PRDK20240314

PROJECT DESCRIPTION

THE PROJECT IS AN ART INSTALLATION OUTSIDE THE NEW STEM BUILDING AT PIERCE COLLEGE IN PUYALLUP, WASHINGTON. THE ARTWORK IS A 16–FOOT TALL STRUCTURE CONSISTING OF FOUR STEEL ARCHES WITH A CIRCULAR GLASS CENTERPIECE CONNECTING THE ARCHES AT THE TOP. THE ARCHES BEGIN AS T'S AND TAPER TO FLAT PLATES WHERE THEY MEET EACH OTHER. THE ART WAS INSPIRED BY NATIVE AMERICAN ARCHITECTURE AND THE GLASS REFLECTS THE PATH OF THE SUMMER SOLSTICE IN A DISPLAY ON THE GROUND. THE SCOPE OF WORK SHOWN IN THIS DOCUMENT REPRESENTS COMPLIANCE WITH THE 2018 INTERNATIONAL BUILDING CODE.

PROJECT INFORMATION

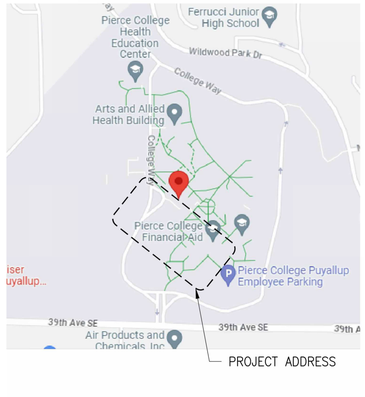
PROJECT ADDRESS:	STEM BUILDING, PIERCE COLLEGE 1601 39TH AVE SE PUYALLUP, WA 98374

PROJECT DIRECTORY

ARTIST	DAVID FRANKLIN PRESTON SINGLETARY, INC. 117 E LOUISA STREET #394 SEATTLE, WA 98102 206.545.0555 STUDIO@PRESTONSINGLETARY.COM
STRUCTURAL ENGINEER:	SELINDA MARTINEZ, PE RBHU 1329A HOPKINS STREET BERKELEY, CA 94702 415.967.2525

DRAWING INDEX

VICINITY MAP



GENERAL NOTES

1. ALL WORK AND MATERIALS SHALL CONFORM TO THE REQUIREMENTS OF THE 2018 INTERNATIONAL BUILDING CODE (REFERRED TO HEREINAFTER AS "IBC").
2. ALL DETAILS, SECTIONS AND NOTES SHOWN ON THE DRAWINGS ARE INTENDED TO BE TYPICAL AND SHALL APPLY TO SIMILAR SITUATIONS ELSEWHERE, UNLESS NOTED OTHERWISE. NOTES AND DETAILS ON THE DRAWINGS TAKE PRECEDENCE OVER THE GENERAL NOTES AND TYPICAL DETAILS.
3. ALL OMISSIONS AND CONFLICTS BETWEEN VARIOUS ELEMENTS OF THE WORKING DRAWINGS AND/OR ARCHITECTURAL SPECIFICATIONS (WHERE APPLICABLE) SHALL BE BROUGHT TO THE ATTENTION OF THE STRUCTURAL ENGINEER BEFORE PROCEEDING WITH ANY OF THE WORK INVOLVED.
4. AT ALL TIMES THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR THE CONDITIONS OF THE JOB SITE INCLUDING SAFETY OF THE PERSONS AND PROPERTY, AND FOR ALL NECESSARY INDEPENDENT ENGINEERING REVIEWS OF THESE CONDITIONS. THE ARCHITECT'S OR ENGINEER'S JOB SITE REVIEW IS NOT INTENDED TO INCLUDE REVIEW OF THE ADEQUACY OF THE CONTRACTOR'S SAFETY MEASURES.
5. DURING AND AFTER CONSTRUCTION, BUILDER AND/OR OWNER SHALL KEEP LOADS ON STRUCTURE WITHIN THE LIMITS OF DESIGN LOADS.
6. IN NO CASE SHALL WORKING DIMENSIONS BE SCALED FROM PLANS, SECTIONS OR DETAILS ON THE STRUCTURAL DRAWINGS.
7. NO OPENINGS, CHASES, NOTCHES, ETC. SHALL BE PLACED IN COLUMNS, JOISTS, BEAMS, BEARING WALLS, AND SHEAR WALLS UNLESS SPECIFICALLY NOTED ON THESE DRAWINGS. THE CONTRACTOR SHALL NOTIFY THE STRUCTURAL ENGINEER WHEN DRAWINGS BY OTHERS SHOW SUCH OPENINGS.
8. CONTRACTOR SHALL COORDINATE ALL STRUCTURAL FRAMING WITH MECHANICAL, PLUMBING AND ELECTRICAL INFRASTRUCTURE, INCLUDING, BUT NOT LIMITED TO, RECESSED AND SEMI–RECESSED LIGHTING, MECHANICAL DUCTS AND PIPING, FIRE SPRINKLER PIPE AND HEADS AND PLUMBING DRAINS, WASTE AND SUPPLY LINES.
9. CONTRACTOR SHALL FOLLOW AND COMPLY WITH ALL MANUFACTURER'S GUIDELINES AND SPECIFICATIONS OF THE PRODUCTS INCLUDED IN THE DRAWINGS.
10. ALL ASTM DESIGNATIONS SHALL BE AS AMENDED TO DATE UNLESS NOTED OTHERWISE.
11. IT IS SOLELY THE CLIENT'S RESPONSIBILITY TO ENSURE THAT THE U.S APPROVED MATERIALS LISTED IN THE GENERAL NOTES ARE USED AND THAT ANY SUBSTITUTES MEET THE APPROVED STANDARDS AND CRITERIA.

10 GENERAL NOTES

SCALE: NTS

DESIGN CRITERIA

1. DEAD LOADS:
   a. GLASS = 3 PSF
   b. SCULPTURE WEIGHT = 3000 LBS
2. LIVE LOADS:
   a. PUSHING LOAD = 200 LBS (ANY DIRECTION)
3. SEISMIC DESIGN PARAMETERS:

a.	IMPORTANCE FACTOR	I = 1.0
b.	RISK CATEGORY	II
c.	SITE CLASS	C
d.	MAPPED SHORT PERIOD ACCELERATION	S_s = 1.253
e.	SITE COEFFICIENT	F_a = 1.2
f.	DESIGN SHORT PERIOD ACCELERATION	S_{DS} = 1.002
g.	MAPPED ONE SECOND ACCELERATION	S_1 = 0.432
h.	SITE COEFFICIENT	F_v = *null
i.	DESIGN ONE SECOND ACCELERATION	S_{D1} = 0.432
j.	SEISMIC DESIGN CATEGORY	D

   DESIGN BASE SHEAR: V = Cs*W AT STRENGTH LEVEL
   (W = EFFECTIVE SEISMIC WEIGHT)

k.	GOVERNING SEISMIC RESPONSE COEFFICIENT	C_s = 0.501
	RESPONSE MODIFICATION FACTOR	R = 2

4. WIND DESIGN PARAMETERS:

a.	BASIC WIND SPEED	97mph
b.	RISK CATEGORY	II
c.	EXPOSURE CATEGORY	C
d.	WIND PRESSURES	21.7psf

5. FOUNDATION DESIGN PARAMETERS:
   a. SPREAD FOOTING PARAMETERS

• ALLOWABLE SOIL PRESSURE:	3,500 PSF
DEAD LOADS:	3,500 PSF
DEAD PLUS LIVE LOADS:	3,500 PSF
DEAD PLUS LIVE PLUS SEISMIC:	3,666 PSF
• COEFFICIENT OF FRICTION	0.4 (1.5 SAFETY FACTOR INCLUDED)
• PASSIVE PRESSURE	290 PCF (1.5 SAFETY FACTOR INCLUDED)

FOUNDATION

1. FOUNDATION DESIGN IS BASED ON THE GEOTECHNICAL REPORT BY GEOENGINEERS PREPARED ON JANUARY 21, 2021.
2. INSTALLATION OF THE FOUNDATION FOOTINGS OR PIERS WITH RESPECT TO THE DEPTH BELOW FINISHED OR NATURAL GRADE SHALL BE AT A MINIMUM ACCORDING TO THE FOUNDATION DETAILS ON THESE PLANS. FIELD DISCOVERED CONDITIONS MAY NECESSITATE DEEPER FOUNDATIONS.
3. EXCEPT WHERE OTHERWISE SHOWN, EXCAVATIONS SHALL BE MADE AS NEAR AS POSSIBLE TO THE NEAT LINES REQUIRED BY THE SIZE AND SHAPE OF THE STRUCTURE.
4. ALL EXCAVATIONS, FORMS AND REINFORCING ARE TO BE INSPECTED BY GEOTECHNICAL ENGINEER PRIOR TO PLACING CONCRETE.
5. ALL WATER, SOIL, AND OTHER DEBRIS SHALL BE REMOVED FROM FOUNDATION EXCAVATIONS PRIOR TO PLACING OF CONCRETE.
6. ALL BACKFILL WITH ENGINEERED FILLS SHALL BE COMPACTED TO 95% RELATIVE DENSITY.

CONCRETE

1. ALL CONCRETE CONSTRUCTION SHALL BE PER IBC CHAPTER 19 AND IN ACCORDANCE WITH ACI 318–11, SPECIFICATIONS FOR STRUCTURAL CONCRETE.
2. ALL CONCRETE SHALL HAVE A MAXIMUM WATER–CEMENT RATIO OF 0.48, 4"±1" SLUMP, AND SHALL OBTAIN A 28 DAY MINIMUM COMPRESSIVE STRENGTH AS FOLLOWS:
   a. GRADE BEAMS, MAT SLABS, AND FOOTINGS 2,500 PSI
3. ALL CONCRETE SHALL BE NORMAL WEIGHT CONCRETE, WEIGHING LESS THAN 150 PCF, UNLESS OTHERWISE NOTED.
4. CEMENT SHALL CONFORM TO ASTM C150, TYPE II (OR ENGINEERED MAXIMUM DESIGN TO STRENGTH).
5. HARD ROCK AGGREGATES SHALL CONFORM TO ASTM C33. MAXIMUM NORMAL SIZE OF AGGREGATE SHALL NOT EXCEED 1½ INCHES FOR FOUNDATION CONCRETE AND 1 INCH FOR STRUCTURAL CONCRETE ABOVE THE FOUNDATION. SEE ALSO THE REQUIREMENTS IN ACI STANDARD SPECIFICATIONS. MAXIMUM NORMAL SIZE SHALL ALSO BE SELECTED SUCH THAT WORKABILITY AND PLACEABILITY OF CONCRETE ARE FACILITATED.
6. ALL ALTERNATE CONCRETE MIX DESIGN AND TEST STRENGTHS SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER FOR APPROVAL PRIOR TO CONSTRUCTION.
7. MAXIMUM VERTICAL DROP OF CONCRETE SHALL BE NO MORE THAN 2'–0" FROM END OF PLACEMENT DEVICE TO PLACEMENT SURFACE.
8. CONCRETE COVER AT REINFORCING SHALL BE AS FOLLOWS:

a.	CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH:	3" CLEAR
b.	EXPOSED TO EARTH OR WEATHER BUT CAST AGAINST FORMS	2" CLEAR
c.	BARS PARALLEL TO COLD JOINTS	2" CLEAR

9. ALL REINFORCING STEEL, DOWELS, ANCHOR BOLTS, PIPE SLEEVES AND OTHER INSERTS SHALL BE SECURED IN POSITION PRIOR TO PLACING OF CONCRETE. "WET SETTING" WILL NOT BE ALLOWED.
10. THE SURFACE OF ALL CONSTRUCTION JOINTS SHALL BE CLEANED AND ROUGHENED BY REMOVING THE ENTIRE SURFACE AND EXPOSING CLEAN AGGREGATE SOLIDLY EMBEDDED IN MORTAR MIX.

REINFORCING BAR

1. REINFORCING STEEL SHALL BE DEFORMED BARS PER ASTM A615 WITH BAR MARKS LEGIBLY ROLLED INTO THE SURFACE INDICATION SIZE, TYPE OF STEEL, AND YIELD STRENGTH DESIGNATION:

a.	#3 BARS AND SMALLER	GRADE 40 OR GRADE 60
b.	#4 BARS AND LARGER	GRADE 60
c.	ALL BARS TO BE WELDED	GRADE A706

2. REINFORCING SHALL HAVE A MINIMUM LAP IN CONFORMANCE WITH DETAILS AND SPECIFICATIONS SHOWN ON THESE DRAWINGS. STAGGER SPLICES WHENEVER POSSIBLE. VERTICAL WALL REINFORCING BARS SHALL EITHER EXTEND INTO FOOTINGS OR LAP SPLICED WITH FOOTING DOWELS OF THE SAME SIZE BARS.
3. BENDING OF REINFORCING SHALL BE IN CONFORMANCE WITH DETAILS AND SPECIFICATIONS SHOWN ON THESE DRAWINGS. FIELD BENDING OF BARS THAT ARE IN PLACE IS NOT PERMITTED UNLESS APPROVED BY THE STRUCTURAL ENGINEER.
4. ALL BARS SHALL BE FREE OF LOOSE AND FLAKY RUST AND SCALE, GREASE, OR OTHER MATERIALS WHICH MIGHT AFFECT OR IMPAIR BOND.

Approval of submitted plans is not an approval of omissions or oversights by this office or non compliance with any applicable regulations of local government. The contractor is responsible for making sure that the building complies with all applicable codes and regulations of the local government.

The approved construction plans, documents, and all engineering must be posted on the job at all inspections in a visible and readily accessible location.

Full sized legible color plans are required to be provided by the permitee on site for inspection.

City of Puyallup
Building
REVIEWED FOR COMPLIANCE
BSnowden
05/30/2024
1:16:55 PM
CITY OF PUYALLUP STATE OF WASHINGTON

STRUCTURAL STEEL

1. STEEL MATERIALS SHALL CONFORM TO THE FOLLOWING:

TYPICAL SHAPES AND PLATES	ASTM A275 SS304 OR ASTM A276 SS316
ELECTRODES	AWS E308L–XX
BASE PLATES	ASTM A275 SS304 OR ASTM A276 SS316
ANCHOR BOLTS	ASTM F593, SS304

2. IF MATERIAL DOES NOT CONFORM WITH THE ASTM STANDARDS LISTED IN THE STRUCTURAL DRAWINGS, MATERIAL TEST REPORTS OR REPORTS OF TESTS MADE BY THE FABRICATOR OR A TESTING LABORATORY SHALL CONSTITUTE SUFFICIENT EVIDENCE OF CONFORMITY WITH THE DESIGNATED ASTM STANDARDS LISTED IN AISC 360 SECTION A3.
3. ALL STRUCTURAL STEEL SHALL CONFORM TO AISC SPECIFICATIONS FOR THE DESIGN, FABRICATION, AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS. BOLT HOLES SHALL BE 1/16" OVERSIZED, EXCEPT AT BASE PLATES, WHEN APPROVED, WHERE THEY CAN BE 5/16" OVERSIZED, WITH WELDED WASHERS.
4. ALL WELDING TO CONFORM TO THE REQUIREMENTS OF THE LATEST AWS D1.1 STRUCTURAL WELDING CODE AND SHALL BE PERFORMED BY CERTIFIED WELDERS.
5. ALL WELDS NOT SPECIFIED SHALL BE CONTINUOUS FILLET WELDS, USING NOT LESS THAN THE MINIMUM SIZES BASED ON THICKNESS OF THICKER PART JOINED PER AISC/AWS, AND IN NO CASE LESS THAN 1/4" UNLESS NOTED OTHERWISE.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONTROL OF ALL ERECTION PROCEDURES AND SEQUENCES ESPECIALLY WITH RELATION TO TEMPERATURE DIFFERENTIALS, ERECTION TOLERANCES, AND WITH RESPECT TO STRUCTURAL STEEL FRAMING INTO REINFORCED CONCRETE WALLS.
7. THE STRUCTURAL STEEL CONNECTIONS CONSIST OF THE FOLLOWING:
   a. ALL MAJOR STRUCTURAL STEEL CONNECTIONS ARE DETAILED ON THE DRAWINGS. THE DETAILS INDICATE THE REQUIRED MINIMUM PLATE THICKNESSES, ANGLES, WELDS, BOLTS AND GENERAL CONNECTION CONFIGURATION. THE FINAL DIMENSIONAL CONFIGURATION INCLUDING ADJUSTMENTS FOR CAMBER SHALL BE DETERMINED BY THE FABRICATOR ON SHOP DRAWINGS.
   b. ANY PROPOSED REVISIONS OR MODIFICATIONS TO THE CONNECTIONS AS SHOWN ON THE DRAWINGS SHALL BE FULLY ENGINEERED BY THE FABRICATOR. SHOP DRAWINGS AND CALCULATIONS PREPARED AND STAMPED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF WASHINGTON SHALL BE SUBMITTED FOR REVIEW. THE CAPACITY OF CONNECTIONS SHALL NOT BE REDUCED FROM THAT PROVIDED BY THE DETAIL AS SHOWN WHERE NOT SHOWN OR INFERRED FROM DRAWINGS, THE CONNECTION SHALL BE CAPABLE OF NOT LESS THAN 120% OF THE MEMBER CAPACITY IN TENSION. ANY PROPOSED REVISIONS SHALL BE AT NO ADDITIONAL COST TO THE OWNER.

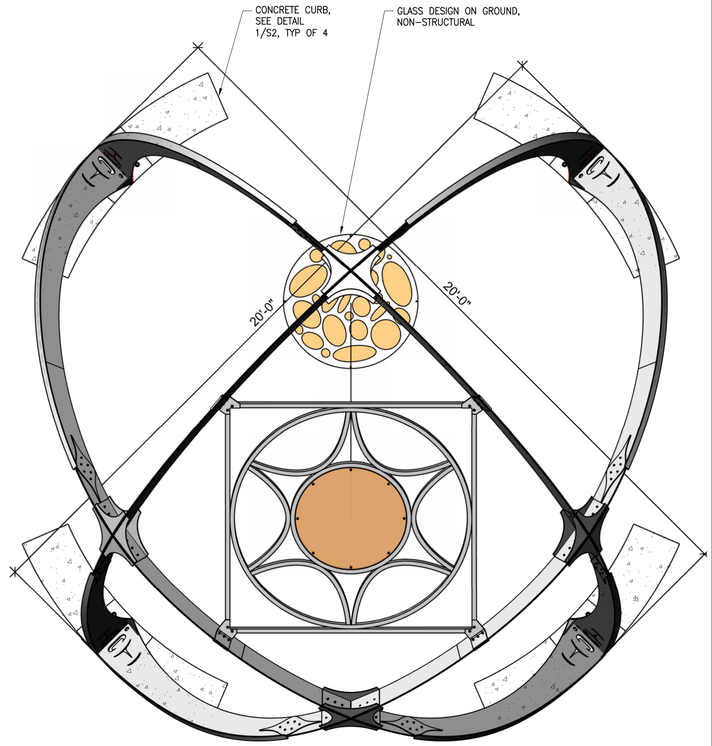
1

City of Puyallup
Development Engineering
APPROVED
See permit for additional requirements.
Linda Lian
03/12/2024
10:38:04 AM
CITY OF PUYALLUP STATE OF WASHINGTON

Call Before You Dig. It's the law. Locate all utilities prior to starting work Dial 811 or call 1-800-424-5555.

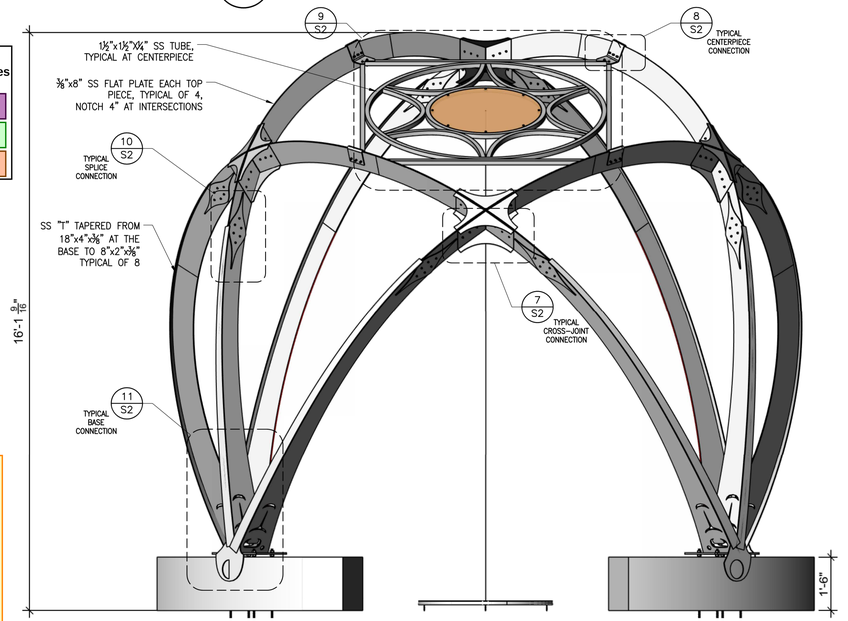
The applicant shall request a sediment control and erosion inspection with a City Engineering Inspector through the CityView portal at least 48 hours in advance of job start. Refer to the Stormwater Fact Sheet and City Standards 02.03.02 & 05.02.01

City of Puyallup
Development & Permitting Services
ISSUED PERMIT
Building | Planning
Engineering | Public Works
Fire | Traffic



2 PLAN VIEW

SCALE: 1/2"=1'–0"



1 ELEVATION VIEW

SCALE: 1/2"=1'–0"

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Sun Lodge Art Installation at Pierce College
1601 39th Ave SE
Puyallup, Washington 98374

DATE:	ISSUE:
09.22.2023	Permit Set
05.13.2024	Revised Set

STAMP

SELINDA MARTINEZ STATE OF WASHINGTON 23429 REGISTERED PROFESSIONAL ENGINEER

PROJECT NUMBER:

2369

TITLE

GENERAL NOTES AND OVERALL VIEWS

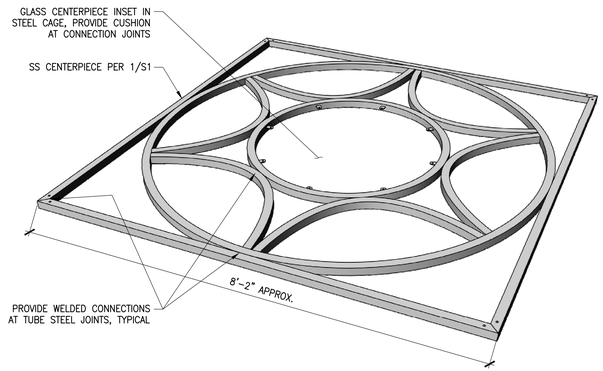
SHEET:

S1

PRDK20240314

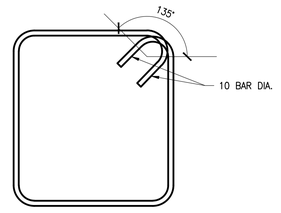
City of Puyallup
Development & Permitting Services
ISSUED PERMIT

Building	Planning
Engineering	Public Works
Fire	Traffic

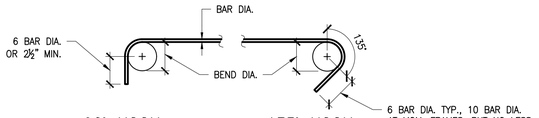


9 CENTERPIECE DETAIL

SCALE: NTS



TYPICAL STIRRUP (CLOSED–TIE)

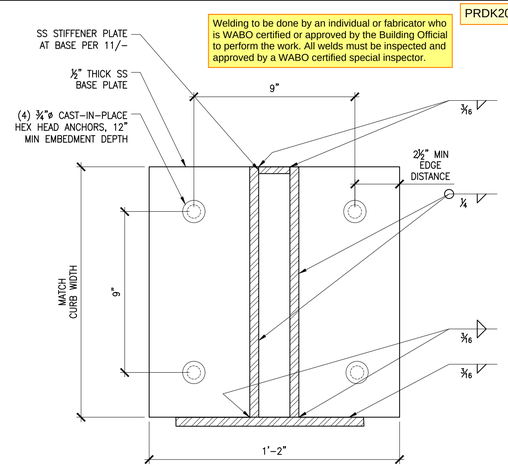


NOTE:
1. MINIMUM BEND DIAMETER FOR STIRRUPS AND TIES IS 4d FOR #5 BARS & SMALLER AND 6d FOR #6 THRU #8 BARS.
2. STIRRUPS CALLED OUT ON THE DRAWINGS MAY NEED TO BE INSTALLED IN PIECES TO ACCOMMODATE FIELD AND EXISTING CONDITIONS. WHERE THIS NEEDS TO OCCUR EACH PIECE NEEDS TO HAVE HOOKED ENDS AS SHOWN IN THIS DETAIL.
3. ON DRAWINGS, WHERE A STIRRUP CORNER SHOWS DOUBLE HOOKS, IT MEANS THAT HOOKS LAP AT CORNER. THIS THEREFORE IDENTIFIES THE PIECES OF THE STIRRUP

6 STIRRUP & TIE BENDS

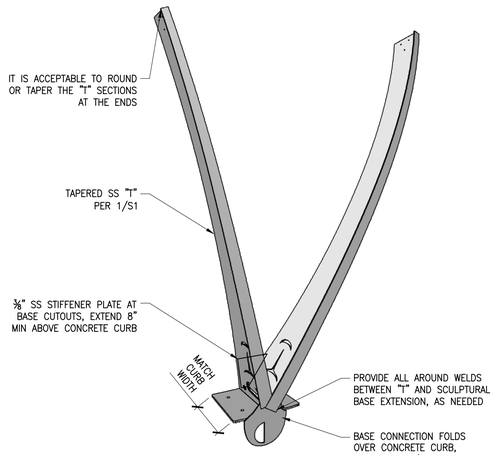
SCALE: N.T.S.

Welding to be done by an individual or fabricator who is WABO certified or approved by the Building Official to perform the work. All welds must be inspected and approved by a WABO certified special inspector.



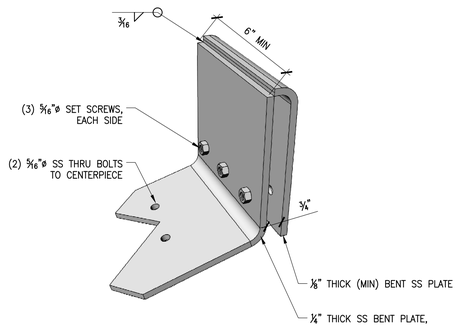
3 BASE PLATE PLAN DETAIL

SCALE: 3"=1'–0"



11 BASE CONNECTION

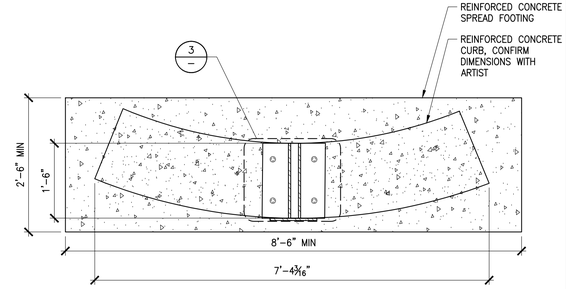
SCALE: NTS



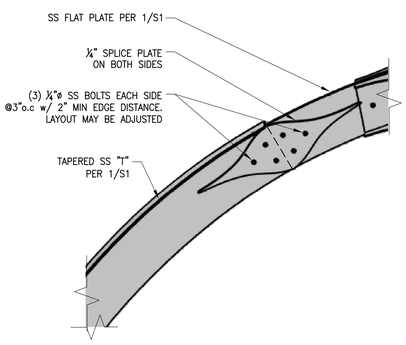
8 CENTERPIECE CONNECTION

SCALE: NTS

LAP SPLICE (Ld) SCHEDULE (INCHES) CLASS B						
SIZE	LOCATION	CONCRETE COMPRESSIVE STRENGTH (PSI)				
		2,500	3,000	4,000	5,000	6,000
#4	HORIZ. TOP BAR	41	38	33	29	27
	ALL OTHER BARS	32	29	25	23	21
#6	HORIZ. TOP BAR	61	56	49	44	40
	ALL OTHER BARS	47	43	37	34	31
#8	HORIZ. TOP BAR	102	93	81	72	66
	ALL OTHER BARS	78	72	62	56	51

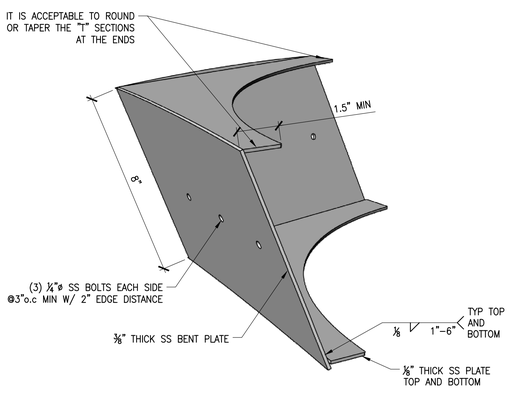


A: PLAN



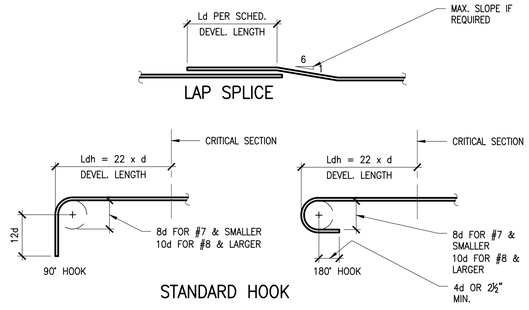
10 SPLICE CONNECTION

SCALE: NTS



7 CROSS–JOINT CONNECTION

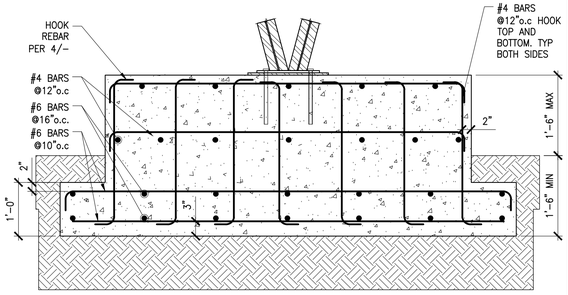
SCALE: NTS



NOTES:
1. d = REBAR DIAMETER.
2. LAP SPLICE LENGTHS ARE BASED ON 60 KSI REBAR YIELD STRENGTH AND NORMAL CONCRETE WEIGHT.
3. TOP BAR IS A HORIZONTAL BAR (OTHER THAN IN WALLS) PLACED WITH MORE THAN 12" OF FRESH CONCRETE CAST BELOW BARS.
4. LAP SPLICE LENGTHS ARE BASED ON MINIMUM CLEAR COVER GREATER THAN ONE BAR DIAMETER AND MINIMUM CLEAR SPACING GREATER THAN TWO BAR DIAMETERS.
5. IF EITHER REQUIREMENT IN NOTE 4 IS NOT SATISFIED, INCREASE LAP SPLICE LENGTH BY 50%.

4 REBAR DEVELOPMENT LENGTHS

SCALE: NTS



B: SECTION

NOTE:
1. CONFIRM CURVED GEOMETRY AND LAYOUT WITH ARTIST

1 TYPICAL FOUNDATION DETAIL

SCALE: 3/4"=1'–0"

STRUCTURAL ENGINEER:

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FOUNDATION AND DETAILS

SHEET:

S2