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PROJECT NAME:

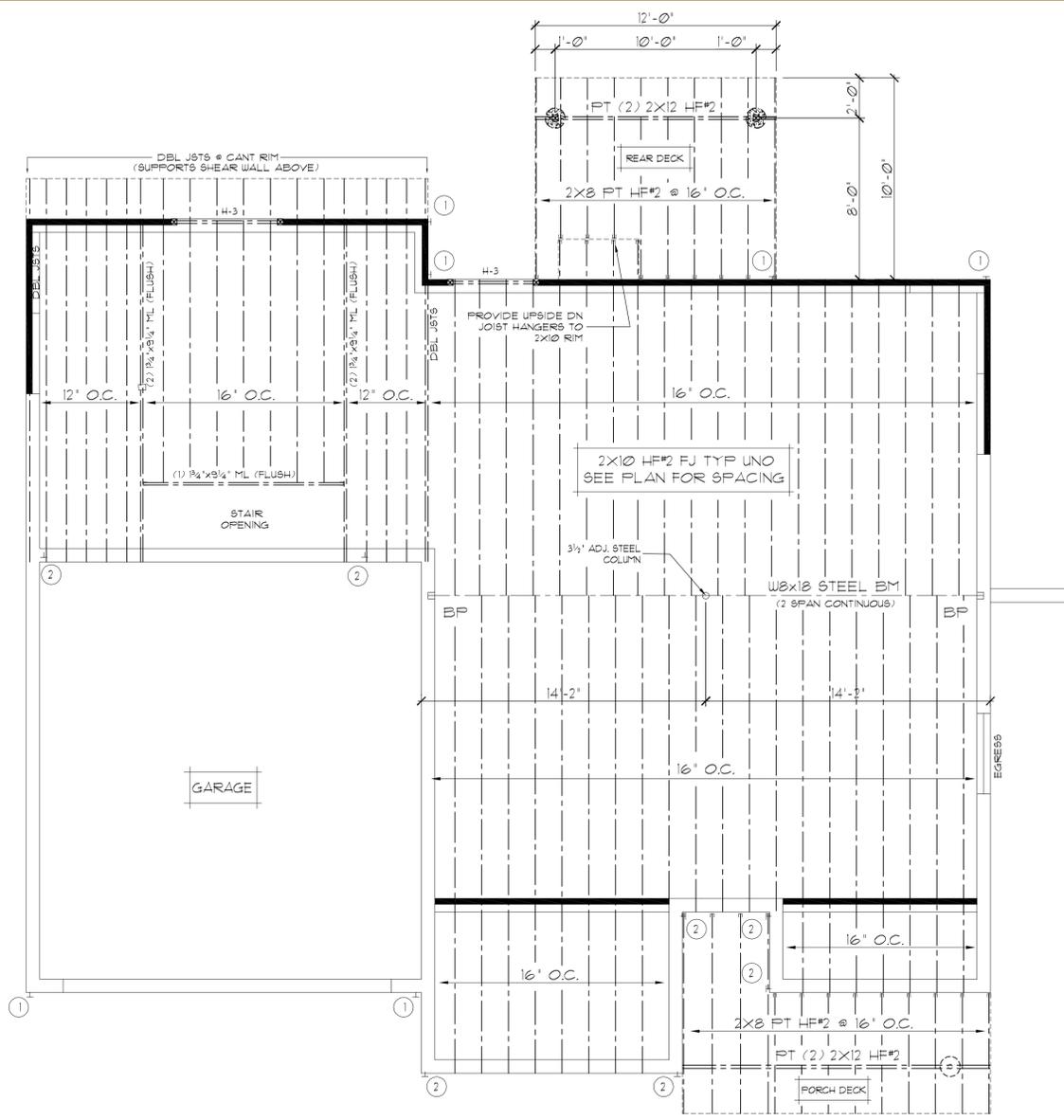
PROJECT NAME

PROJECT DESCRIPTION
 STREET ADDRESS
 CITY, STATE

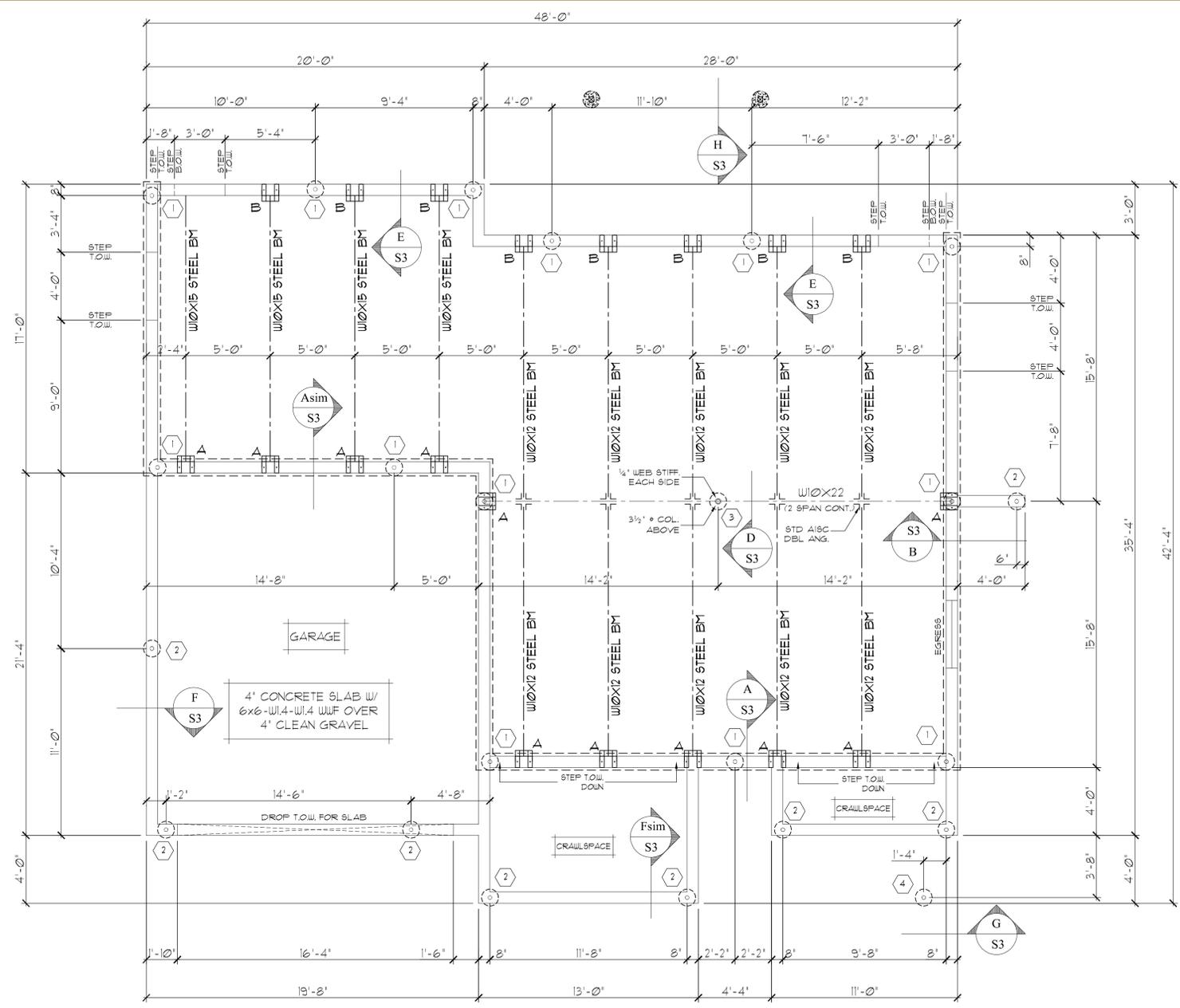
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HELICAL PILE LAYOUT

NO.	DATE	REVISION/ISSUE



1ST FLOOR FRAMING / HD STRAP PLAN
 SCALE: 1/4" = 1'-0"



FOUNDATION & STRUCTURAL FLOOR PLAN
 SCALE: 1/4" = 1'-0"

HELIX FOUNDATION SCHEDULE					
SYMBOL	QUANTITY	DESIGN CAPACITY	MIN. LENGTH*	PIER CAP CONNECTION	NOTES
①	13	40 KIPS MAX.	11' (FT)	MAGNUM MP-1902	MAGNUM HD PIERS W/ SINGLE 12" DUAL CUTTING BLADE TYPICAL MINIMUM OF 25% OF PIERS TO BE OBSERVED BY SECURE DURING INSTALLATION
②	8	23 KIPS MAX.	11' (FT)	1 # GALVANIZED 1" BAR (SEE DETAIL SHEET S3)	
③	1	40 KIPS MAX.	11' (FT)	MAGNUM MP-1925	
④	1	5 KIPS MAX.	20' (FT)	MAGNUM MP-1915	

* MIN. LENGTH = FINISHED GRADE TO UPPER CUTTING BLADE

HEADER SCHEDULE				
HEADER	SIZE	MATERIAL	MINIMUM END BEARING	MINIMUM SUPPORTING COLUMN
H-1	2-2x8	HF #2	1 1/2"	1-2x4 STUD
H-2	2-2x10	HF #2	1 1/2"	1-2x4 STUD
H-3	2-2x12	HF #2	3"	2-2x4 STUD

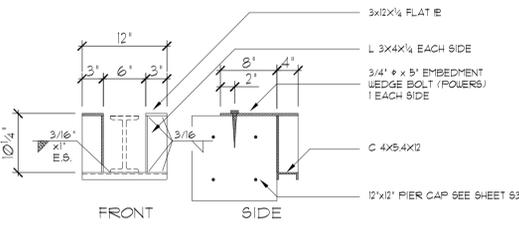
HOLDDOWN (HD) SCHEDULE		
HD #	MANUF. / MODEL	NOTES
①	SIMPSON STD-HB	HD'S AS SHOWN ARE IN APPROXIMATE LOCATIONS. FIELD LOCATE HD'S AT CORNERS, EDGE OF OPENINGS ABOVE, OR ENDS OF REQUIRED SHEAR WALLS (SEE ARCH PLANS FOR DIMENSIONS)
②	SIMPSON STD-HDRJ	
③	SIMPSON CS16R	LENGTH = RIM + 25' (4) BEYOND RIM EACH WAY

NOTE:
 SEE SHEET S2 AND S3 FOR ADDITIONAL FRAMING AND FOUNDATION NOTES/DETAILS

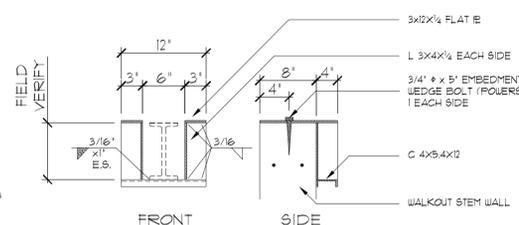
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TYPICAL STRUCTURAL BASEMENT FLOOR IS 3 1/2" CONCRETE DECK W/ 6x6-W2.9-W2.9 WUF OVER 1.0C24 DECKING OVER WF BM'S SHOWN

PROVIDE TEMP. 6x6 BLOCKING BELOW THE PIER CAP DURING CONSTRUCTION. BLOCKING TO BE LOCATED ADJACENT TO PIERS & NO MORE THAN 8FT O.C. BETWEEN PIERS. BLOCKING TO BE REMOVED FOLLOWING PLACEMENT OF THE WALL ABOVE.



BEAM SADDLE
 TYPE-A



BEAM SADDLE
 TYPE-B

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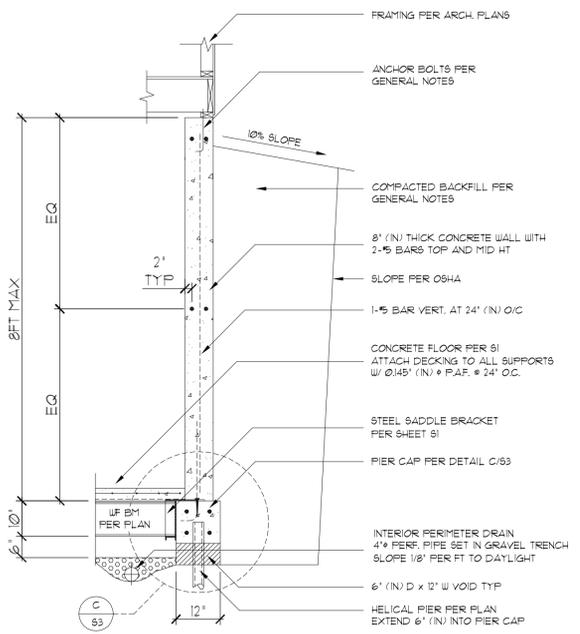
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FOUNDATION AND PILE DETAILS

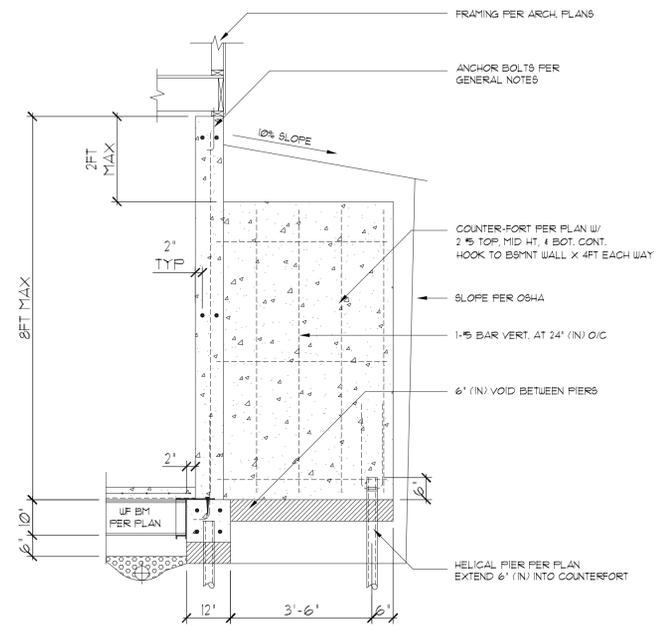
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General Notes:

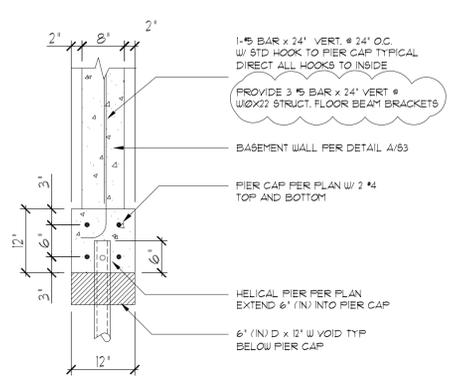
- Codes:**
 This plan was prepared based on the 1997 Uniform Building Code with local amendments and portions of the most recent versions of ACI 318, AISI Allowable Stress Design ninth edition, and the NDS for wood construction.
- Loads:**
 This plan is based upon the following load parameters:
 Roof: Live Load + 30 psf
 Floor: Live Load + 40 psf
 Wind: Speed = 100 mph Exposure B
 Seismic: Zone 1
 Soils report by: Soil Engineering Firm
 Recommended allowable bearing pressures:
 Max. Brg = 16 kaf
 Min swell pressure = 16 kaf, 8F + 15 kaf
- Materials:**
 This plan is based upon the following material properties:
Concrete: Concrete shall contain Type I cement, 6%+1% air entrainment, and a minimum 28 day compressive strength of 3000 psi for walls and caissons, 3500 psi for slabs-on-grade, and 4000 psi for the interior structural floor.
Reinforcing: Reinforcing shall be deformed grade 60 steel unless noted otherwise (UNO) on the plan and shall conform to ASTM A615. Minimum concrete cover shall be 2" (in) UNO on the plan. Overlaps shall be 36 bar diameters but not less than 24" (in). Detail reinforcing bars in accordance to the ACI detailing manual and ACI code, latest edition. All foundation wall reinforcement should be wired in place. Slab and footing reinforcement shall utilize chairs or other acceptable methods to achieve the required cross section location.
Steel: Structural Steel beams shall conform to ASTM A50. 3" (in) adjustable steel columns shall be 1 GA or better and rated for a safe allowable load of not less than 14 kips for columns up to 8'-0" in height and 15 kips for columns up to 9'-0" in height. 3 1/2" (in) adjustable steel columns shall be schedule 40 and rated for a safe allowable load of not less than 36 kips for columns up to 10'-0" in height. All adjustable steel columns shall have 1-3/4" (in) of thread exposed.
Anchor Bolts: Foundation anchor bolts shall conform to ASTM A307 and be 1/2" (in) diameter by 12" (in) long spaced at 4'-0" maximum and 12" (in) from corners and splices.
Wood: All dimensional lumber shall be Hem Fir #2 or better unless noted on the plan. All Laminated Veneer Lumber shall have an allowable flexural stress $F_b = 2600$ psi and Modulus of Elasticity of $E = 1.9 \times 10^6$ psi or better. Glued Laminated Lumber shall have an allowable flexural stress $F_b = 2400$ psi and Modulus of Elasticity of $E = 1.8 \times 10^6$ psi or better.
- Soils:**
 Magnum recommends quality assurance observation of the installation of at least 25% of the helix piers. All other recommendations contained in the soils report pertaining to backfill, drainage, etc. should be incorporated into the design of this project. The need for and extent of foundation drains shall be determined at the open-hole inspection and shall be installed per the soils report or per the geo-technical engineers recommendations.
- Slabs-on-grade:**
 The garage has a slab-on-grade floor system. Slabs-on-grade where utilized should be isolated from grade beams, columns, plumbing, or other support structures by use of 1/2" (in) minimum isolation joint material. Provide a 1/2" (in) minimum void space between all interior partitions and floor slabs-on-grade. The partition void space should be monitored and maintained throughout the life of the structure. Magnum recommends any areas with slab-on-grade type construction placed upon expansive soils not be finished for a minimum of 3 years. Provide control joints at 10'-0" on center maximum. Exterior slabs such as patios, porches, driveways etc. should not be doweled to the foundation unless shown on our plan.
- Backfill:**
 We recommend foundation walls not be backfilled for a minimum of eight days after placement of concrete. Prior to backfilling we recommend damp-proofing for all below grade habitable living areas as required by local code. All floor systems should be in place before backfilling against any foundation wall, or as an alternative adequately brace the foundation. Start backfilling of foundation walls at corners. Magnum recommends imported granular (non-expansive) structural fill be used for backfilling around all foundation walls and beneath all slab-on-grade areas for sites where expansive soils are present. In lieu of imported granular fill, onsite soils could be used for backfill if the material and compaction process is acceptable to the geo-technical engineer. Backfill should be adequately compacted and graded to provide adequate drainage away from the foundation. Backfill adjacent to the foundation may settle over time. The backfill must be monitored and maintained to provide adequate drainage away from the foundation.
- Framing:**
 SEE 51/53
- Drainage:**
 Adequate drainage shall be provided around the structure. This drainage should be monitored and maintained throughout the life of the structure. At a minimum Magnum recommends a minimum slope of 1" (in) in the first ten feet and a minimum 2% slope from that point to the property line for landscaped areas. For all below grade habitable areas Magnum recommends a perimeter drain. The perimeter drain shall consist of a minimum of drainage fabric over 12" (in) of clean gravel over a 4" (in) perforated pipe sloped at 1/8" (in)/ft minimum to daylight well beyond the foundation system or to a sump pit with pump.
- Limitations:**
 It is the contractor/owners responsibility to verify and coordinate all dimensions prior to construction. Brick ledges, foundation steps, insets, beam pockets, and basement windows, etc. may or may not be shown. This plan is based on the contractor/owner furnished plans and the above referenced specifications. Any discrepancies or changes should be brought to the attention of the structural engineer. We recommend a copy of "A Guide to Swelling Soils for Colorado Home Buyers and Home Owners, Colorado Geological Survey Special Publication #43 be provided to any new or future owners of this property.



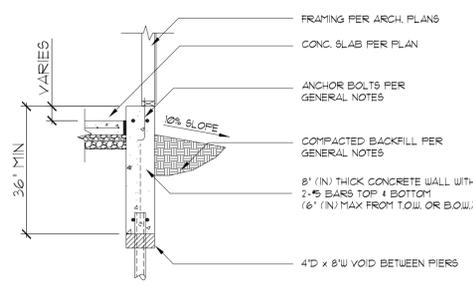
A
S3



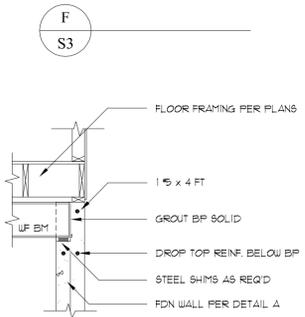
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S3



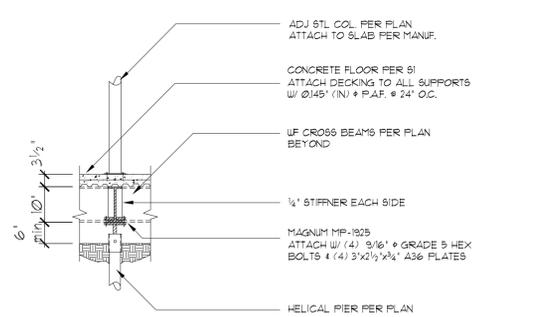
C
S3



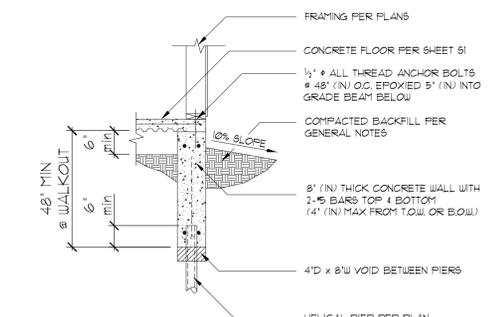
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S3



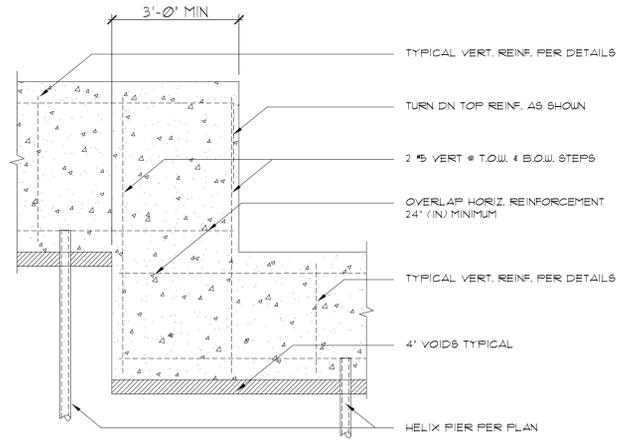
BEAM POCKET DETAIL



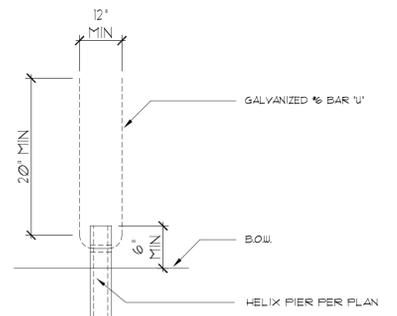
E
S3



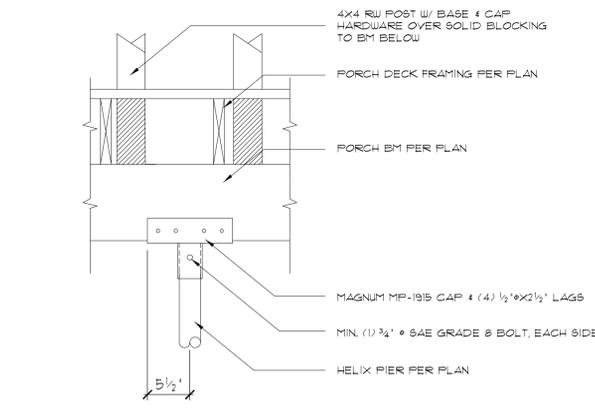
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S3



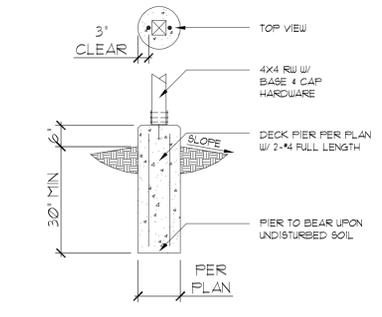
TYPICAL STEP DOWN REINFORCEMENT DETAIL



#6 GALVANIZED "U" ATTACHMENT



G
S3



H
S3