

GENERAL NOTES

GENERAL

STRUCTURAL DIMENSIONS CONTROLLED BY OR RELATED TO MECHANICAL OR ELECTRICAL EQUIPMENT SHALL BE COORDINATED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.

MECHANICAL AND ELECTRICAL EQUIPMENT SUPPORTS, ANCHORAGES, OPENINGS, RECESSES AND REVEALS NOT SHOWN ON THE STRUCTURAL DRAWINGS BUT REQUIRED BY OTHER CONTRACT DRAWINGS, SHALL BE PROVIDED FOR PRIOR TO PLACING CONCRETE.

STRUCTURAL DRAWINGS SHALL BE USED IN COORDINATION WITH MECHANICAL, ELECTRICAL, ARCHITECTURAL, CIVIL DRAWINGS AND SHOP DRAWINGS PROVIDED BY MANUFACTURERS OF EQUIPMENT.

STRUCTURES HAVE BEEN DESIGNED FOR OPERATIONAL LOADS ON THE COMPLETED STRUCTURES. DURING CONSTRUCTION, THE STRUCTURES SHALL BE PROTECTED BY BRACING AND BALANCING WHEREVER EXCESSIVE CONSTRUCTION LOADS MAY OCCUR.

UNLESS OTHERWISE SHOWN, ON ALL STRUCTURAL DRAWINGS THE FINISH GRADE AROUND STRUCTURES IS SHOWN THUS INDICATING EITHER GROUND SURFACE, TOP OF CONCRETE SLAB OR AC PAVEMENT. FOR DETAILS OF FINISH SURFACES SEE CIVIL AND ARCHITECTURAL DRAWINGS.

STRUCTURAL

DESIGN IN ACCORDANCE WITH THE 1994 EDITION OF THE UNIFORM BUILDING CODE EXCEPT WHERE OTHER APPLICABLE CODES OR THE FOLLOWING NOTES ARE MORE RESTRICTIVE.

LOCATION OF ALL CONSTRUCTION JOINTS SHALL BE AS SHOWN ON THE DRAWINGS OR APPROVED BY THE ENGINEER. ALL CONSTRUCTION JOINTS LOCATED ON THE DRAWINGS OR REQUIRED FOR CONSTRUCTION, BUT NOT SHOWN ON THE DRAWINGS, SHALL HAVE A 6" FLATSTRIP WATERSTOP, IF IN MEMBERS IN CONTACT WITH WATER. IN ADDITION, JOINTS IN ALL SLABS COVERED WITH WATER, SHALL HAVE BOTH A 6" FLATSTRIP WATERSTOP AND A SEALANT GROOVE.

STRUCTURAL STEEL

STEEL CONSTRUCTION SHALL CONFORM TO THE SPECIFICATIONS AND STANDARDS AS CONTAINED IN THE LATEST EDITION OF THE AISC STEEL CONSTRUCTION MANUAL.

ALL STRUCTURAL SHAPES, BARS, PLATES AND SHEETS SHALL BE OF STEEL MEETING ASTM A-36 SPECIFICATIONS.

ALL WELDING SHALL BE BY THE SHIELDED ARC METHOD AND SHALL CONFORM TO AWS CODE FOR ARC AND GAS WELDING IN BUILDING CONSTRUCTION. QUALIFICATIONS OF WELDERS SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS FOR STANDARD QUALIFICATION PROCEDURE OF THE AWS.

CONCRETE (EXCEPT PRECAST CONCRETE)

UNLESS OTHERWISE NOTED OR SPECIFIED, ALL STRUCTURAL CONCRETE SHALL DEVELOP A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI IN 28 DAYS.

REINFORCEMENT STEEL SHALL BE DEFORMED BARS CONFORMING IN QUALITY TO THE REQUIREMENTS OF ASTM A-615, "SPECIFICATIONS FOR DEFORMED BILLET-STEEL BARS FOR CONCRETE REINFORCEMENT", GRADE 60.

COLUMN SPIRALS SHALL CONFORM TO ASTM A-82, "SPECIFICATION FOR COLD-DRAWN STEEL WIRE FOR CONCRETE REINFORCEMENT".

ALL DETAILING, FABRICATION AND PLACING OF REINFORCING BARS, UNLESS OTHERWISE INDICATED, SHALL BE IN ACCORDANCE WITH ACI-318, "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES", LATEST EDITION.

TOLERANCES IN PLACING REINFORCEMENT SHALL BE:

- ± 3/8 INCH FOR MEMBERS WITH D < 8 INCHES
- ± 1/2 INCH FOR MEMBERS WITH D > 8 INCHES

ALL KEYWAYS IN CONSTRUCTION JOINTS, WHERE SHOWN, SHALL BE ROUGH AND THOROUGHLY CLEANED FOR BOND.

DOWELS, PIPE, WATERSTOPS AND OTHER INSTALLED MATERIALS AND ACCESSORIES SHALL BE HELD SECURELY IN POSITION WHILE CONCRETE IS BEING PLACED.

UNLESS OTHERWISE INDICATED, ASIDE FROM NORMAL ACCESSORIES USED TO HOLD REINFORCING BARS FIRMLY IN POSITION, THE FOLLOWING SHALL BE ADDED:

- A) IN SLABS #5 RISER BARS AT 36 INCHES OC MAXIMUM TO SUPPORT TOP REINFORCING BARS.
- B) IN WALLS WITH 2 CURTAINS #3 U OR Z SHAPE SPACERS AT 6 FEET OC EACH WAY.

METAL CLIPS OR SUPPORTS SHALL NOT BE PLACED IN CONTACT WITH THE FORMS OR THE SUBGRADE. CONCRETE BLOCKS (OR DOBIES) SUPPORTING BARS ON SUBGRADE SHALL BE IN SUFFICIENT NUMBERS TO SUPPORT THE BARS WITHOUT SETTLEMENT, BUT IN NO CASE SHALL SUCH SUPPORT BE CONTINUOUS.

DOWELS SHALL BE WIRED OR OTHERWISE HELD IN POSITION. THEY SHALL NOT BE SHOVED INTO FRESHLY PLACED CONCRETE.

UNLESS OTHERWISE INDICATED ON THE DRAWINGS, LAPS OF REINFORCEMENT SHALL BE AS SHOWN ON DETAIL S-143.

LOCATE TWO 3/4 INCH GALVANIZED RICHMOND ROCKET INSERTS, HOHMANN & BARNARD OR EQUAL, STRADDLING CENTERLINE OF EQUIPMENT OVER ALL PUMPS, METERS OR OTHER MECHANICAL UNITS OF MORE THAN 100 LBS. FOR INSERTING LIFTING EYES IF NOT OTHERWISE INDICATED.

REINFORCING BARS AND ACCESSORIES SHALL NOT BE IN CONTACT WITH AND PIPE, PIPE FLANGE OR METAL PARTS EMBEDDED IN CONCRETE, A MINIMUM OF 2 INCHES CLEARANCE SHALL BE PROVIDED AT ALL TIMES.

UNLESS OTHERWISE SHOWN ON THE DRAWINGS CONCRETE COVER FOR REINFORCING BARS SHALL BE AS FOLLOWS:

- FOR CONCRETE PLACED AGAINST EARTH _____ 3"
- FOR SURFACES IN CONTACT WITH WATER OR WEATHER AND FORMED SURFACES IN CONTACT WITH EARTH _____ 2"
- FOR CONCRETE NOT EXPOSED TO WEATHER, OR IN CONTACT WITH WATER OR EARTH _____ 1 1/2"

UNLESS OTHERWISE NOTED, WALLS AND SLABS SHOWN WITH A SINGLE LAYER OF REINFORCEMENT SHALL HAVE THAT REINFORCEMENT CENTERED

SLABS WITH SLOPING SURFACES SHALL HAVE THE INDICATED SLAB THICKNESS MAINTAINED AS THE MINIMUM. SLAB BOTTOMS MAY EITHER SLOPE WITH THE TOP SURFACE OR BE LEVEL. REINFORCING IN SLABS W/ SLOPING SURFACES SHALL BE PLACED AT THE REQUIRED CLEARANCE FROM THE SLAB SURFACES.

MASONRY

CONCRETE BLOCK MASONRY SHALL BE LIGHT OR MEDIUM WEIGHT, HOLLOW UNITS CONFORMING TO ASTM C 90, GRADE N. SIZE OF UNITS, COLOR AND TEXTURE SHALL BE PER THE SPECIFICATIONS.

GROUT ALL CELLS CONTAINING REINFORCEMENT OF CONCRETE BLOCK MASONRY UNLESS OTHERWISE NOTED ON DRAWINGS.

BAR LAPS SHALL BE 72 BAR DIAMETERS UNLESS OTHERWISE NOTED.

MORTAR SHALL BE IN ACCORDANCE WITH TABLE 21-A OF UBC TYPE S AND SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS OF 2500 PSI.

GROUT SHALL BE IN ACCORDANCE WITH PARAGRAPH 2103 OF THE UBC AND SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 2500 PSI.

UNLESS OTHERWISE SPECIFIED, SPECIAL INSPECTION SHALL BE PROVIDED FOR ALL MASONRY WORK.

THE COMBINED MASONRY ASSEMBLAGE COMPRESSIVE STRENGTH AT 28 DAYS SHALL BE A MINIMUM OF $f_m = 1500$ PSI.

REINFORCEMENT SHALL BE TIED OR OTHERWISE SECURED IN POSITION PRIOR TO GROUTING.

ALUMINUM

ALUMINUM CONSTRUCTION SHALL BE IN ACCORDANCE WITH AMERICAN SOCIETY OF CIVIL ENGINEERS SPECIFICATIONS FOR STRUCTURES OF ALUMINUM ALLOY 6061-T6. ALUMINUM SURFACES SHALL BE PREVENTED FROM COMING IN DIRECT CONTACT WITH CONCRETE OR WITH METALS NOT COMPATIBLE WITH ALUMINUM, USING METHODS DESCRIBED IN THE SPECIFICATIONS.

TESTING HYDRAULIC STRUCTURES

WHEN FILLING THE STRUCTURES WITH WATER FOR THE TEST REQUIRED IN THE SPECIFICATIONS, ALL VARIOUS BASINS LOCATED IN THE SAME STRUCTURE SHALL BE FILLED SIMULTANEOUSLY AT THE SAME RATE IN ORDER TO KEEP THE SAME LEVEL IN EACH BASIN.

STRUCTURAL STANDARD DETAILS

DETAILS ON SHEETS GS-1 THRU GS-6 ARE PART OF MONTGOMERY WATSON'S STRUCTURAL STANDARD DETAILS.

THESE DETAILS ARE TO BE USED WHEN REFERRED TO OR WHEN NO OTHER MORE RESTRICTIVE OR DIFFERENT DETAILS ARE SHOWN ON THE DRAWINGS.

STANDARD WALL DETAILS

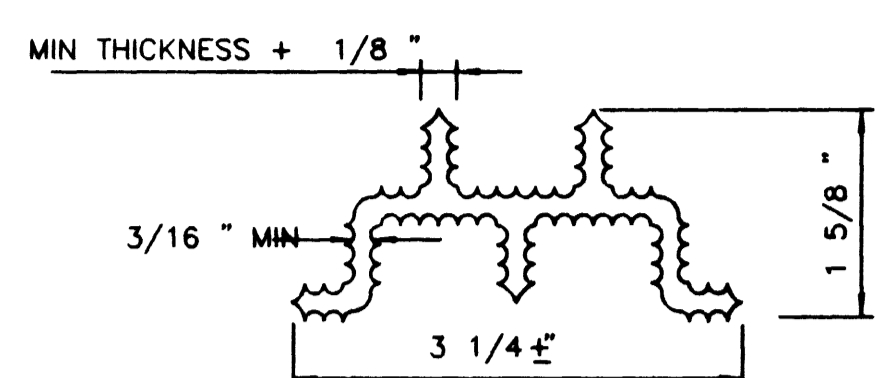
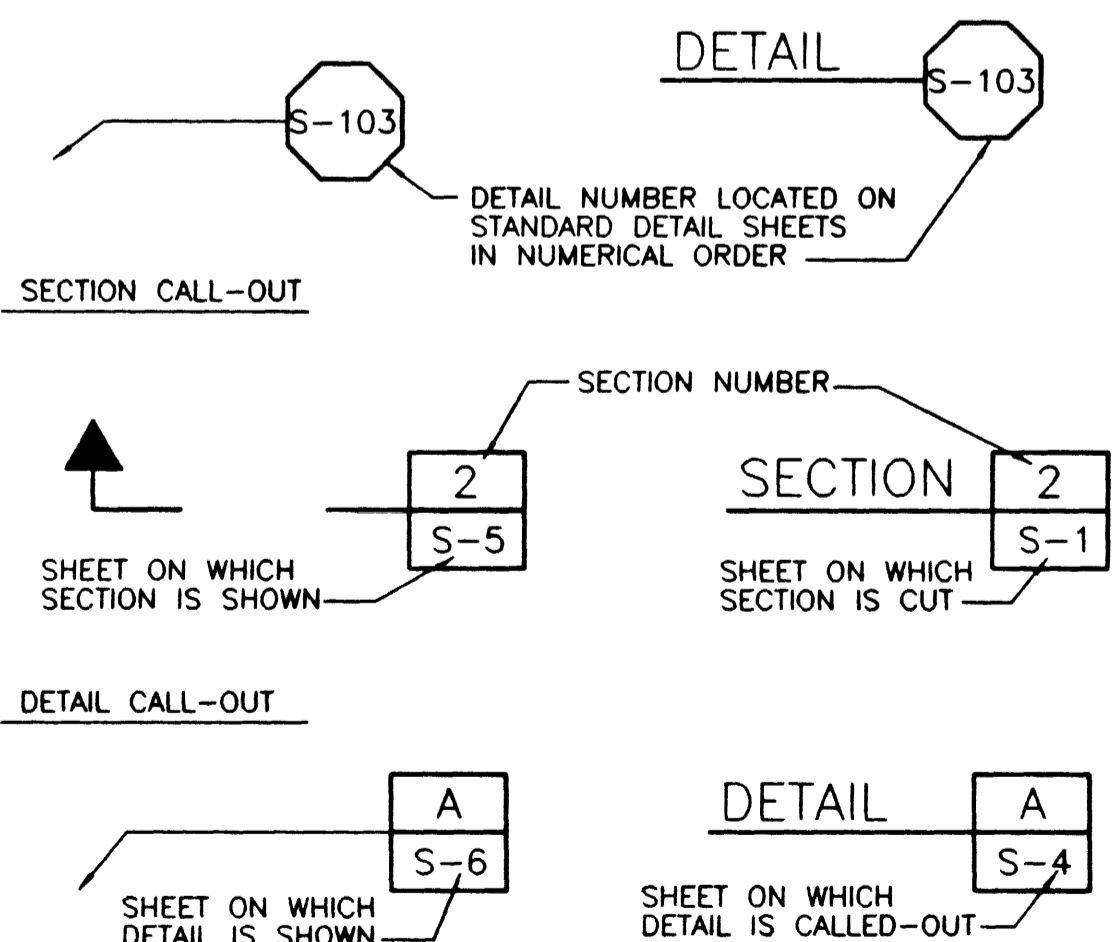
SEE N/GA-6 FOR TOP OF WALL TREATMENT ON ALL STRUCTURES UNLESS OTHERWISE NOTED.

INSPECTION

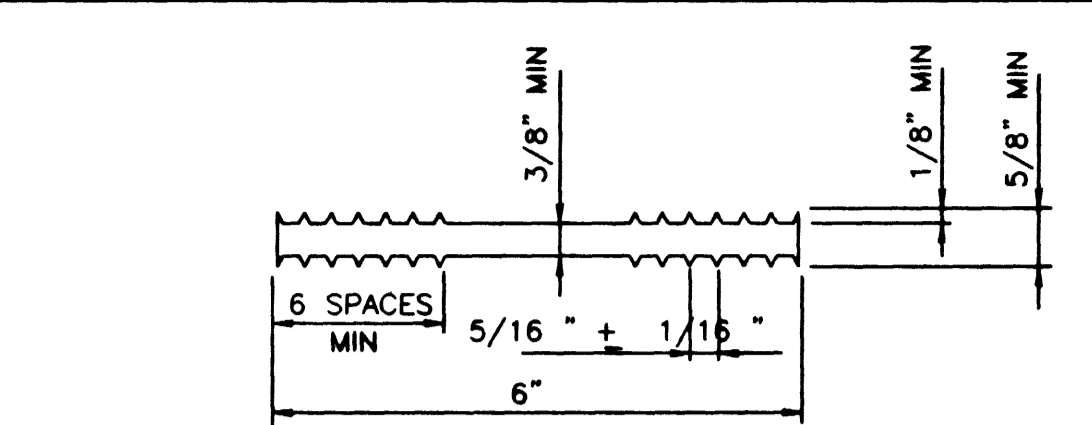
SPECIAL INSPECTION SHALL BE PROVIDED FOR THE FOLLOWING IN ACCORDANCE WITH SECTION 108 AND 1701.5 OF THE 1994 UBC:

TAKING OF TEST SPECIMENS AND PLACING OF REINFORCING AND ANCHOR BOLTS FOR CONCRETE FOUNDATIONS; ALL STRUCTURAL WELDING EXCEPT BY AN APPROVED FABRICATOR; INSTALLATION OF ALL HIGH STRENGTH BOLTING, AND ALL MASONRY.

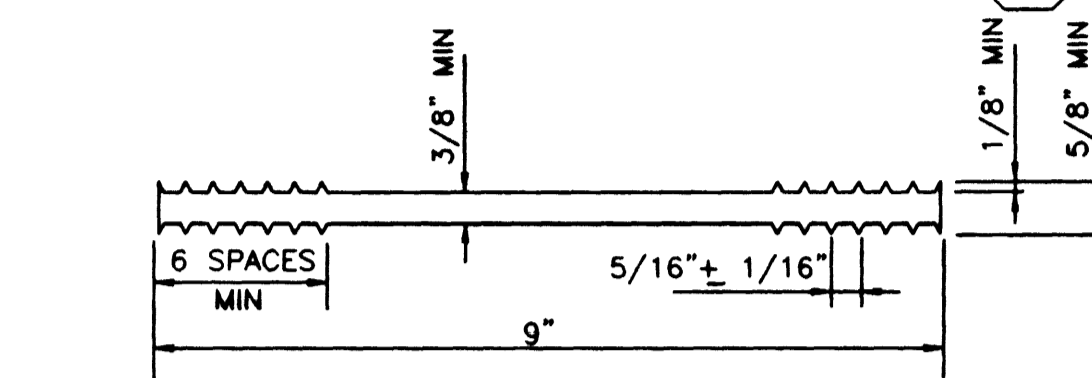
STRUCTURAL STANDARD DETAIL CALL-OUT



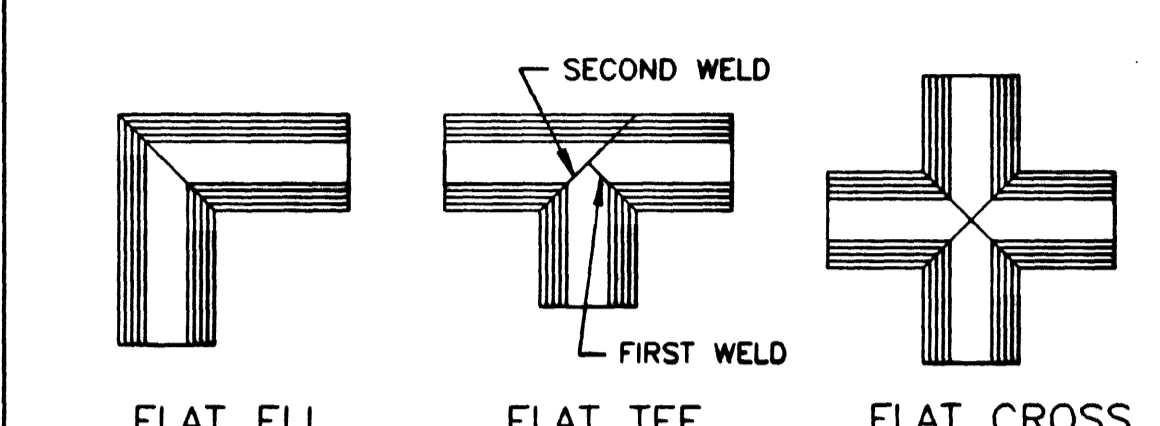
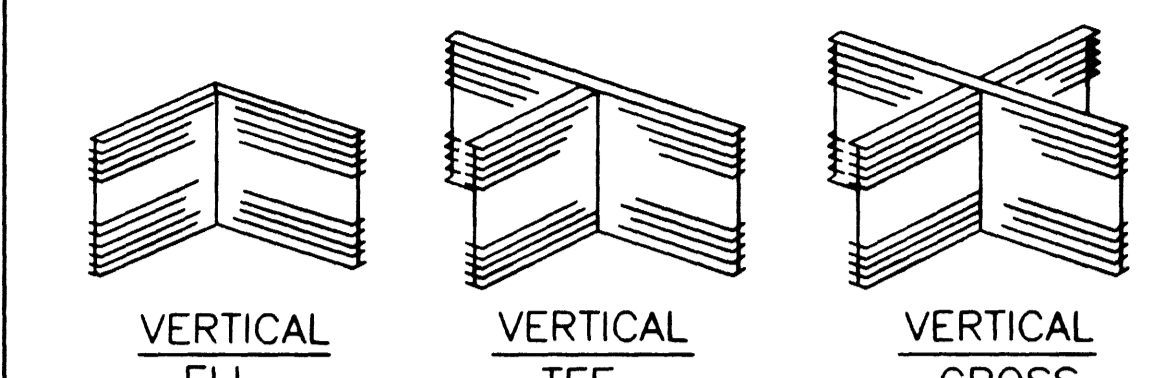
2 - RIB WATERSTOP REV 010196 S-101



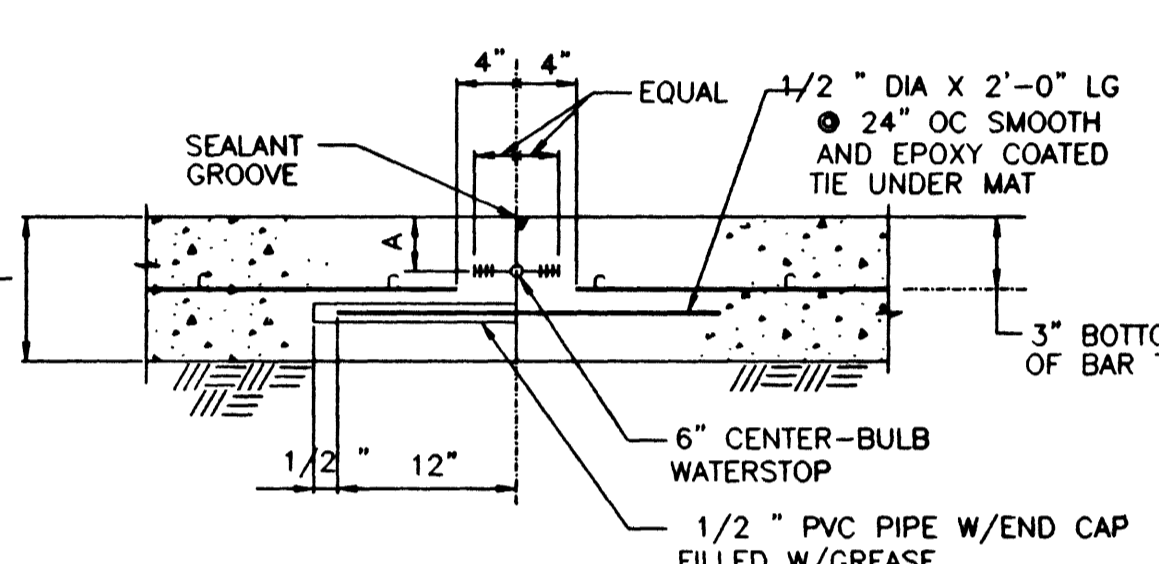
6" FLATSTRIP WATERSTOP REV 010196 S-103



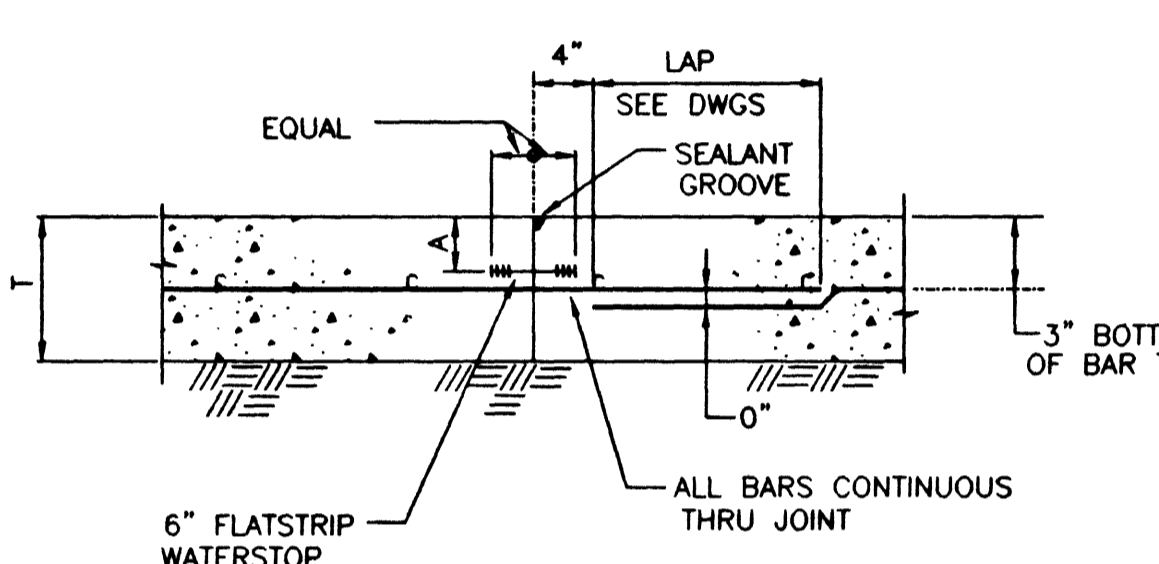
9" FLATSTRIP WATERSTOP REV 010196 S-106



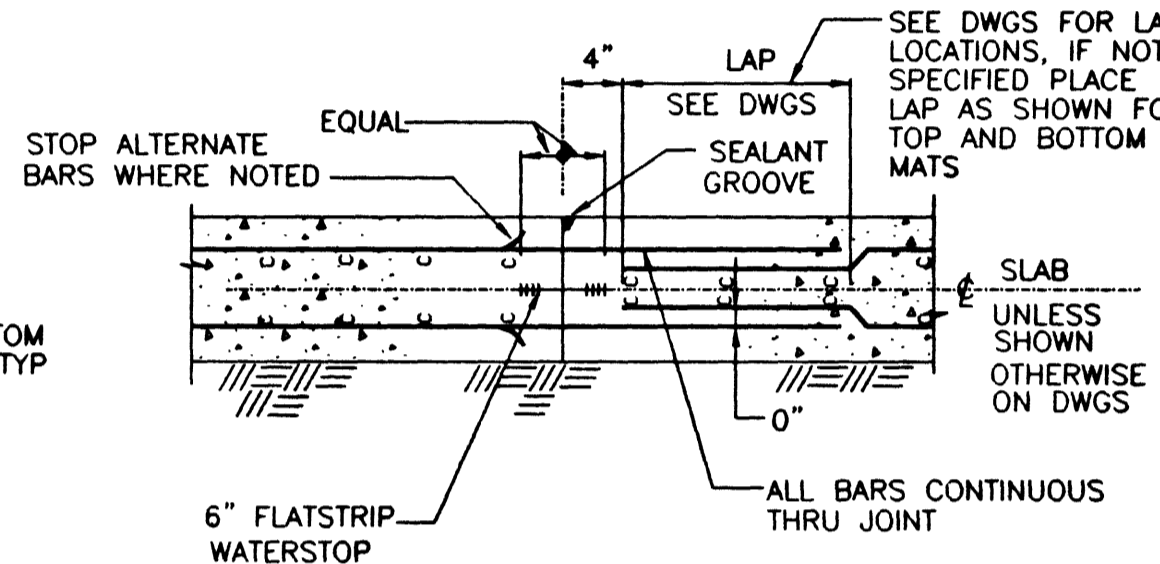
PREFABRICATED WATERSTOPS JOINTS REV 010196 S-108



SINGLE MAT REIN - SLEEVE - TYPE JOINT (TYP CONSTRUCTION JOINT UNLESS OTHERWISE NOTED) WITH WATERSTOP AND SEALANT GROOVE S-110



SINGLE MAT REIN - CONTINUOUS THRU JOINT (ONLY WHEN SPECIFIED ON DRAWINGS) WITH WATERSTOP AND SEALANT GROOVE S-112



DOUBLE MAT REIN WITH WATERSTOP AND SEALANT GROOVE S-114

NO WATERSTOP OR SEALANT GROOVE S-111

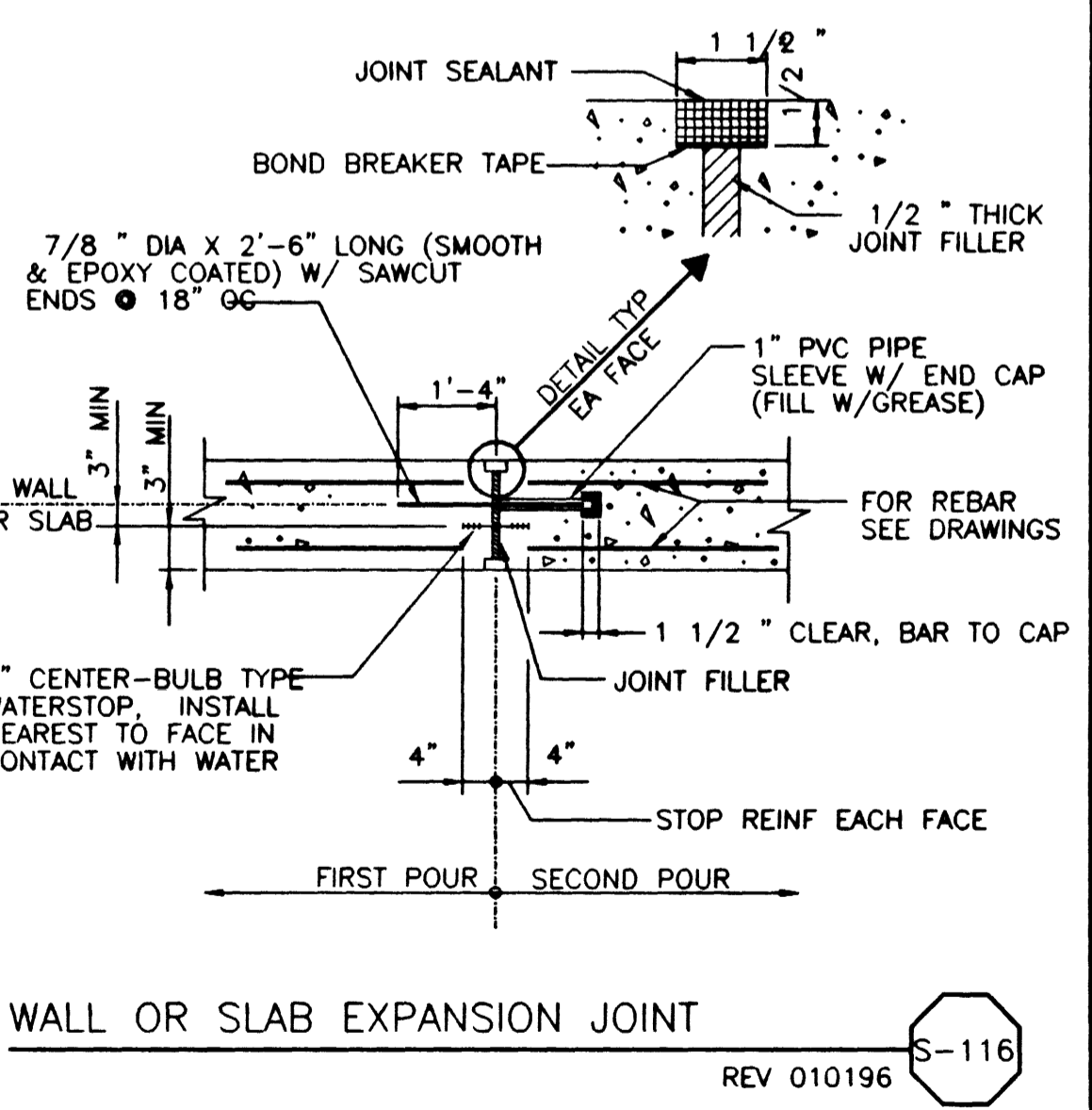
NO WATERSTOP OR SEALANT GROOVE S-113

NO WATERSTOP OR SEALANT GROOVE S-115

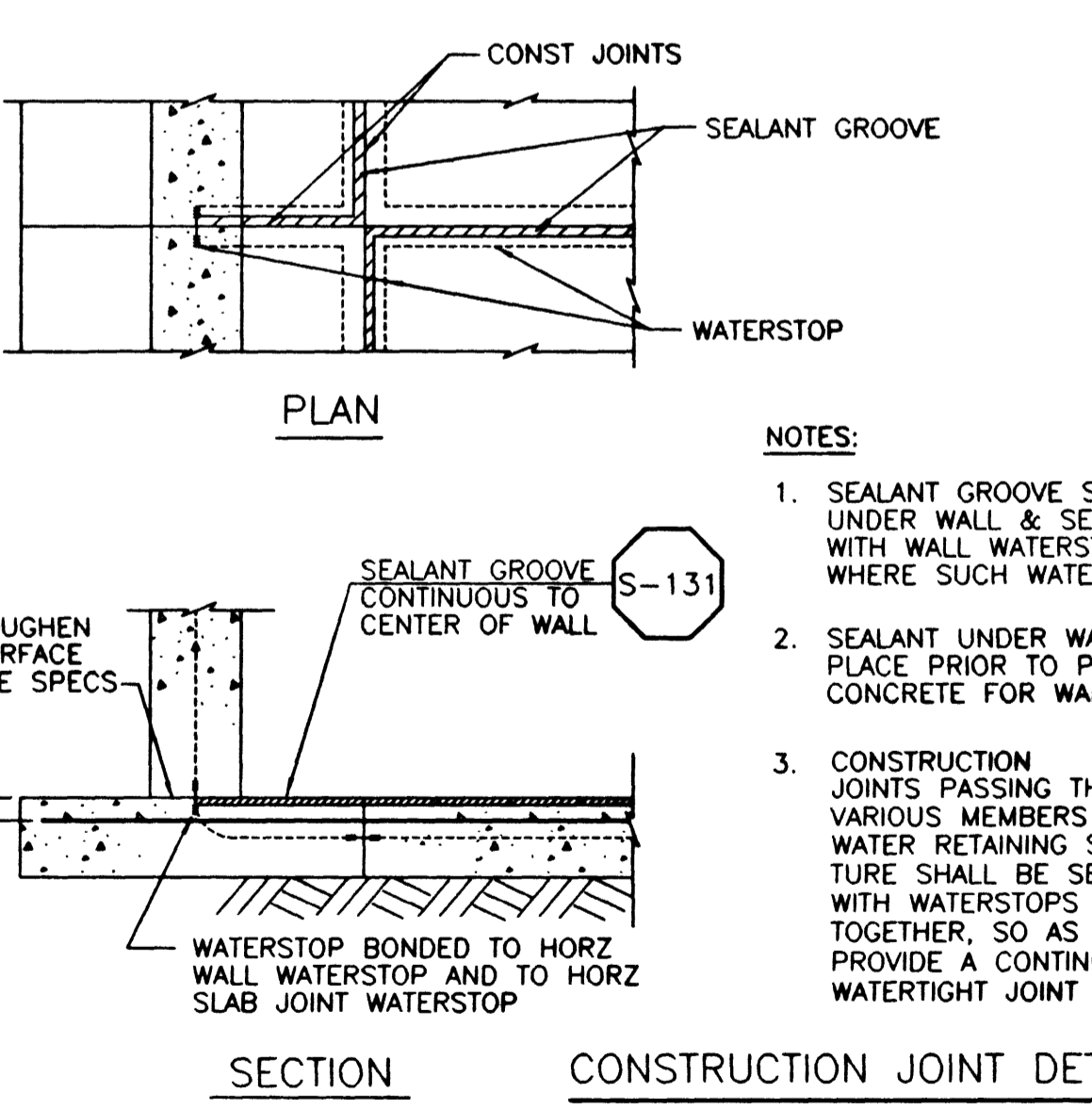
T	A
6"	2"
7"	2 1/2"
8"	2 1/2"

NOTES:
1. IN ALL CONSTRUCTION JOINTS WITH WATERSTOPS, APPLY 2 COATS OF BOND BREAKER TO FACE OF JOINT, AVOID COATING WATERSTOP (AND SEALANT GROOVE WHERE USED)
2. WATERSTOPS AND SEALANT GROOVES TO BE PROVIDED IN ALL WATER RETAINING SLABS, SEE DRAWINGS, FOR OTHER LOCATIONS WHERE THEY MAY BE REQUIRED

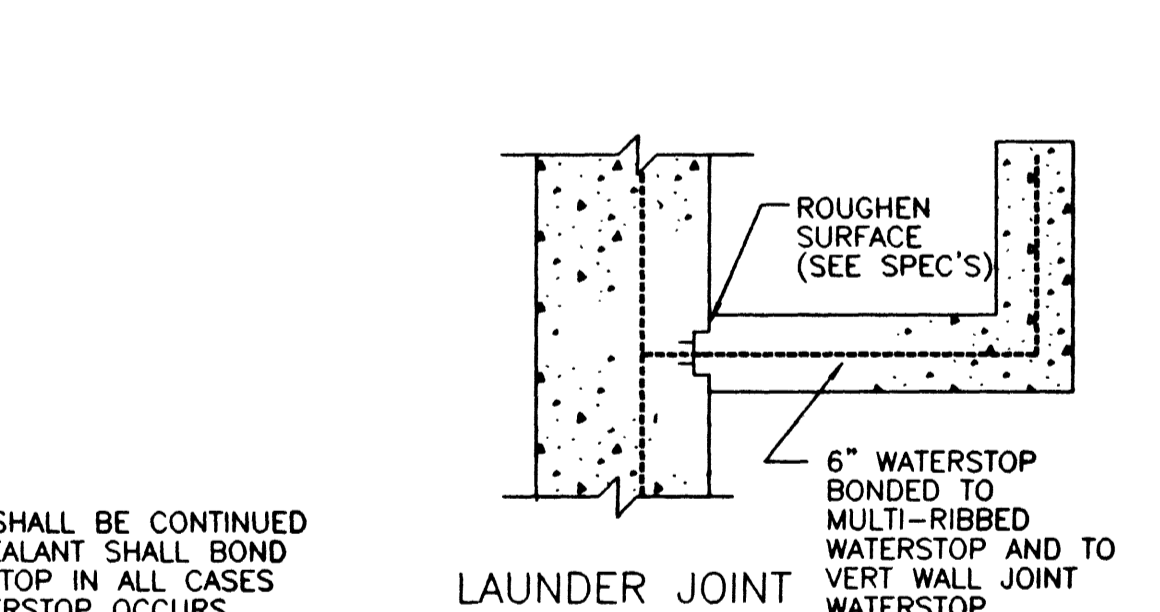
SLAB-ON-GRADE CONSTRUCTION JOINTS REV 011696



WALL OR SLAB EXPANSION JOINT REV 010196 S-116



CONSTRUCTION JOINT DETAILS WALL TO SLAB REV 011896 S-118



LAUNDRY JOINT

- NOTES:
- SEALANT GROOVE SHALL BE CONTINUED UNDER WALL & SEALANT SHALL BOND WITH WALL WATERSTOP IN ALL CASES WHERE SUCH WATERSTOP OCCURS
 - SEALANT UNDER WALL SHALL BE IN PLACE PRIOR TO PLACEMENT OF CONCRETE FOR WALL
 - CONSTRUCTION JOINTS PASSING THROUGH VARIOUS MEMBERS OF A WATER RETAINING STRUCTURE SHALL BE SEALED WITH WATERSTOPS BONDED TOGETHER, SO AS TO PROVIDE A CONTINUOUS WATERTIGHT JOINT

THE ORIGINAL CONTRACT DOCUMENT WAS SEALED AND SIGNED BY SAM MOUAWAD

AS BUILT
DATE
12 APR 99
ABREGO

DATE/TIME DD-MM-YYYY HH:MM FILE No. E:\p\o\l\m\w\l\st\l\brm\o*.dgn JOB No. 629

SCALE: NONE	WARNING: IF THIS BAR DOES NOT MEASURE 1 THEN DRAWING IS NOT TO SCALE.	DESIGNED: MW	DRAWN: MW	CHECKED: C. LEE	SUBMITTED: THE ORIGINAL CONTRACT DOCUMENT WAS SIGNED BY SAM MOUAWAD	PROJECT ENGINEER: R. C. E. NO. DATE	RECOMMENDED: THE ORIGINAL CONTRACT DOCUMENT WAS SIGNED BY VICKI J. SCHARNHORST	MONTGOMERY WATSON	MONTGOMERY WATSON 3014 WEST CHARLESTON BLVD LAS VEGAS, NV. 89102-1944 (702) 878-8010	CITY OF LAS VEGAS BONANZA/MOJAVE WATER RESOURCE CENTER	DWG. 42 GS-1 513-64
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