TYPICAL DETAIL)		INDICATES MOMENT FRAME CONNECTION
	INDICATES DOUBLE SHEAR CONNECTION (REFER TO THE DOUBLE SHEAR PLATE CONNECTIONS DETAIL)		INDICATES PARTIALLY RESTRAINED MOMENT FRAME CONNECTION
	INDICATES REINFORCING TYPE (REFER TO THE REINFORCING SCHEDULE)		INDICATES CANTILEVER CONNECTION
	INDICATES NUMBER OF STUD RAIL REQUIRED AT COLUMN (REFER TO STUD RAIL DETAILS)		INDICATES DRAG CONNECTION
	ROOF/FLOOR DIAPHRAGM NAILING SYMBOL (REFER TO DIAPHRAGM NAILING SCHEDULE)		INDICATES A LEDGER
 COLUMN SIZE	STEEL/CONCRETE COLUMN SYMBOL (REFER TO STEEL COLUMN SCHEDULE)		INDICATES WOOD OR STEEL STUD BEARING WALL LINE PER KEY ON SHEET
$T/FTG = X'-X"$	ELEVATION SYMBOL (T/ REFERS TO COMPONENT THAT THE ELEVATION REFERENCES)	 OR 	INDICATES WOOD OR STEEL STUD SHEAR WALL LINE AND HOLD-DOWNS PER KEY ON SHEET
	STUD BUBBLE (INDICATES NUMBER OF STUDS REQUIRED IF EXCEEDS NUMBER SPECIFIED IN PLAN NOTE)		INDICATES MASONRY/CMU WALL
	INDICATES STEP IN FOOTING (REFER TO TYPICAL STEP IN FOOTING DETAIL)		INDICATES CONCRETE/TILT-UP CONCRETE WALL
 SXXX	DETAILS OR SECTION CUT (DETAIL NUMBER/SHEET NUMBER)		INDICATES BEARING WALL BELOW
	DETAILS OR SECTION CUT IN PLAN VIEW (DETAIL NUMBER/SHEET NUMBER)		INDICATES EXISTING WALL
	INDICATES LOCATION OF CONCRETE WALLS, SHEAR WALLS OR BRACED FRAME ELEVATIONS		POST-TENSION DEAD END (PLAN)
	STRUCTURAL EXTENT SYMBOL SINGLE ARROW - END OF EXTENT DOUBLE ARROW - CONTINUOUS EXTENT ALONG THE ELEMENT LINE UNTIL THE ELEMENT IS INTERRUPTED		POST-TENSION STRESSING END (PLAN)
	INDICATES DIRECTION OF DECK SPAN		POST-TENSION PROFILE (PLAN) (IN INCHES)
			INTERMEDIATE STRESSING (PLAN)
ABBREVIATIONS			
L	Angle	EXCAV	Excavation
AB	Anchor Bolt	FB	Factory-Built
ADDL	Additional	FD	Floor Drain
ADH	Adhesive	FDN	Foundation
ALT	Alternate	FIN	Finish
ARCH	Architectural	FLR	Floor
B or BOT	Bottom	FRP	Fiberglass Reinforced Plastic
B/	Bottom Of	FRT	Fire Retardant Treated
BLDG	Building	FTG	Footing
BLKG	Blocking	FR	Roof Drain
BMU	Brick Masonry Unit	GA	Gage
BP	Baseplate	GALV	Galvanized
BRBF	Buckling Restrained	GEOTECH	Geotechnical
BRG	Bearing	GL	Glue Laminated Timber
BTWN	Between	GWB	Gypsum Wall Board
C	Camber	HDR	Header
CB	Castellated Beam	HF	Hem-Fir
C/BORE	Counterbore	HGR	Hanger
CL or ☐	Centerline	HD	Hold-down
CLT	Cross-Laminated Timber	HORIZ	Horizontal
CIP	Cast in Place	HSS = TS	High Point (Hollow Structural Section)
CFS	Cold-Formed Steel	IBC	International Building Code
CJ	Construction or Control Joint	ID	Inside Diameter
CJP	Complete Joint Penetration	IE	Invert Elevation
CLR	Clear	IF	Inside Face
CLG	Ceiling	INT	Interior
CMU	Concrete Masonry Unit	K	Kips
COL	Column	KSF	Kips Per Square Foot
CONC	Concrete	LF	Lineal Foot
CONN	Connection	LL	Live Load
CONST	Construction	LLB	Long Leg Back-to-Back
CONT	Continuous	LLH	Long Leg Horizontal
C/SINK	Countersink	LT	Low Point
CTRD	Centered	LONGIT	Longitudinal
DIA	Diameter	LSL	Laminated Strand Lumber
DB	Drop Beam	LVL	Laminated Veneer Lumber
DBA	Deformed Bar Anchor	MAS	Masonry
DBL	Double	MAX	Maximum
DEMO	Demolish	MECH	Mechanical
DEV	Development	MEP	Mechanical, Electrical, Plumbing
DF	Douglas Fir	MEZZ	Mezzanine
DIAG	Diagonal	MFR	Manufacturer
DIST	Distributed	MIN	Minimum
DL	Dead Load	MISC	Miscellaneous
DN	Down	NIC	Not In Contract
DO	Ditto	NLT	Nail-Laminated Timber
DP	Depth/Deep	NTS	Not To Scale
DWVG	Drawing	OC	On Center
(E)	Existing	OCBF	Ordinary Concentric Braced
EA	Each	OD	Outside Diameter
EL	Each Face	OF	Outside Face
ELEV	Elevation	OPNG	Opening
ELEC	Electrical	OPP	Opposite
ELEV	Elevator	OWSJ	Open Web Steel Joist
EMBED	Embedment	WJO	Wide Open Web Wood Joist
EQ	Equal	PL	Plate
EQUIP	Equipment	PAF	Powder Actuated Fastener
EW	Each Way	PC	Precast
EXP	Expansion	PERP	Perpendicular
EXP JT	Expansion Joint	PJP	Partial Joint Penetration
EXT	Exterior		
		PLF	Pounds Per Linear Foot
		PLWD	Plywood
		PREFAB	Prefabricated
		PSF	Pounds per Square Foot
		PSI	Pounds Per Square Inch
		PSL	Parallel Strand Lumber
		P-T	Post-Tensioned
		PT	Pressure Treated
		R	Radius
		RD	Roof Drain
		REF	Refer/Reference
		REINF	Reinforcing
		REQD	Required
		RET	Retaining
		SB	Site-Built
		SCBF	Special Concentric Braced Frame
		SCHED	Schedule
		SER	Structural Engineer of Record
		SFRS	Seismic Force-Resisting System
		SHTHG	Sheathing
		SIM	Similar
		SLBB	Short Leg Back-to-Back
		SMF	Special Moment Frame
		SOG	Slab on Grade
		SP	Southern Pine
		SPEC	Specification
		SQ	Square
		SR	Studrail
		SF	Square Foot
		ST	Stainless Steel
		STAGG	Stagger/Staggered
		STD	Standard
		STIFF	Stiffener
		STL	Steel
		STRUCT	Structural
		SWWJ	Solid Web Wood Joist
		SYM	Symmetrical
		T	Top
		T/	Top Of
		T&B	Top & Bottom
		TC AX LD	Top Chord Axial Load
		TCX	Top Chord Extension
		TDS	Tie Down System
		T&G	Tongue & Groove
		THKND	Thickened
		THRD	Threaded
		THRU	Through
		TRANSV	Transverse
		TYP	Typical
		UNO	Unless Noted Otherwise
		URM	Unreinforced Masonry
		Unit	Unit
		VERT	Vertical
		W	Wide
		W/	With
		WO	Without
		WHS	Welded Headed Stud
		WP	Working Point
		WWF	Welded Wire Fabric
		±	Plus or Minus

CONSTRUCTION JOINTS: Conform to ACI 301 Sections. 2.2.2.5, 5.2.2.1 and 5.3.2.6. Construction joints shall be located and detailed as on the construction drawings. Submit alternate locations per ACI 301 Section 5.1.2.3a for review and approval by the SER two weeks minimum prior to forming. Use of an acceptable adhesive, surface retardant, portland cement grout or roughening the surface is not required unless specifically noted on the drawings.

EMBEDDED ITEMS: Position and secure in place expansion joint material, anchors and other structural and non-structural embedded items before placing concrete. Contractor shall refer to mechanical, electrical, plumbing and architectural drawings and coordinate other embedded items.

GROUT: Use 7000 psi non-shrink grout under column base plates.

POST-INSTALLED ANCHORS to CONCRETE: Anchor location, type, diameter and embedment shall be as indicated on drawings. Reference the POST-INSTALLED ANCHORS section for applicable Post-Installed Anchor Adhesives. Anchors shall be installed and inspected in strict accordance with the applicable ICC-Evaluation Service Report (ESR). Special inspection shall be per the TESTS and INSPECTIONS section.

CONCRETE PLACEMENT TOLERANCE: Conform to ACI 117-10 for concrete placement tolerance.

FLOOR FLATNESS and FLOOR LEVELNESS: Minimum values of flatness, F(F) 30; and of levelness, F(L) 20; with minimum local values of flatness, F(F) 24; and of levelness, F(L) 15; for slabs-on-grade are required. Overall minimum values of flatness, F(F) 30; with minimum local values of flatness, F(F) 24; for suspended slabs are required. Concrete slabs that will receive wood flooring shall have a minimum F(F) 35. The preceding values are minimums unless specifications require higher values. Measured values shall be in accordance with ACI 117.

CONCRETE REINFORCEMENT

REFERENCE STANDARDS: Conform to:
(1) ACI 301-16 "Standard Specifications for Structural Concrete", Section 3 "Reinforcement and Reinforcement Supports."
(2) ACI SP-66(04) "ACI Detailing Manual"
(3) CRSI MSP-09, 28" Edition, "Manual of Standard Practice."
(4) ANSI/AWS D1.4: 2005, "Structural Welding Code - Reinforcing Steel."
(5) IBC Chapter 19-Concrete.
(6) ACI 318-14 "Building Code Requirements for Structural Concrete."
(7) ACI 117-10 "Specifications for Tolerances for Concrete Construction and Materials"

SUBMITTALS: Conform to ACI 301 Section 3.1.2 "Submittals." Submit placing drawings showing fabrication dimensions and placement locations of reinforcement and reinforcement supports.

MATERIALS:
Reinforcing Bars ASTM A615, Grade 60, deformed bars.
Weldable Reinforcing Bars ASTM A706, Grade 60, deformed bars.
Bar Supports CRSI MSP-09, Chapter 3 "Bar Supports."
Tie Wire 16 gage or heavier, black annealed.
Anchor Rods (UNO) ASTM F1554, Gr. 36 Heavy Hex Head

FABRICATION: Conform to ACI 301, Section 3.2.2. "Fabrication", and ACI SP-66 "ACI Detailing Manual."

WELDING: Bars shall not be welded unless authorized. When authorized, conform to ACI 301, Section 3.2.2.2. "Welding", AWS D1.4, and provide ASTM A706, grade 60 reinforcement.

PLACING: Conform to ACI 301, Section 3.3.2 "Placement." Placing tolerances shall conform to ACI 117.

CONCRETE COVER: Conform to the following cover requirements unless noted otherwise in the drawings.

Concrete cast against earth	3"
Concrete exposed to earth or weather	2"
Ties in columns and beams	1-1/2"
Bars in walls	3/4"

SPLICES: Conform to ACI 301, Section 3.3.2.7. "Splices". Refer to "Typical Lap Splice and Development Length Schedule" for typical reinforcement splices. Splices indicated on individual sheets shall control over the schedule. Mechanical connections may be used when approved by the SER.

FIELD BENDING: Conform to ACI 301 Section 3.3.2.8. "Field Bending or Straightening." Bar sizes #3 through #5 may be field bent cold the first time. Other bars require preheating. Do not twist bars. Bars shall not be bent past 45 degrees.

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DCI PROJECT NO.: 20031-0084-02

BEAVER HILL PIT ROOF STRUCTURE
SLAB REPLACEMENT
COOS COUNTY SOLID WASTE DISPOSAL TRANSFER STATION
55722 HIGHWAY 101, COOS BAY, OREGON

CONSTRUCTION

REVISIONS:
DATE DESCRIPTION

DATE: AUG. 2024

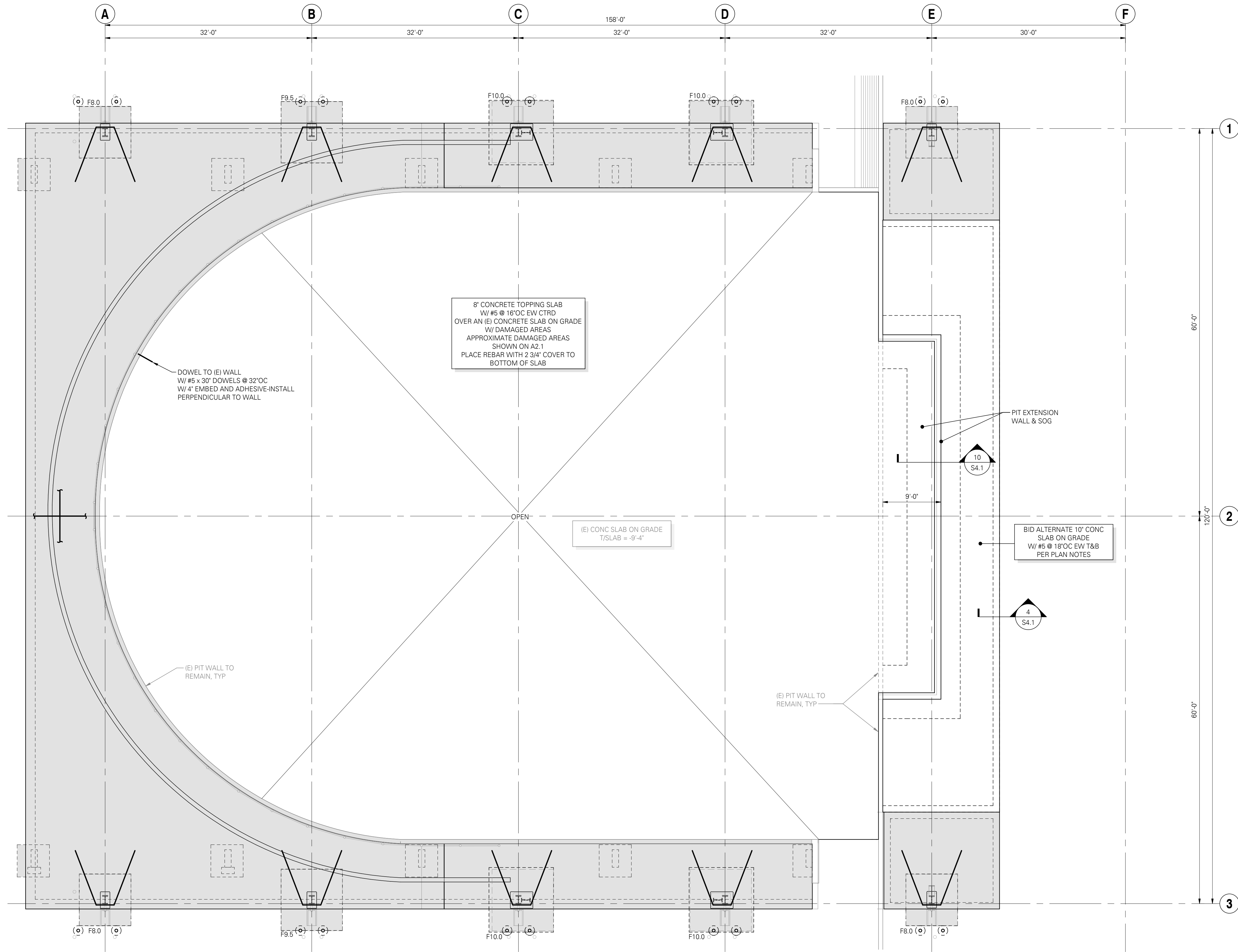
SHEET TITLE:
STRUCTURAL
GENERAL NOTES
CONTINUED

S1.2

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FOUNDATION PLAN NOTES:

- STRUCTURAL GENERAL NOTES, DESIGN CRITERIA, ABBREVIATIONS AND LEGEND PER S1.1 - S1.2.
- VERIFY ALL DIMENSIONS AND ELEVATIONS WITH THE ARCHITECTURAL DRAWINGS.
- CONTRACTOR SHALL LOCATE AND VERIFY THE FOLLOWING WITH OTHERS PRIOR TO POURING CONCRETE: ALL DOOR OPENINGS IN FOUNDATION WALLS; DRAINS AND SLOPES; BLOCKOUTS FOR PLUMBING, SPRINKLERS AND HVAC. ALL DUCTS, CHASES AND PIPES PER MECHANICAL, PLUMBING, ELECTRICAL AND SPRINKLER DRAWINGS. STAIR DETAILS AND GUARDRAILS PER ARCHITECTURAL DRAWINGS.
- TOP OF SLAB (T/SLAB) ELEVATION ASSUMED 0'-0". FOR ACTUAL T/SLAB ELEVATION REFER TO CIVIL AND ARCHITECTURAL DRAWINGS. PROVIDE 6 MIL VAPOR BARRIER BELOW SLAB AT INTERIOR SPACES. PROVIDE FREE-DRAINING GRANULAR FILL PER GEOTECH REPORT.
- ALL FOOTINGS AND SLABS TO BEAR ON COMPETENT NATIVE SOIL AND/OR STRUCTURAL FILL. IMPROVED SOIL, SUBGRADE PREPARATION, STRUCTURAL FILL, DRAINAGE SYSTEM, AND OTHER REQUIREMENTS PER GEOTECH REPORT AS NOTED IN THE STRUCTURAL GENERAL NOTES.
- CJ INDICATES CONTROL JOINT PER PLAN.
- MOISTURE PROOF ALL CONCRETE STEM AND BASEMENT WALLS PER ARCHITECT. CONTRACTOR TO VERIFY ADDITIONAL LOCATIONS WHICH REQUIRE WATERPROOFING PER ARCHITECTURAL DRAWINGS.
- TYPICAL DETAILS PER:
1/S3.1 TYPICAL LAP SPLICE SCHEDULE
2/S3.1 STANDARD HOOKS AND BAR BENDS
- REMOVE DAMAGED PORTIONS OF THE EXISTING SLAB ON GRADE. PROVIDE SOIL PREPARATION OF THE SOIL BELOW THE REMOVED SLAB SECTIONS PER THE GEOTECHNICAL REPORT.



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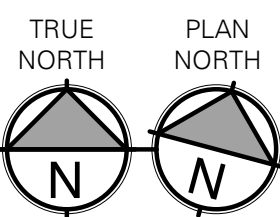
SHEET TITLE:
STRUCTURAL
GROUND LEVEL
FOUNDATION PLAN

S2.1

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GROUND LEVEL FOUNDATION PLAN

SCALE: 1/8" = 1'-0"



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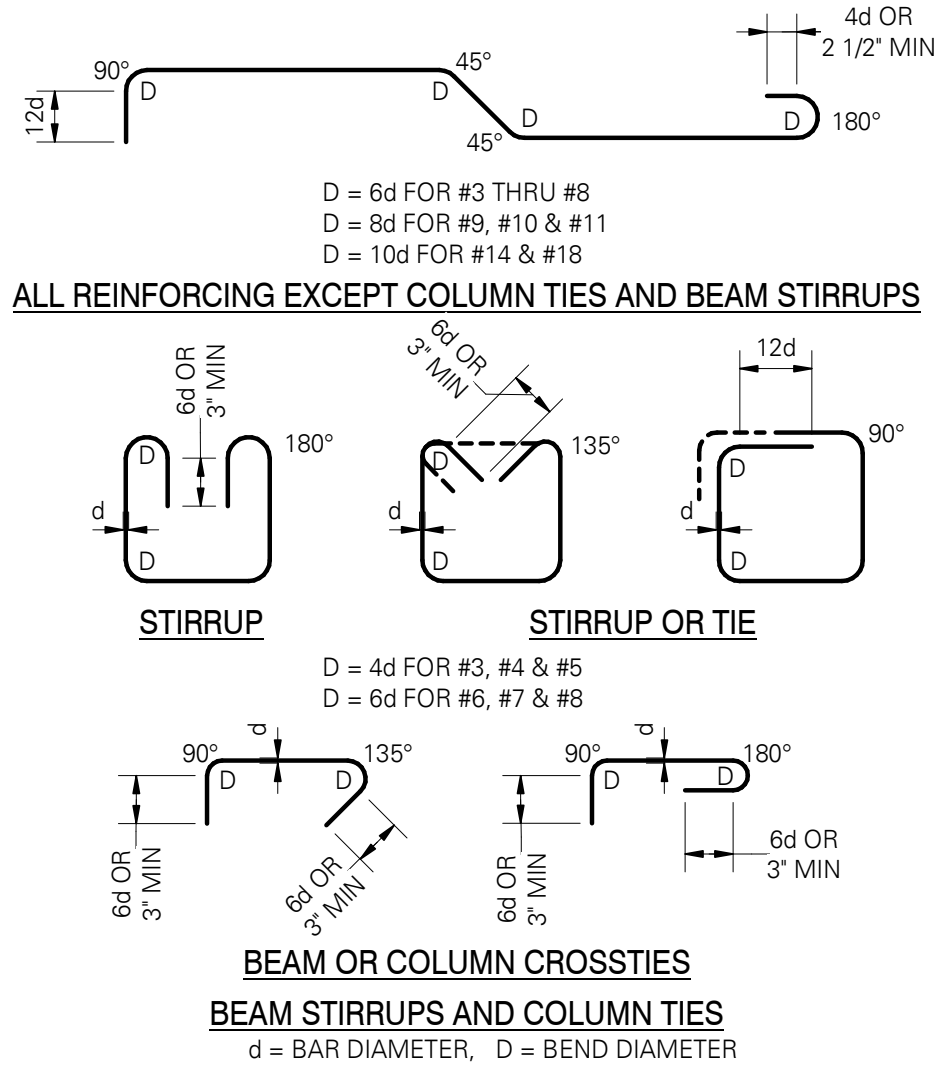
01403A		GRADE 60 REINFORCING				
BAR SIZE	MISCELLANEOUS BARS		TOP BARS (see note #3)		HOOKED BARS	
	Ld	Splice	Ld	Splice		
f'c = 3000psi						
#3	17	22	22	28	9	
#4	22	29	29	38	11	
#5	28	36	36	47	14	
#6	33	43	43	56	17	
#7	48	63	63	81	20	
#8	55	72	72	93	22	
#9	62	81	81	105	25	

NOTES:

- ALL TABULATED VALUES ARE IN INCHES.
- VALUES FOR UNCOATED REINFORCING AND NORMAL WEIGHT CONCRETE WITH CLEAR SPACING > db, CLEAR COVER > db AND MINIMUM STIRRUPS OR TIES THROUGHOUT Ld OR CLEAR SPACING > 2db AND CLEAR COVER > db.
- TOP REINFORCING = HORIZONTAL REINFORCING WITH MORE THAN 12" OF FRESH CONCRETE BELOW OR AS NOTED ON DOCUMENTS AS "TOP BAR".
- LAP SPLICE OF DIFFERENT SIZE BARS TO BE THE LARGER OF Ld OF THE LARGER BAR OF SPLICE LENGTH OF THE SMALLER BAR

LAP SPLICE AND DEVELOPMENT LENGTH SCHEDULE

SCALE: 3/4" = 1'-0" (01403A)



ALL REINFORCING EXCEPT COLUMN TIES AND BEAM STIRRUPS

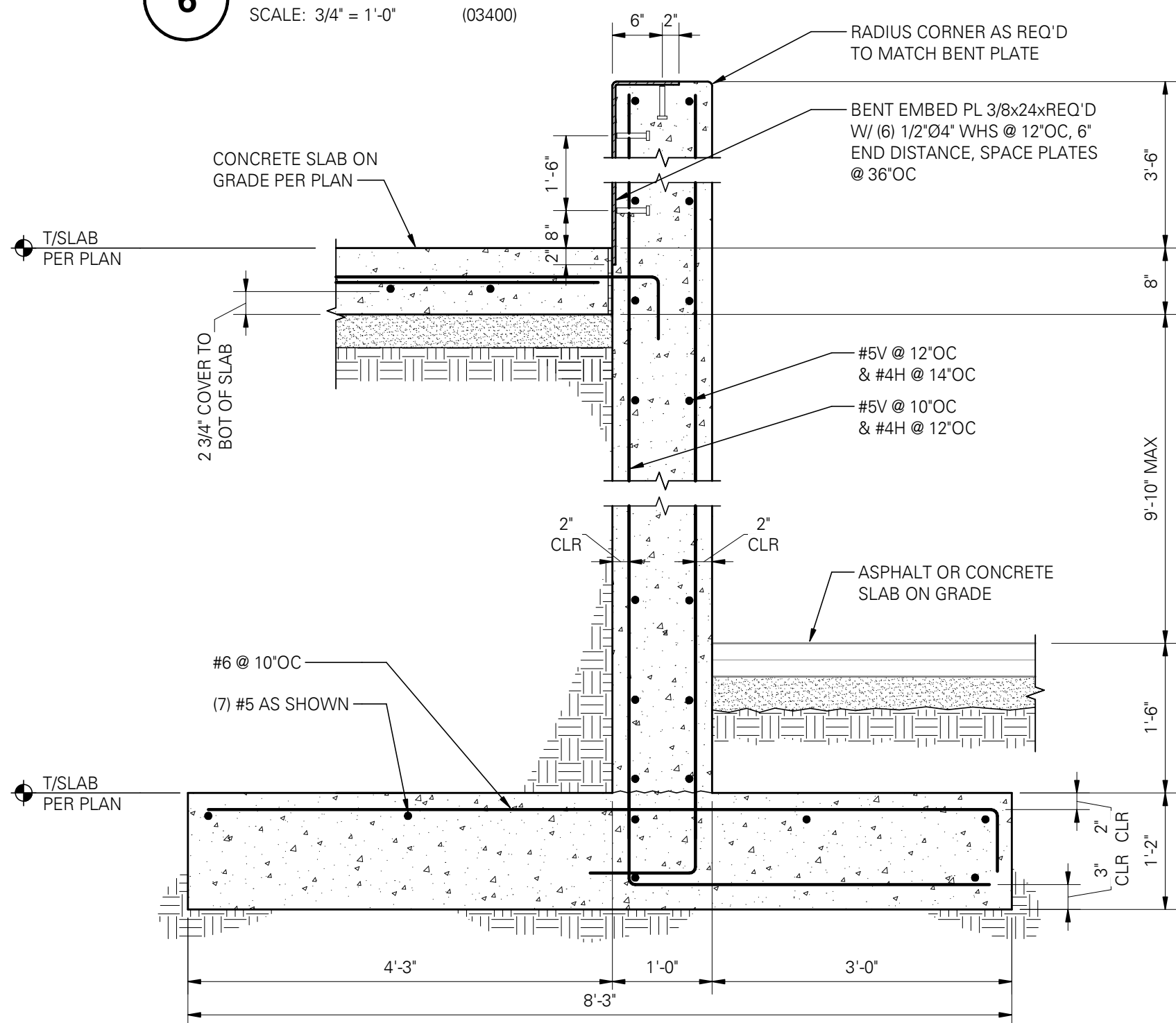
BEAM OR COLUMN CROSSTIES
BEAM STIRRUPS AND COLUMN TIES
d = BAR DIAMETER, D = BEND DIAMETER

NOTE:

TIES AND CROSSTIES FOR SHEAR WALL
BOUNDARY ELEMENTS SHALL BE
DETAILED AS COLUMN TIES/CROSSTIES.

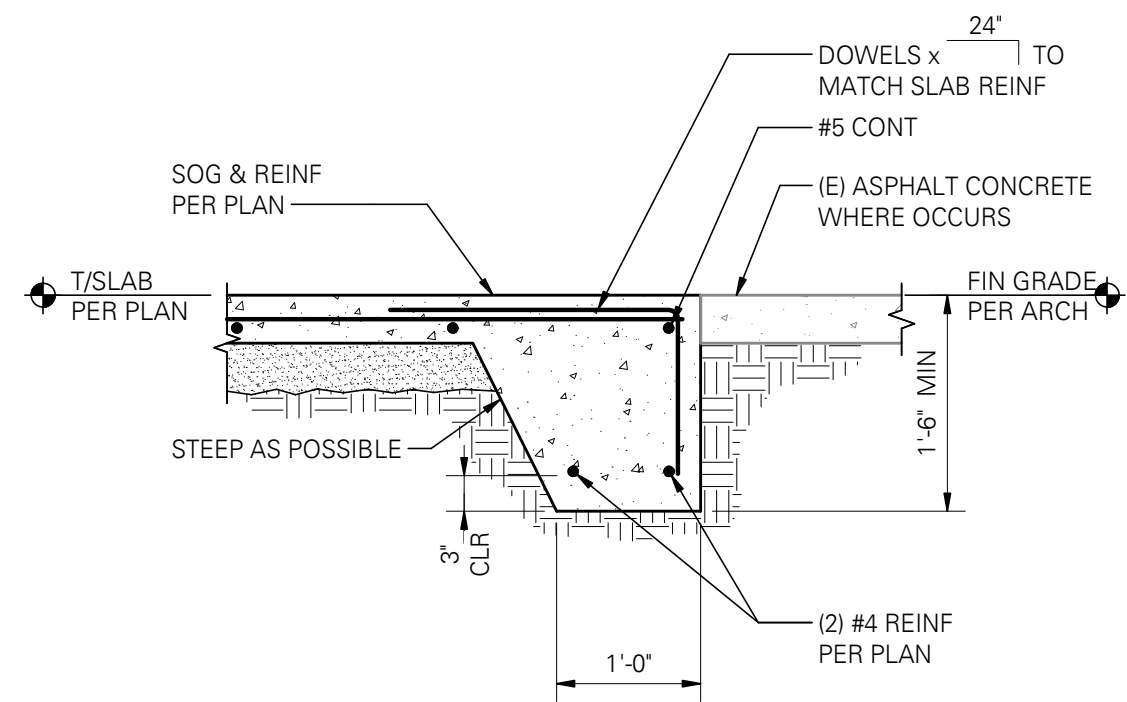
STANDARD HOOKS AND BENDS

SCALE: 3/4" = 1'-0" (03400)



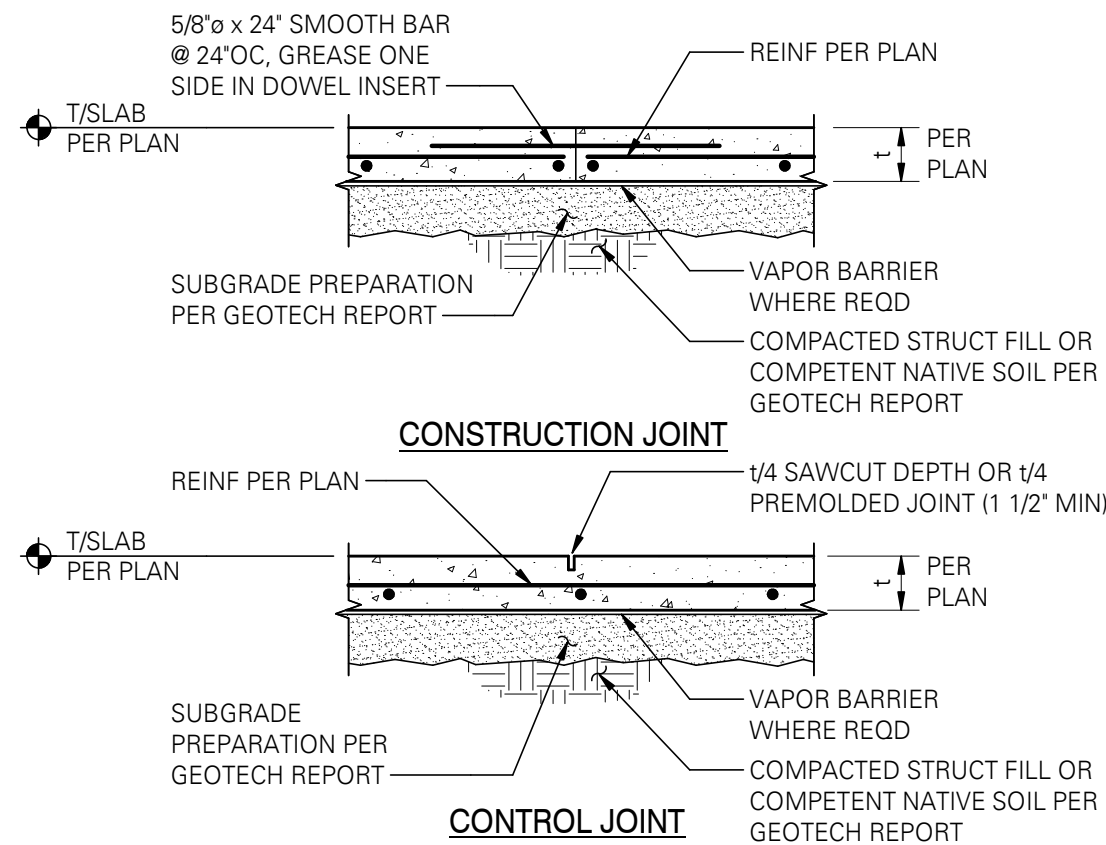
RETAINING WALL AT PIT EXTENSION

SCALE: 3/4" = 1'-0"



4 TYPICAL THICKENED SLAB EDGE FOOTING

SCALE: 3/4" = 1'-0" (03203M)



NOTES:

- CONSTRUCTION JOINT IS A JOINT BETWEEN DIFFERENT POURS. CONTROL JOINT IS A CRACK CONTROL JOINT WITHIN THE SAME POUR.
- USE "EARLY ENTRY DRY-CUT SAW" AS SOON AS POSSIBLE WITHOUT CAUSING RAVELING OF CONCRETE EDGES. SAWCUT ALONG SHORT DIRECTION OF POUR FIRST.
- ALIGN A CONSTRUCTION OR CONTROL JOINT WITH RE-ENTRANT SLAB CORNERS, EACH WAY, TYPICAL.
- CONSTRUCTION/CONTROL JOINT TO ENCLOSE APPROXIMATE SQUARE AREAS 225 SQUARE FEET MAXIMUM, WITH MAXIMUM PANEL ASPECT RATIO OF 1.3 TO 1.0.
- CONTRACTOR TO SUBMIT CONSTRUCTION/CONTROL JOINT PLAN TO STRUCTURAL ENGINEER OF RECORD FOR REVIEW/APPROVAL.

TYPICAL SLAB ON GRADE JOINT DETAILS WITH REINFORCING

SCALE: 3/4" = 1'-0" (03201)

CONSTRUCTION

REVISIONS:
DATE DESCRIPTION

DATE: AUG. 2024

SHEET TITLE:
STRUCTURAL
FOUNDATION
DETAILS

S4.1

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