

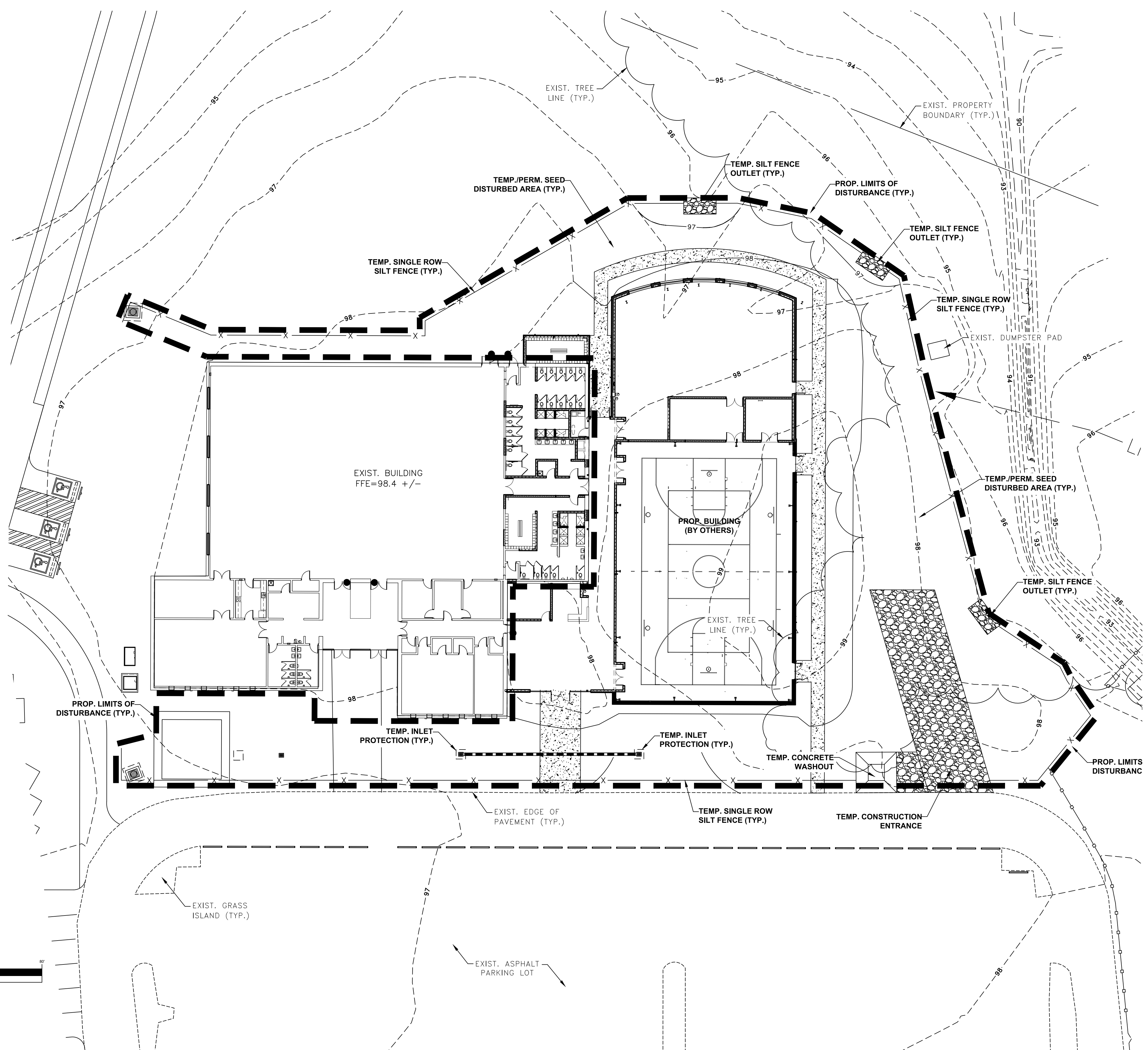


SCDHEC STANDARD NOTES

- IF NECESSARY, SLOPES WHICH EXCEED EIGHT (8) VERTICAL FEET SHOULD BE STABILIZED WITH SYNTHETIC OR VEGETATIVE MATS. IN ADDITION TO HYDROSEEDING, IT MAY BE NECESSARY TO INSTALL TEMPORARY SLOPE DRAINS DURING CONSTRUCTION. TEMPORARY BERMS MAY BE NEEDED UNTIL THE SLOPE IS BROUGHT TO GRADE.
- STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN FOURTEEN (14) DAYS AFTER WORK HAS CEASED, EXCEPT AS STATED BELOW.
 - WHERE STABILIZATION BY THE 14TH DAY IS PRECLUDED BY SNOW COVER OR FROZEN GROUND CONDITIONS STABILIZATION MEASURES MUST BE INITIATED AS SOON AS PRACTICABLE.
 - WHERE CONSTRUCTION ACTIVITY ON A PORTION OF THE SITE IS TEMPORARILY CEASED, AND EARTH-DISTURBING ACTIVITIES WILL BE RESUMED WITHIN 14 DAYS, TEMPORARY STABILIZATION MEASURES DO NOT HAVE TO BE INITIATED ON THAT PORTION OF THE SITE.
- ALL SEDIMENT AND EROSION CONTROL DEVICES SHALL BE INSPECTED ONCE EVERY CALENDAR WEEK. IF PERIODIC INSPECTION OR OTHER INFORMATION INDICATES THAT A BMP HAS BEEN INAPPROPRIATELY OR INCORRECTLY INSTALLED, THE PERMITTEE MUST ADDRESS THE NECESSARY REPLACEMENT OR MODIFICATION REQUIRED TO CORRECT THE BMP WITHIN 48 HOURS OF IDENTIFICATION.
- PROVIDE SILT FENCE AND/OR OTHER CONTROL DEVICES, AS MAY BE REQUIRED, TO CONTROL SOIL EROSION DURING UTILITY CONSTRUCTION. ALL DISTURBED AREAS SHALL BE CLEANED, GRADED, AND STABILIZED WITH GRASSING IMMEDIATELY AFTER THE UTILITY INSTALLATION. FILL, COVER, AND TEMPORARY SEEDING AT THE END OF EACH DAY ARE RECOMMENDED. IF WATER IS ENCOUNTERED WHILE TRENCHING, THE WATER SHOULD BE FILTERED TO REMOVE SEDIMENT BEFORE BEING PUMPED BACK INTO ANY WATERS OF THE STATE.
- ALL EROSION CONTROL DEVICES SHALL BE PROPERLY MAINTAINED DURING ALL PHASES OF CONSTRUCTION UNTIL THE COMPLETION OF ALL CONSTRUCTION ACTIVITIES AND ALL DISTURBED AREAS HAVE BEEN STABILIZED. ADDITIONAL CONTROL DEVICES MAY BE REQUIRED DURING CONSTRUCTION IN ORDER TO CONTROL EROSION AND/OR OFFSITE SEDIMENTATION. ALL TEMPORARY CONTROL DEVICES SHALL BE REMOVED ONCE CONSTRUCTION IS COMPLETE AND THE SITE IS STABILIZED.
- THE CONTRACTOR MUST TAKE NECESSARY ACTION TO MINIMIZE THE TRACKING OF MUD ONTO PAVED ROADWAY(S) FROM CONSTRUCTION AREAS AND THE GENERATION OF DUST. THE CONTRACTOR SHALL FREQUENTLY REMOVE MUD/SOIL FROM PAVEMENT, AS MAY BE REQUIRED.
- TEMPORARY DIVERSION BERMS AND/OR DITCHES WILL BE PROVIDED AS NEEDED DURING CONSTRUCTION TO PROTECT WORK AREAS FROM UPSLOPE RUNOFF AND/OR TO DIVERT SEDIMENT-LADEN WATER TO APPROPRIATE TRAPS OR STABLE OUTLETS.
- ALL WATERS OF THE STATE (WOS), INCLUDING WETLANDS, ARE TO BE FLAGGED OR OTHERWISE CLEARLY MARKED IN THE FIELD. A DOUBLE ROW OF SILT FENCE IS TO BE INSTALLED IN ALL AREAS WHERE A 50-FOOT BUFFER CAN'T BE MAINTAINED BETWEEN THE DISTURBED AREA AND ALL WOS. A 10-FOOT BUFFER SHOULD BE MAINTAINED BETWEEN THE LAST ROW OF SILT FENCE AND ALL WOS.
- LITTER, CONSTRUCTION DEBRIS, OILS, FUELS, AND BUILDING PRODUCTS WITH SIGNIFICANT POTENTIAL FOR IMPACT (SUCH AS STOCKPILES OF FRESHLY TREATED LUMBER) AND CONSTRUCTION CHEMICALS THAT COULD BE EXPOSED TO STORM WATER MUST BE PREVENTED FROM BECOMING A POLLUTANT SOURCE IN STORM WATER DISCHARGES.
- A COPY OF THE SWPPP, INSPECTIONS RECORDS, AND RAINFALL DATA MUST BE RETAINED AT THE CONSTRUCTION SITE OR A NEARBY LOCATION EASILY ACCESSIBLE DURING NORMAL BUSINESS HOURS, FROM THE DATE OF COMMENCEMENT OF CONSTRUCTION ACTIVITIES TO THE DATE THAT FINAL STABILIZATION IS REACHED.
- INITIATE STABILIZATION MEASURES ON ANY EXPOSED STEEP SLOPE (3H:1V OR GREATER) WHERE LAND-DISTURBING ACTIVITIES HAVE PERMANENTLY OR TEMPORARILY CEASED, AND WILL NOT RESUME FOR A PERIOD OF 7 CALENDAR DAYS.
- MINIMIZE SOIL COMPACTION AND, UNLESS INFEASIBLE, PRESERVE TOPSOIL.
- MINIMIZE THE DISCHARGE OF POLLUTANTS FROM EQUIPMENT AND VEHICLE WASHING, WHEEL WASH WATER, AND OTHER WASH WATERS. WASH WATERS MUST BE TREATED IN A SEDIMENT BASIN OR ALTERNATIVE CONTROL THAT PROVIDES EQUIVALENT OR BETTER TREATMENT PRIOR TO DISCHARGE.
- MINIMIZE THE DISCHARGE OF POLLUTANTS FROM DEWATERING OF TRENCHES AND EXCAVATED AREAS. THESE DISCHARGES ARE TO BE ROUTED THROUGH APPROPRIATE BMPS (SEDIMENT BASIN, FILTER BAG, ETC.).
- THE FOLLOWING DISCHARGES FROM SITES ARE PROHIBITED: WASTEWATER FROM WASHOUT OF CONCRETE, UNLESS MANAGED BY AN APPROPRIATE CONTROL; WASTEWATER FROM WASHOUT AND CLEANOUT OF STUCCO, PAINT, FORM RELEASE OILS, CURING COMPOUNDS AND OTHER CONSTRUCTION MATERIALS; FUELS, OILS, OR OTHER POLLUTANTS USED IN VEHICLE AND EQUIPMENT OPERATION AND MAINTENANCE; AND SOAPS OR SOLVENTS USED IN VEHICLE AND EQUIPMENT WASHING.
- AFTER CONSTRUCTION ACTIVITIES BEGIN, INSPECTIONS MUST BE CONDUCTED AT A MINIMUM OF AT LEAST ONCE EVERY CALENDAR WEEK AND MUST BE CONDUCTED UNTIL FINAL STABILIZATION IS REACHED ON ALL AREAS OF THE CONSTRUCTION SITE.
- IF EXISTING BMPS NEED TO BE MODIFIED OR IF ADDITIONAL BMPS ARE NECESSARY TO COMPLY WITH THE REQUIREMENTS OF THIS PERMIT AND/OR SC'S WATER QUALITY STANDARDS, IMPLEMENTATION MUST BE COMPLETED BEFORE THE NEXT STORM EVENT WHENEVER PRACTICABLE BEFORE THE NEXT STORM EVENT IS IMPRACTICABLE. THE SITUATION MUST BE DOCUMENTED IN THE SWPPP AND ALTERNATIVE BMPS MUST BE IMPLEMENTED AS SOON AS REASONABLY POSSIBLE.
- A PRE-CONSTRUCTION CONFERENCE MUST BE HELD FOR EACH CONSTRUCTION SITE WITH AN APPROVED ON-SITE SWPPP PRIOR TO THE IMPLEMENTATION OF CONSTRUCTION ACTIVITIES. FOR NON-LINEAR PROJECTS THAT DISTURB 10 ACRES OR MORE THIS CONFERENCE MUST BE HELD ON-SITE UNLESS THE DEPARTMENT HAS APPROVED OTHERWISE.

CONSTRUCTION SEQUENCE

- ITEMS MUST OCCUR IN THE ORDER LISTED; ITEMS CANNOT OCCUR CONCURRENTLY UNLESS SPECIFICALLY NOTED.
- RECEIVE NPDES COVERAGE FROM DHEC
 - PRE-CONSTRUCTION MEETING (ON-SITE IF MORE THAN 10 DISTURBED AND NON-LINEAR)
 - NOTIFY DHEC EDC REGIONAL OFFICE OR OCRM OFFICE 48 HOURS PRIOR TO BEGINNING LAND-DISTURBING ACTIVITIES
 - INSTALLATION OF CONSTRUCTION ENTRANCE(S)
 - CLEARING & GRUBBING ONLY AS NECESSARY FOR INSTALLATION OF PERIMETER CONTROLS
 - INSTALLATION OF PERIMETER CONTROLS (E.G., SILT FENCE)
 - CLEARING & GRUBBING OF SITE OR DEMOLITION (SEDIMENT & EROSION CONTROL MEASURES FOR THESE AREAS MUST ALREADY BE INSTALLED)
 - ROUGH GRADING
 - FINE GRADING, PAVING, ETC.
 - PERMANENT/ FINAL STABILIZATION
 - REMOVAL OF TEMPORARY SEDIMENT & EROSION CONTROL MEASURES AFTER ENTIRE AREA DRAINING TO THE STRUCTURE IS FINALLY STABILIZED (THE DEPARTMENT RECOMMENDS THAT THE PROJECT OWNER/ OPERATOR HAVE THE SWPPP PREPARER OR REGISTRATION EQUIVALENT APPROVE THE REMOVAL OF TEMPORARY STRUCTURES.)
 - PERFORM AS-BUILT SURVEYS OF ALL DETENTION STRUCTURES AND SUBMIT TO DHEC OR MS4 FOR ACCEPTANCE.
 - SUBMIT NOTICE OF TERMINATION (NOT) TO DHEC AS APPROPRIATE.
- NOTE: MAINTENANCE OF SEDIMENT AND EROSION CONTROL MEASURES MUST CONTINUE UNTIL THE SITE IS PERMANENTLY STABILIZED AND THE CONTROLS ARE REMOVED.



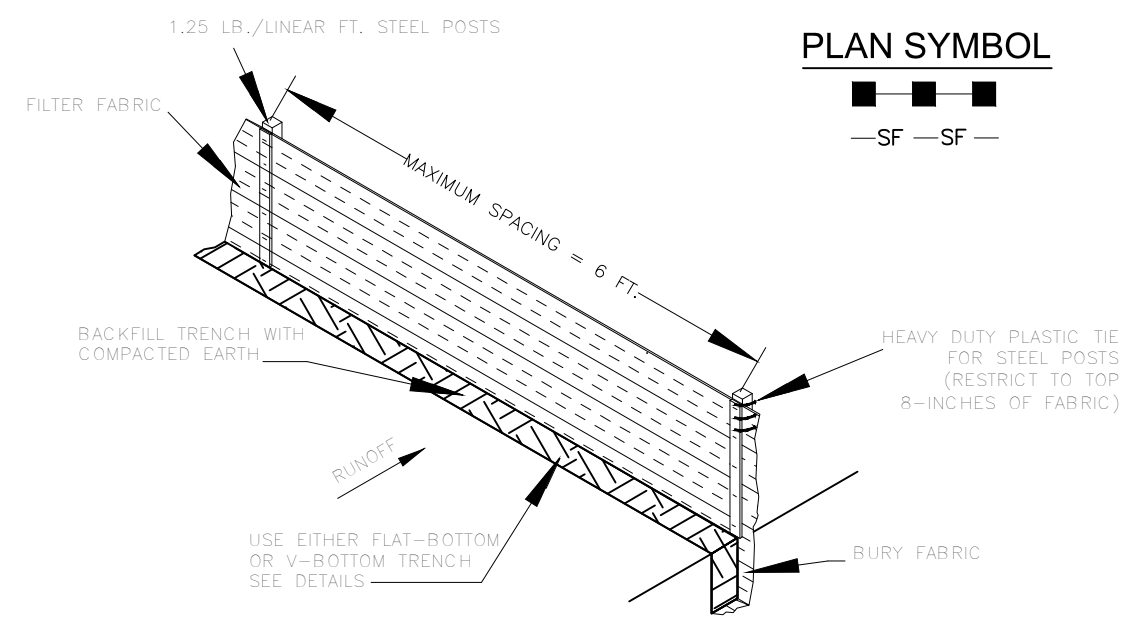
REV. NO.	BY	DATE	DESCRIPTION OF REVISION

PROJECT INFORMATION	
DESIGNED BY:	AW
DRAWN BY:	AW
CHECKED BY:	JF
PROJECT NUMBER:	16-32
ORIGINAL DATE:	05/30/17

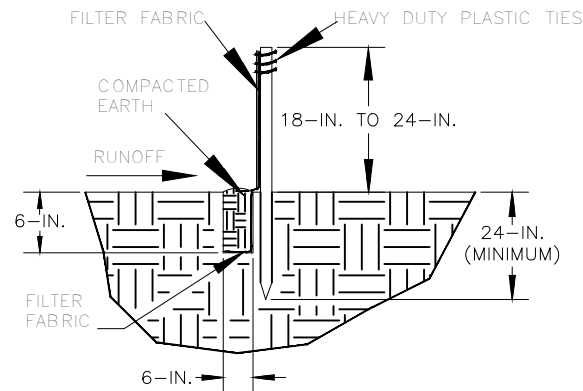
IE INFRASTRUCTURE CONSULTING & ENGINEERING
 26 JOHN GALT ROAD, STE. A, BEAUFORT, SC 29906 | 843-522-0246 | WWW.ICE-ENG.COM
 COLUMBIA | NORTH CHARLESTON | RALEIGH | ATLANTA | AUSTIN | TAMPA | OTHER MAJOR CITIES

COLLETON RECREATION CENTER EXPANSION
 COLLETON COUNTY WALTERBORO, SC
EROSION CONTROL PLAN C5.0

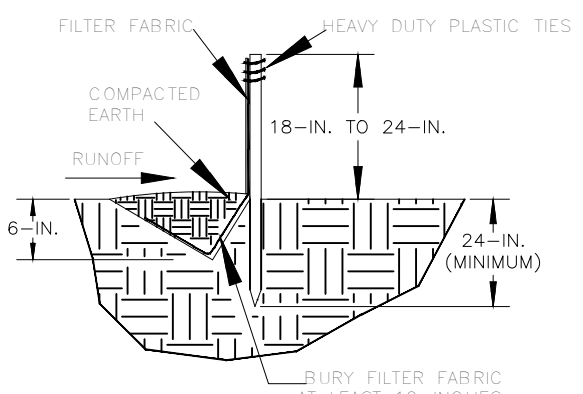
SILT FENCE INSTALLATION



FLAT-BOTTOM TRENCH DETAIL



V-SHAPED TRENCH DETAIL

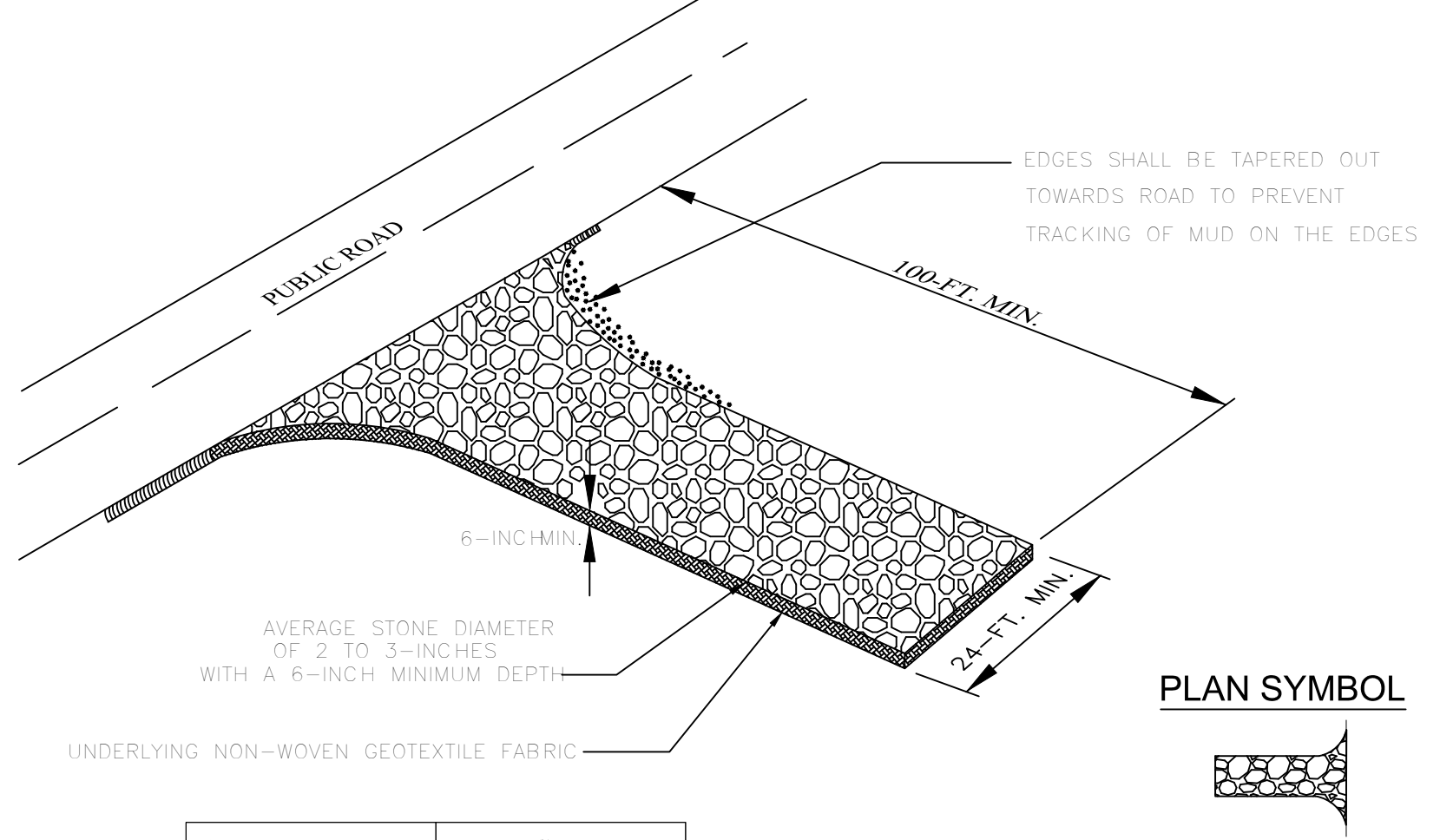


- SILT FENCE - GENERAL NOTES**
- Silt fence shall be installed at all locations on projects or in other areas subject to concentrated flows. Silt fence shall not be used as a velocity control BMP. Concentrated flows and any flows greater than 0.5 cfs.
 - Maximum sheet or overflow flow path length to the silt fence shall be 100-feet.
 - Maximum slope steepness (normal/perpendicular) to the fence line shall be 2:1.
 - Silt fence joints, when necessary, shall be completed by one of the following options:
 - Wrap each fabric together at a support post with both ends fastened to the post, with a 1-foot minimum overlap;
 - Overlap silt fence by installing 3-feet passed the support post to which the new silt fence roll is attached. Attach old roll to new roll with heavy-duty plastic ties or;
 - Overlap entire width of each silt fence roll from one support post to the next support post.
 - Attach filter fabric to the steel posts using heavy-duty plastic ties that are evenly spaced within the top 8-inches of the fabric.
 - Install the silt fence perpendicular to the direction of the stormwater flow and place the silt fence the proper distance from the toe of steep slopes to provide sediment storage and access for maintenance and cleanup.
 - Install Silt Fence Checks (Tie-Racks) every 50-100 feet, dependent on slope, along silt fence that is installed with slope and where concentrated flows are expected or are documented along the proposed/installed silt fence.

South Carolina Department of Health and Environmental Control
SILT FENCE
 STANDARD DRAWING NO. SC-03 Page 1 of 2
 NOT TO SCALE
 FEBRUARY 2014 DATE

SILT FENCE - INSPECTION & MAINTENANCE

- SILT FENCE - POST REQUIREMENTS**
- Silt fence posts must be 48-inch long steel posts that meet, at a minimum, the following physical characteristics:
 - Composed of a high strength steel with a minimum yield strength of 50,000 psi;
 - Includes a standard "T" section with a nominal face width of 1.38-inches and a nominal "T" length of 1.48-inches;
 - Weight 1.25 pounds per foot (± 8%).
 - Posts shall be equipped with projections to aid in fastening of filter fabric.
 - Steel posts may need to have a metal soil stabilization plate welded near the bottom when installed along steep slopes or installed in loose soils. The plate should have a minimum cross section of 1/2-square inches and a maximum height of 3 feet shall be maintained above the ground.
 - Post spacing shall be at a maximum of 8-feet on center.
- SILT FENCE - FABRIC REQUIREMENTS**
- Silt fence shall be composed of woven geotextile fiber fabric that consists of the following requirements:
 - Composed of fibers consisting of long chain synthetic polymers of at least 85% by weight of polypropylene, polyesters, or polyamides that are formed into a network such that the filaments or yarns retain dimensional stability relative to each other;
 - Free of any treatment or coating which might adversely affect its physical properties after installation;
 - Free of any defects or flaws that significantly affect its physical and/or filtering properties; and;
 - Have a minimum width of 36-inches.
 - Use only fabric appearing on SC DOT's Qualified Products Listing (QPL), Approval Sheet #34, meeting the requirements of the most current edition of the SC DOT Standard Specifications for Highway Construction.
 - 12-inches of the fabric should be placed within excavated trench and tread in when the trench is backfilled.
 - Filter Fabric shall be purchased in continuous rolls and cut to the length of the barrier to avoid joints.
 - Filter Fabric shall be installed at a minimum of 24-inches above the ground.



SPECIFICATION	SIZE
ROCK PAD THICKNESS	6 INCHES
ROCK PAD WIDTH	24 FEET
ROCK PAD LENGTH	100 FEET
ROCK PAD STONE SIZE	D = 2-3 INCHES

South Carolina Department of Health and Environmental Control
CONSTRUCTION ENTRANCE
 STANDARD DRAWING NO. SC-06 PAGE 1 of 2
 NOT TO SCALE
 FEBRUARY 2014 DATE

CONSTRUCTION ENTRANCE - GENERAL NOTES

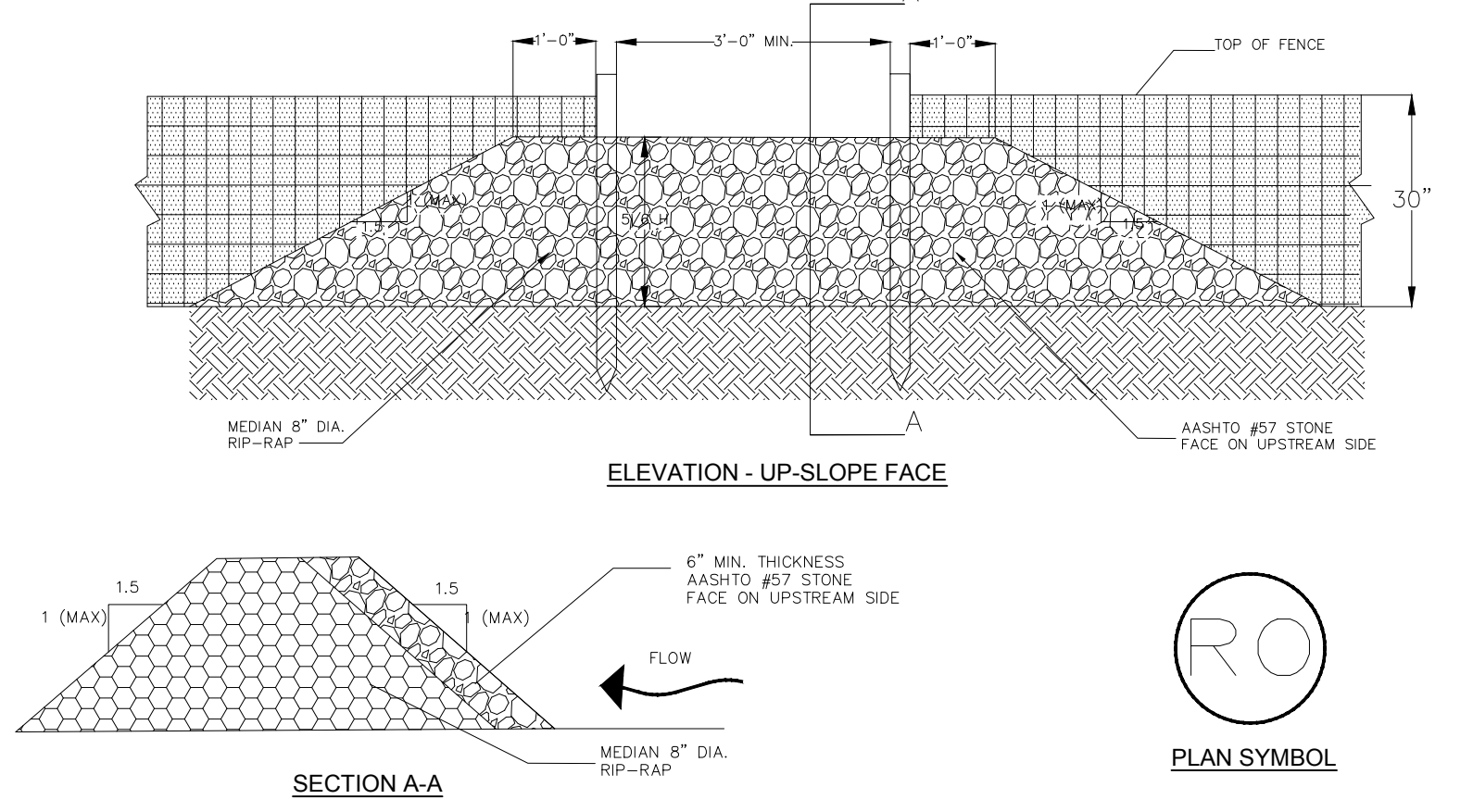
- Stabilized construction entrances should be used at all points where traffic will egress/ingress a construction site onto a public road or any impervious surfaces, such as parking lots.
- Install a non-woven geotextile fabric prior to placing any stone.
- Install a culvert pipe across the entrance when needed to provide positive drainage.
- The entrance shall consist of 2-inch to 3-inch D50 stone placed at a minimum depth of 6-inches.
- Minimum dimensions of the entrance shall be 24-feet wide by 100-feet long, and may be modified as necessary to accommodate site constraints.
- The edges of the entrance shall be tapered out towards the road to prevent tracking of the edge of the entrance.
- Divert all surface runoff and drainage from the stone pad to a sediment trap or basin or other sediment trapping structure.
- Limestone may not be used for the stone pad.

CONSTR. ENTRANCE - INSPECTION & MAINTENANCE

- The key to functional construction entrances is weekly inspections, routine maintenance, and regular sediment removal.
- Regular inspections of construction entrances shall be conducted once every calendar week and, as recommended, within 24-hours after each rainfall event that produces 1/2-inch or more of precipitation.
- During regular inspections, check for mud and sediment buildup and pad integrity. Inspection frequencies may need to be more frequent during long periods of wet weather.
- Reshape the stone pad as necessary for drainage and runoff control.
- Wash or replace stones as needed and as directed by site inspector. The stone in the entrance should be washed or replaced whenever the entrance fails to reduce the amount of mud being carried off-site by vehicles. Frequent washing will extend the useful life of stone pad.
- Immediately remove mud and sediment tracked or washed onto adjacent impervious surfaces by brushing or sweeping. Flushing should only be used when the water can be discharged to a sediment trap or basin.
- During maintenance activities, any broken pavement should be repaired immediately.
- Construction entrances should be removed after the site has reached final stabilization. Permanent vegetation should replace areas from which construction entrances have been removed, unless areas will be used to serve post-construction.

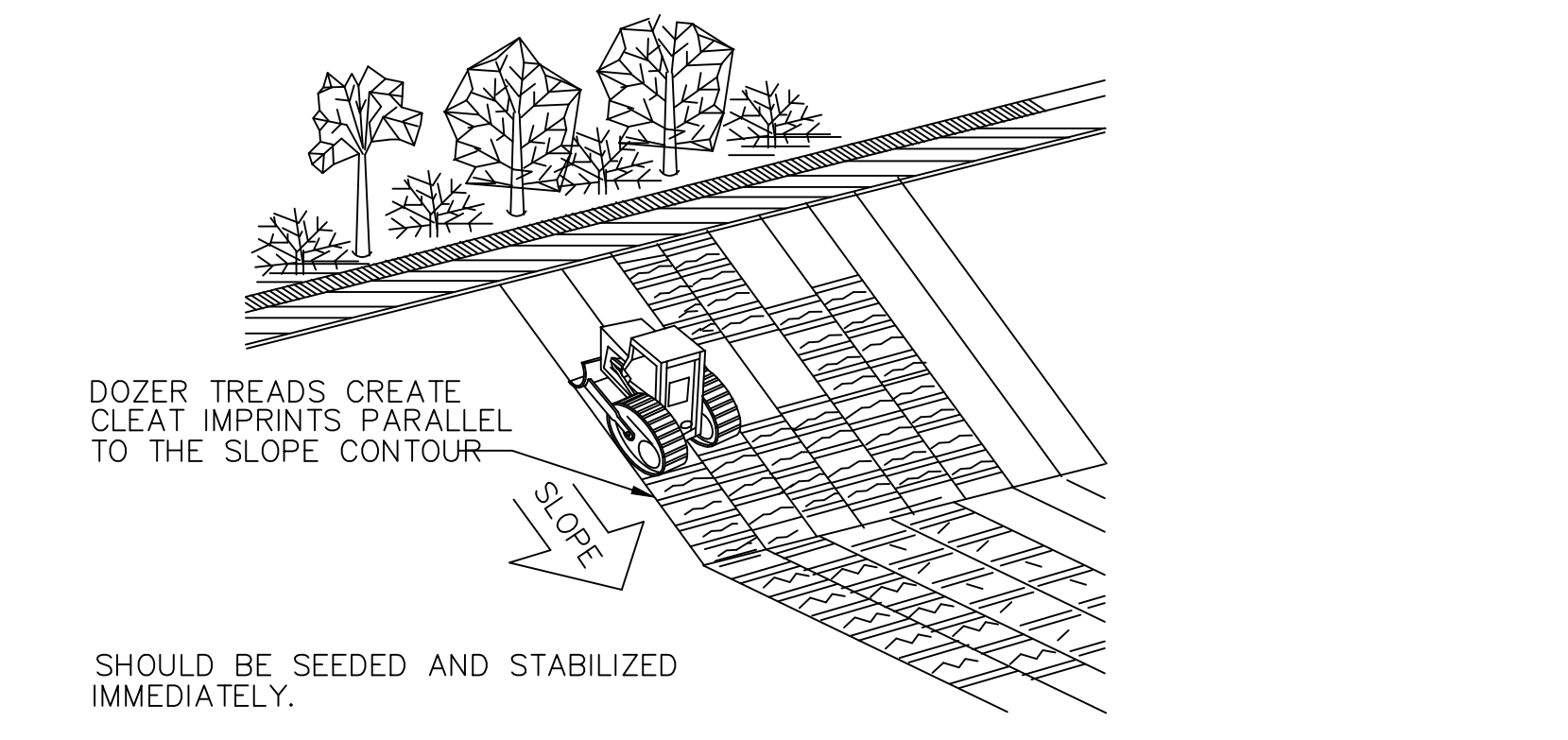
South Carolina Department of Health and Environmental Control
CONSTRUCTION ENTRANCE
 STANDARD DRAWING NO. SC-06 PAGE 2 of 2
 GENERAL NOTES
 FEBRUARY 2014 DATE

SILT FENCE ROCK OUTLET



- NOTES:**
- WASHED STONE (#57) TO BE REMOVED AND REPLACED ONCE IT BECOMES CLOGGED WITH SEDIMENT.
 - SEDIMENT TO BE REMOVED WHEN ACCUMULATIONS REACH 1/3 HEIGHT OF SILT FENCE
 - THE KEY TO FUNCTIONAL ROCK OUTLETS IS WEEKLY INSPECTIONS, ROUTINE MAINTENANCE, AND REGULAR SEDIMENT REMOVAL.

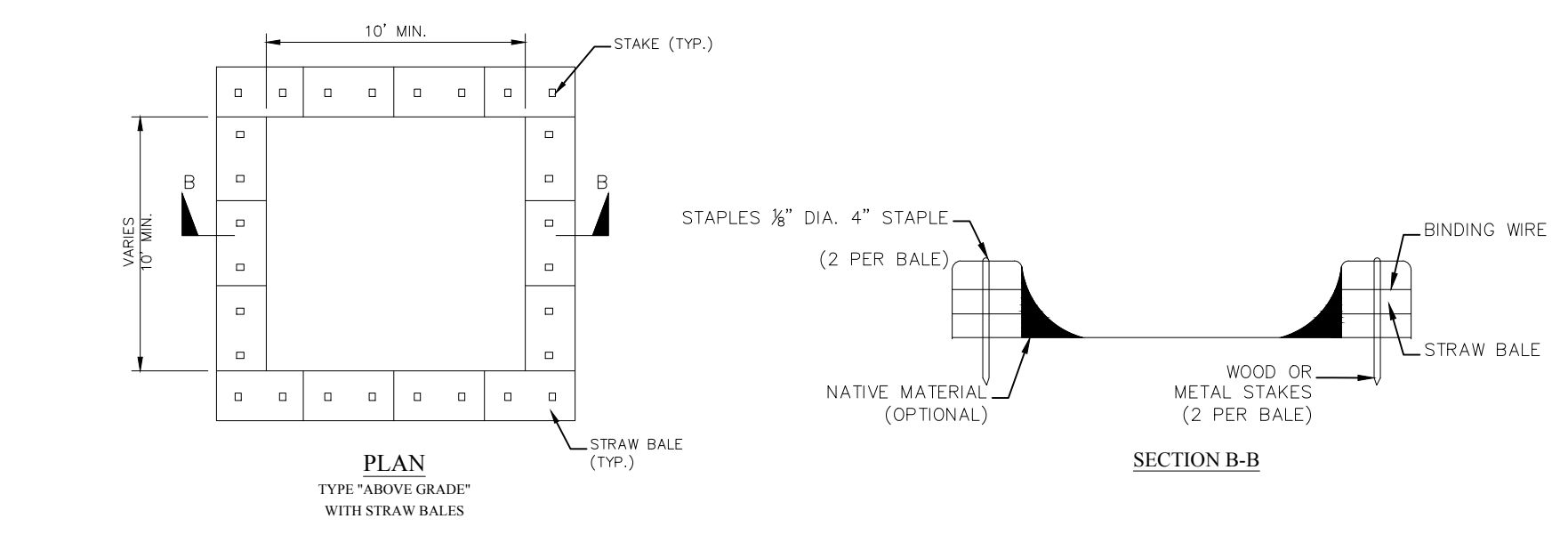
South Carolina Department of Health and Environmental Control
SILT FENCE ROCK OUTLET
 STANDARD DRAWING NO. SC-14 PAGE 1 of 1
 NOT TO SCALE
 FEBRUARY 2014 DATE



TRACKING

South Carolina Department of Health and Environmental Control
TRACKING
 STANDARD DRAWING NO. EC-01 Page 1
 AUGUST, 2003 DATE

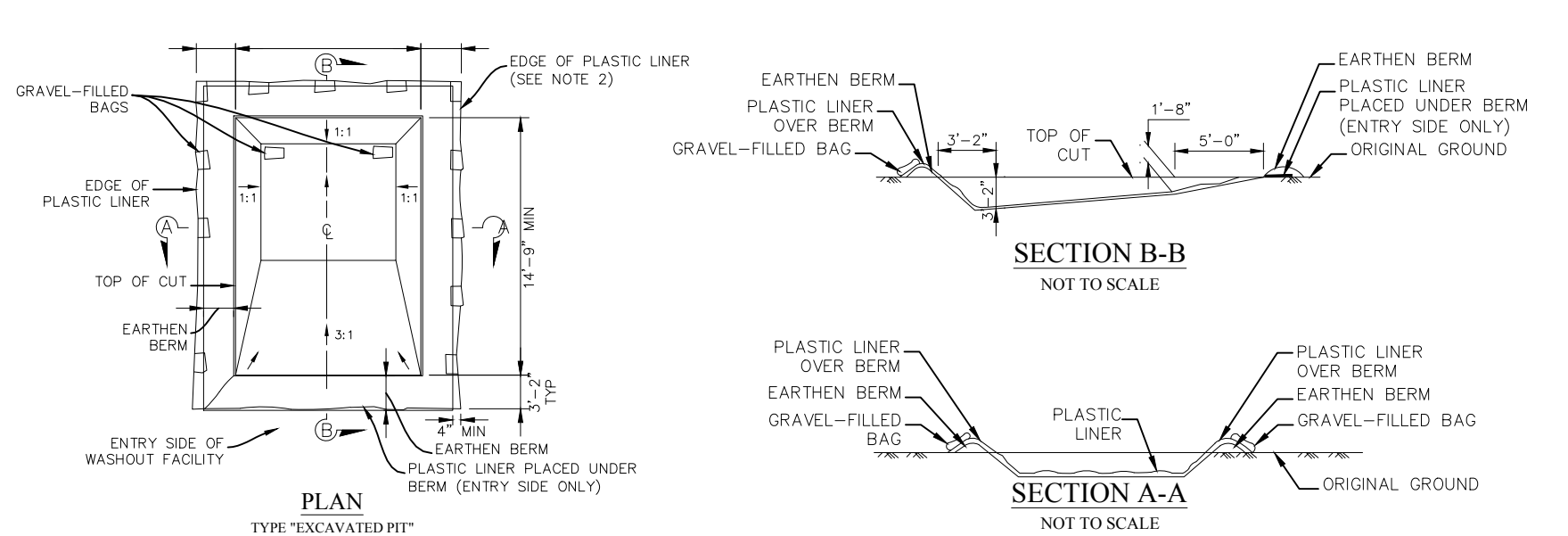
STRAW BALE BARRIER CONCRETE WASHOUT



- NOTES:**
- ACTUAL LAYOUT DETERMINED IN FIELD.
 - INSTALL CONCRETE WASHOUT SIGN (24"x24", MINIMUM) WITHIN 30' OF THE TEMPORARY CONCRETE WASHOUT FACILITY.
 - TEMPORARY WASHOUT AREA MUST BE AT LEAST 50' FROM A STORM DRAIN, CREEK BANK OR PERIMETER CONTROL.
 - CLEAN OUT CONCRETE WASHOUT AREA WHEN 50% FULL.
 - THE KEY TO FUNCTIONAL CONCRETE WASHOUTS IS WEEKLY INSPECTIONS, ROUTINE MAINTENANCE, AND REGULAR CLEAN OUT.
 - SILT FENCE SHALL BE INSTALLED AROUND PERIMETER OF CONCRETE WASHOUT AREA EXCEPT FOR THE SIDE UTILIZED FOR ACCESSING THE WASHOUT.
 - A ROCK CONSTRUCTION ENTRANCE MAY BE NECESSARY ALONG ONE SIDE OF THE WASHOUT TO PROVIDE VEHICLE ACCESS.

South Carolina Department of Health and Environmental Control
CONCRETE WASHOUT
 STRAW BALES OR ABOVE GROUND
 STANDARD DRAWING NO. RC-07 PAGE 1 of 1
 NOT TO SCALE
 FEBRUARY 2014 DATE

EXCAVATED PIT CONCRETE WASHOUT



- NOTES:**
- ACTUAL LAYOUT DETERMINED IN FIELD.
 - INSTALL CONCRETE WASHOUT SIGN (24"x24", MINIMUM) WITHIN 30' OF THE TEMPORARY CONCRETE WASHOUT FACILITY.
 - TEMPORARY WASHOUT AREA MUST BE AT LEAST 50' FROM A STORM DRAIN, CREEK BANK OR PERIMETER CONTROL.
 - CLEAN OUT CONCRETE WASHOUT AREA WHEN 50% FULL.
 - THE KEY TO FUNCTIONAL CONCRETE WASHOUTS IS WEEKLY INSPECTIONS, ROUTINE MAINTENANCE, AND REGULAR CLEAN OUT.
 - SILT FENCE SHALL BE INSTALLED AROUND PERIMETER OF CONCRETE WASHOUT AREA EXCEPT FOR THE SIDE UTILIZED FOR ACCESSING THE WASHOUT.
 - A ROCK CONSTRUCTION ENTRANCE MAY BE NECESSARY ALONG ONE SIDE OF THE WASHOUT TO PROVIDE VEHICLE ACCESS.

South Carolina Department of Health and Environmental Control
CONCRETE WASHOUT
 EXCAVATED PIT
 STANDARD DRAWING NO. RC-08 PAGE 1 of 1
 NOT TO SCALE
 FEBRUARY 2014 DATE

Permanent Seeding - Coastal

Species	Lbs./Ac.	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Sandy, Droughty Sites													
Browtop Millet	40 lbs./ac.												
Bahugras	40 lbs./ac.												
Service Legume	40 lbs./ac.												
Atlantic Coastal Paspalum	15 lbs./ac.												
Penstemon	10 lbs./ac.												
Little Bluestem (Alabama)	4 lbs./ac.												
Service Legume	50 lbs./ac.												
Muscovy Grass	40 lbs./ac.												

Temporary Seeding - Coastal

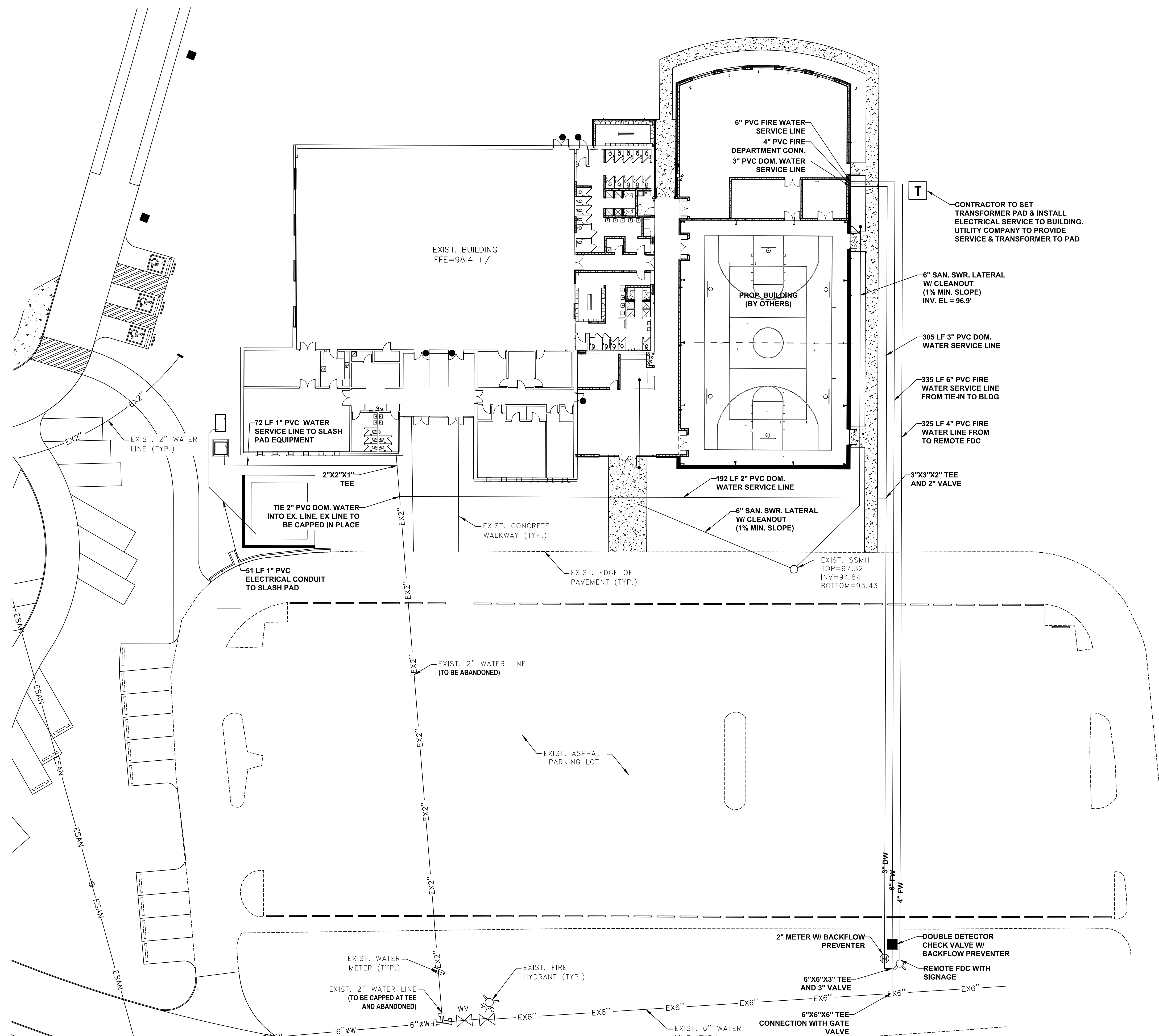
Species	Lbs./Ac.	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Sandy, Droughty Sites													
Browtop Millet	40 lbs./ac.												
Rye, Grain	50 lbs./ac.												
Paspalum	50 lbs./ac.												
Well drained, clayey/loamey Sites													
Browtop Millet	40 lbs./ac.												
Rye, Grain	50 lbs./ac.												
Paspalum	50 lbs./ac.												
Little Bluestem (Alabama)	4 lbs./ac.												
Browtop Millet	40 lbs./ac.												
Browtop Millet	40 lbs./ac.												
Service Legume	40 lbs./ac.												
Browtop Millet	40 lbs./ac.												
Service Legume	40 lbs./ac.												
Service Legume	40 lbs./ac.												
Service Legume	40 lbs./ac.												
Little Bluestem (Alabama)	4 lbs./ac.												
Service Legume	40 lbs./ac.												
Service Legume	40 lbs./ac.												
Service Legume	40 lbs./ac.												
Service Legume	40 lbs./ac.												

South Carolina Department of Health and Environmental Control
SEEDING SCHEDULES

PROJECT INFORMATION		
DESIGNED BY:	AW	
DRAWN BY:	JF	
CHECKED BY:	AW	
PROJECT NUMBER:	16-32	
ORIGINAL DATE:	05/30/17	

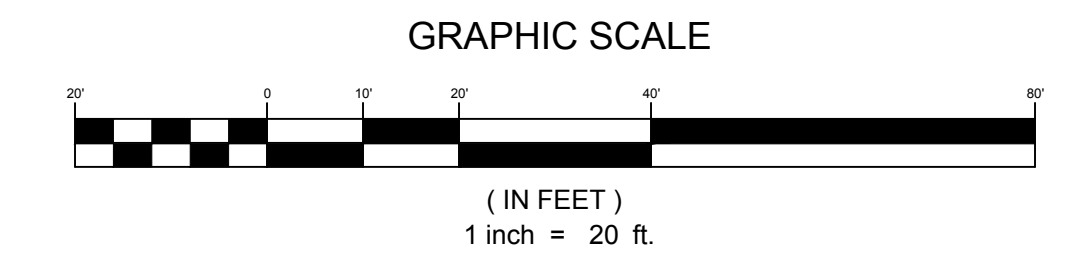
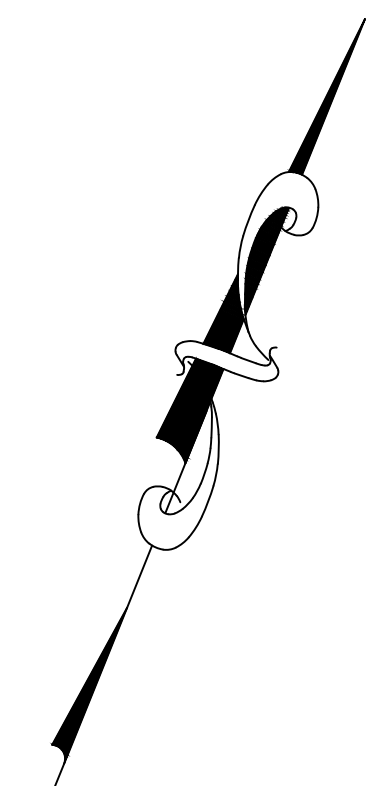
INFRASTRUCTURE CONSULTING & ENGINEERING
 26 JOHN GALT ROAD, STE. A, BEAUFORT, SC 29906 | 843-522-0246 | WWW.ICE-ENG.COM
 COLUMBIA | NORTH CHARLESTON | RALEIGH | ATLANTA | AUSTIN | TAMPA | OTHER MAJOR CITIES

COLLETON RECREATION CENTER EXPANSION
 COLLETON COUNTY WALTERBORO, SC
EROSION CONTROL DETAILS
C5.1



UTILITY NOTES:

1. THE SIZE AND LOCATION OF ALL EXISTING UTILITY LINES SHALL BE VERIFIED BY THE CONTRACTOR. THE CONTRACTOR SHALL COORDINATE ALL PROPOSED WATER AND SEWER WORK WITH THE CITY OF WALTERBORO WATER AND SEWER DEPARTMENT.
2. A MINIMUM COVER OF 36 INCHES IS REQUIRED FOR WATER AND SEWER SERVICES.
3. ALL SEWER SERVICE LINES SHOULD HAVE NO LESS THAN 1' SLOPE PER 100' OF DISTANCE.
4. APPROVED TRACER WIRE SHALL BE INSTALLED ON ALL SERVICE CONNECTIONS.
5. MAINTAIN A MIN 10" SEPARATION (MIN. 18" VERTICAL SEPARATION AT CROSSINGS) BETWEEN SANITARY SEWER LINES AND WATER LINES AND STORM SEWER LINES. IF THESE SEPARATIONS CANNOT BE OBTAINED, SANITARY SEWER LINES AND WATER LINES MUST BE DUCTILE IRON PIPE (DIP). AT CROSSINGS DIP MUST BE USED 10' MINIMUM ON BOTH SIDES OF THE CROSSING.
6. CONTRACTOR IS RESPONSIBLE FOR REPAIR AND/OR REPLACEMENT OF ANY UTILITIES DAMAGED DURING CONSTRUCTION.
7. CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE CITY OF WALTERBORO A MINIMUM OF 48 HOURS IN ADVANCE PRIOR TO CONSTRUCTION OF WATER AND SEWER LINES TO ALLOW A REPRESENTATIVE TO PERIODICALLY BE ON-SITE DURING INSTALLATION.
8. CONTRACTOR SHALL PROVIDE A MINIMUM OF 48 HOURS NOTICE TO OWNER OR REPRESENTATIVE PRIOR TO INTERRUPTION OF ANY EXISTING UTILITY.
9. CONTRACTOR IS RESPONSIBLE FOR PROVIDED AN AS-BUILT SURVEY OF THE WATER AND SEWER LINES TO THE ENGINEER UPON COMPLETION OF INSTALLATION.
10. CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ALL NECESSARY PERMITS AND APPROVALS HAVE BEEN OBTAINED PRIOR TO CONSTRUCTION.
11. SITE CONTRACTOR SHALL BE RESPONSIBLE FOR UTILITIES TO WITHIN 5 FEET OF BUILDING UNLESS STATED OTHERWISE.
12. PROVIDE SILT FENCE AND/OR OTHER EROSION CONTROL DEVICES AS MAY BE REQUIRED TO CONTROL SOIL EROSION DURING ALL UTILITY CONSTRUCTION. ALL DISTURBED AREAS SHALL BE CLEANED, GRADED AND STABILIZED WITH GRASSING IMMEDIATELY AFTER THE UTILITY CONSTRUCTION.
13. CONTRACTOR TO PROVIDE ADEQUATE SIGNAGE FOR REMOTE FDC LOCATION



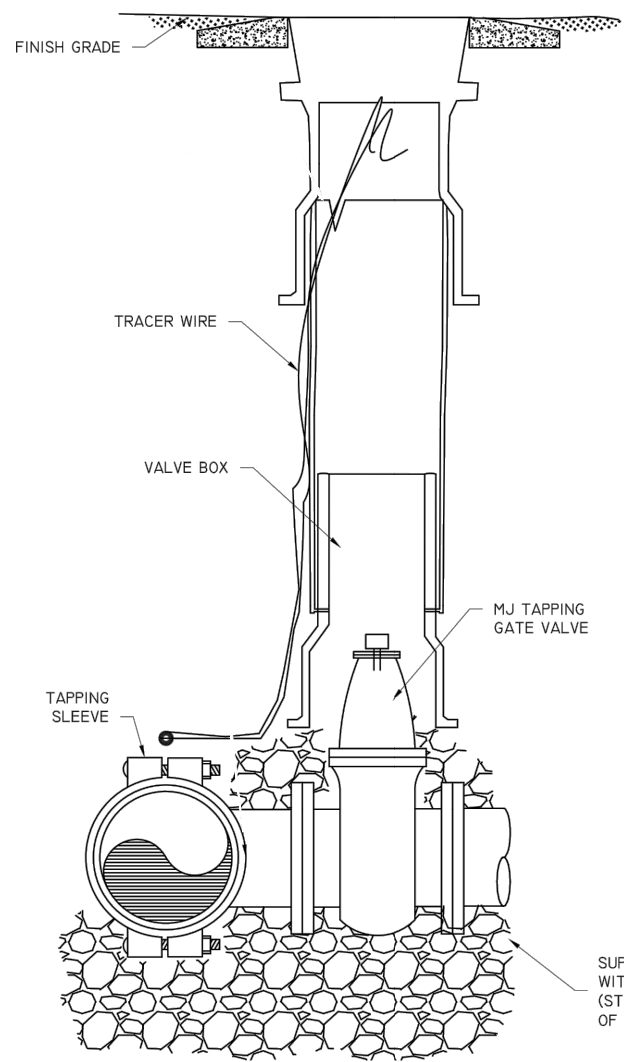
REV. NO.	BY	DATE	DESCRIPTION OF REVISION

PROJECT INFORMATION	
DESIGNED BY:	AW
DRAWN BY:	AW
CHECKED BY:	JF
PROJECT NUMBER:	16-32
ORIGINAL DATE:	05/30/17

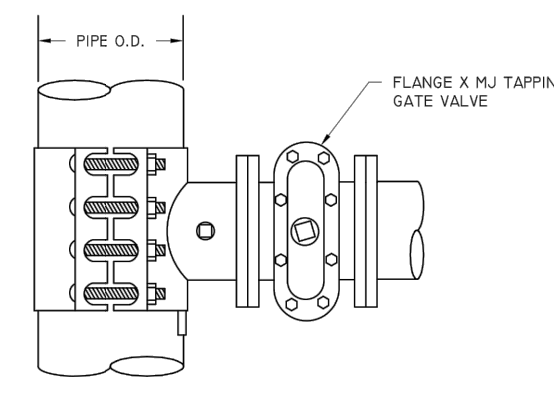
IE INFRASTRUCTURE CONSULTING & ENGINEERING
 26 JOHN GALT ROAD, STE. A, BEAUFORT, SC 29906 | 843-522-0246 | WWW.IE-ENG.COM
 COLUMBIA | NORTH CHARLESTON | RALEIGH | ATLANTA | AUSTIN | TAMPA | OTHER MAJOR CITIES

COLLETON RECREATION CENTER EXPANSION
 COLLETON COUNTY WALTERBORO, SC

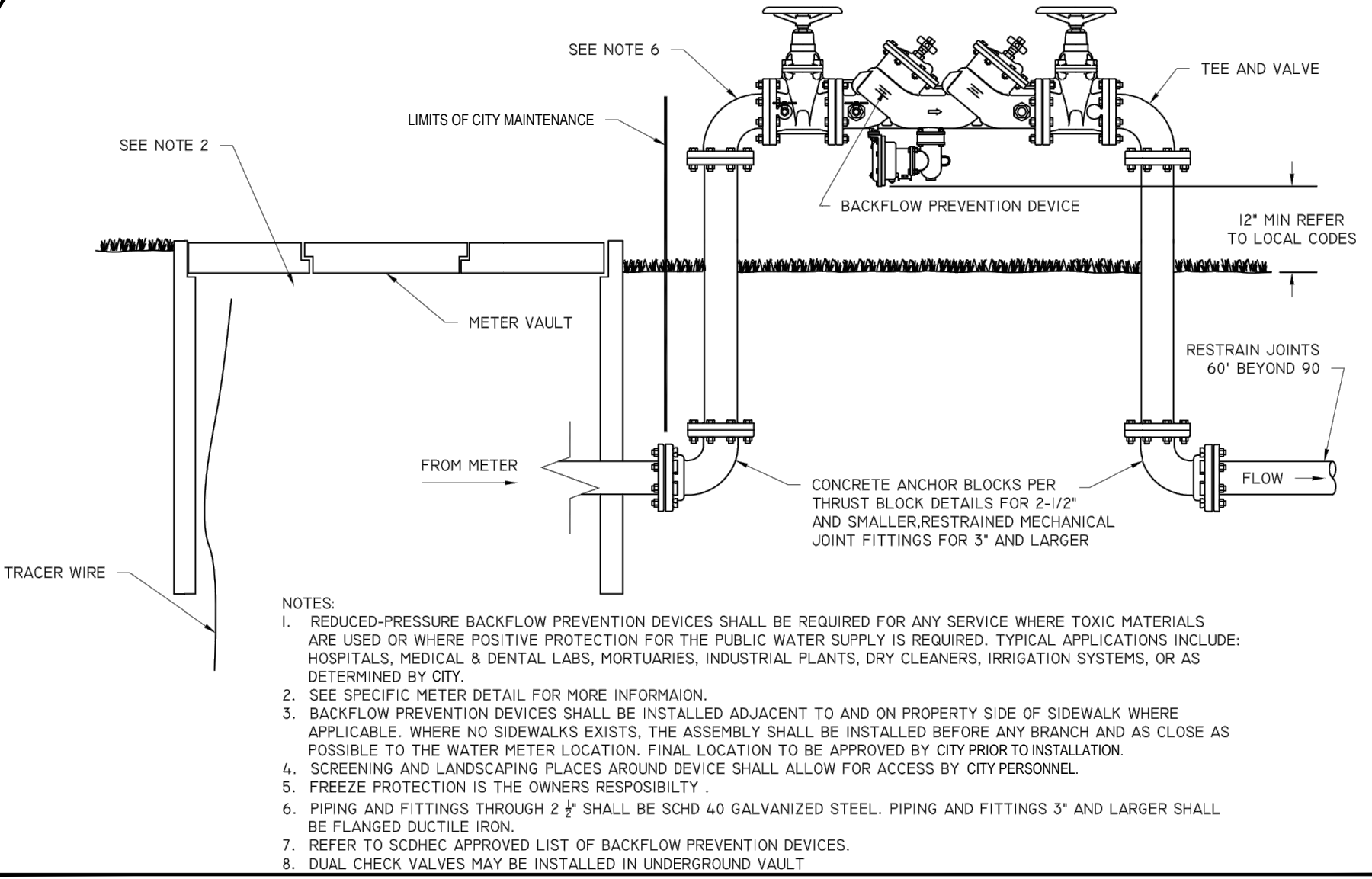
UTILITY PLAN **C6.0**



NOTES:
1. ALL TAPPING SLEEVES GREATER THAN 2" SHALL BE HYDROSTATICALLY PRESSURE TESTED TO 150 PSI FOR 20 MINUTES.

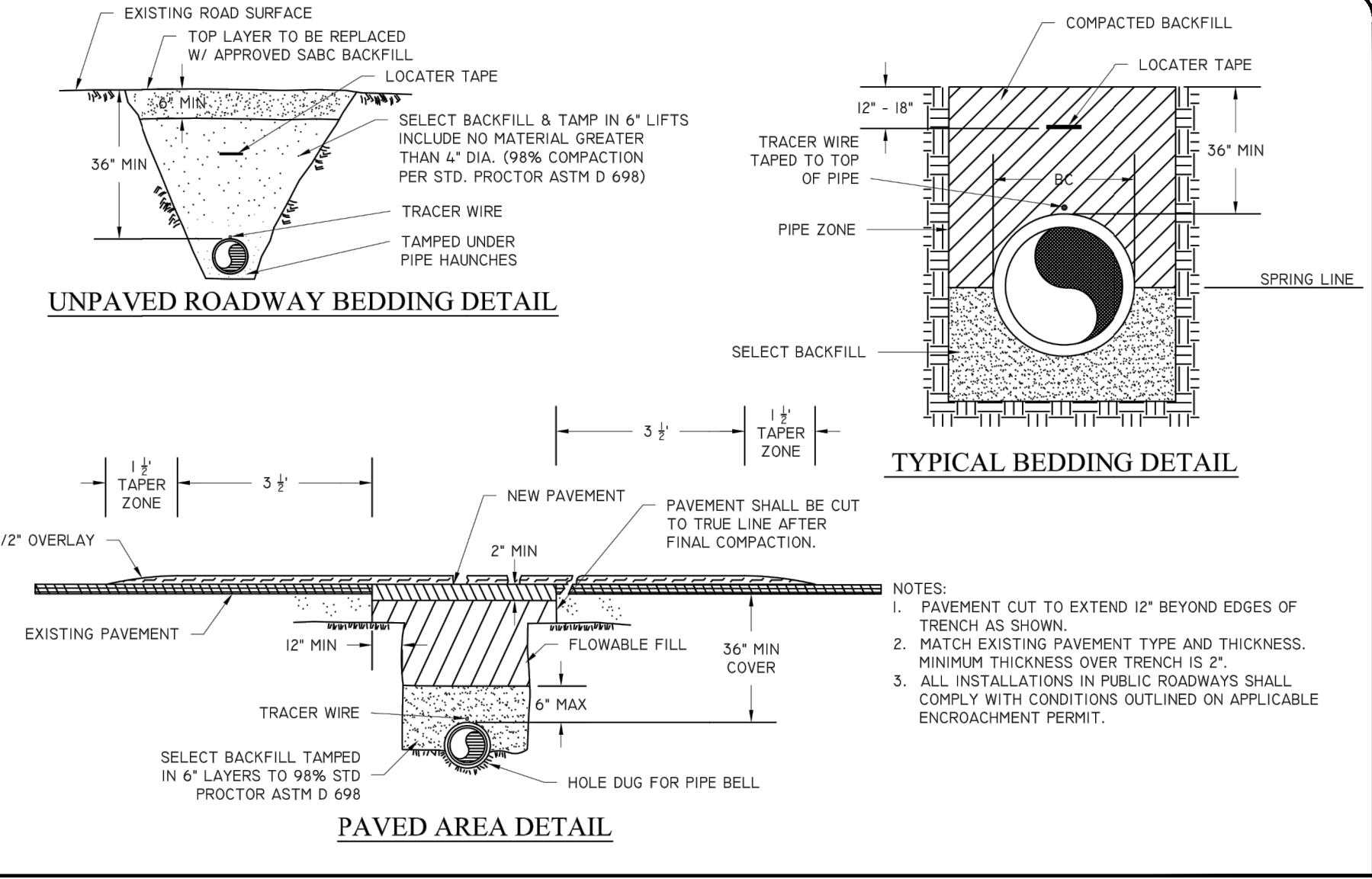


TAPPING SLEEVE & VALVE DETAIL



NOTES:
1. REDUCED-PRESSURE BACKFLOW PREVENTION DEVICES SHALL BE REQUIRED FOR ANY SERVICE WHERE TOXIC MATERIALS ARE USED OR WHERE POSITIVE PROTECTION FOR THE PUBLIC WATER SUPPLY IS REQUIRED. TYPICAL APPLICATIONS INCLUDE: HOSPITALS, MEDICAL & DENTAL LABS, MORTUARIES, INDUSTRIAL PLANTS, DRY CLEANERS, IRRIGATION SYSTEMS, OR AS DETERMINED BY CITY.
2. SEE SPECIFIC METER DETAIL FOR MORE INFORMATION.
3. BACKFLOW PREVENTION DEVICES SHALL BE INSTALLED ADJACENT TO AND ON PROPERTY SIDE OF SIDEWALK WHERE APPLICABLE. WHERE NO SIDEWALK EXISTS, THE ASSEMBLY SHALL BE INSTALLED BEFORE ANY BRANCH AND AS CLOSE AS POSSIBLE TO THE WATER METER LOCATION. FINAL LOCATION TO BE APPROVED BY CITY PRIOR TO INSTALLATION.
4. SCREENING AND LANDSCAPING PLACES AROUND DEVICE SHALL ALLOW FOR ACCESS BY CITY PERSONNEL.
5. FREEZE PROTECTION IS THE OWNER'S RESPONSIBILITY.
6. PIPING AND FITTINGS THROUGH 2 1/2" SHALL BE SCH 40 GALVANIZED STEEL. PIPING AND FITTINGS 3" AND LARGER SHALL BE FLANGED DUCTILE IRON.
7. REFER TO SCHEC APPROVED LIST OF BACKFLOW PREVENTION DEVICES.
8. DUAL CHECK VALVES MAY BE INSTALLED IN UNDERGROUND VAULT.

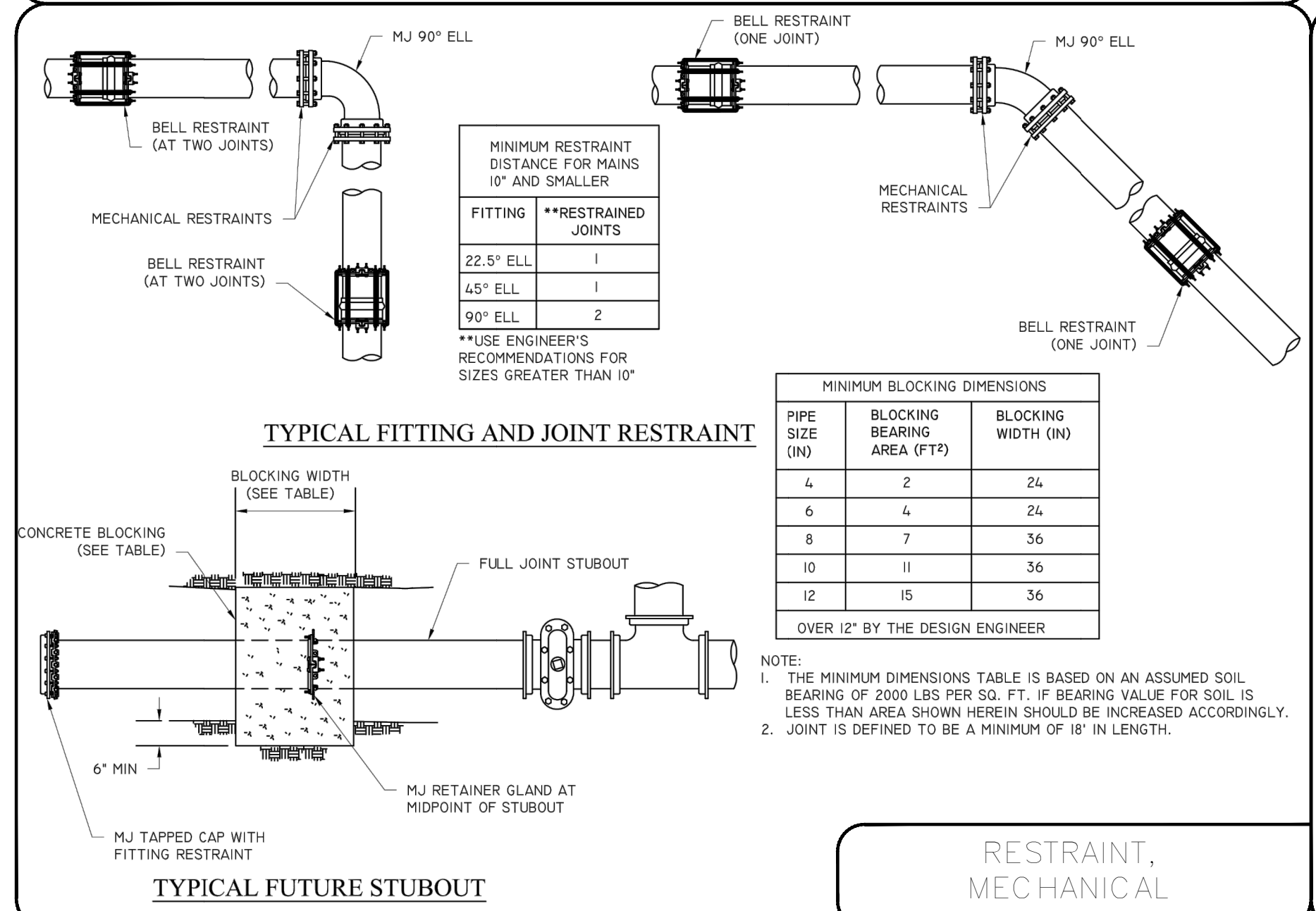
BACKFLOW PREVENTION DETAIL



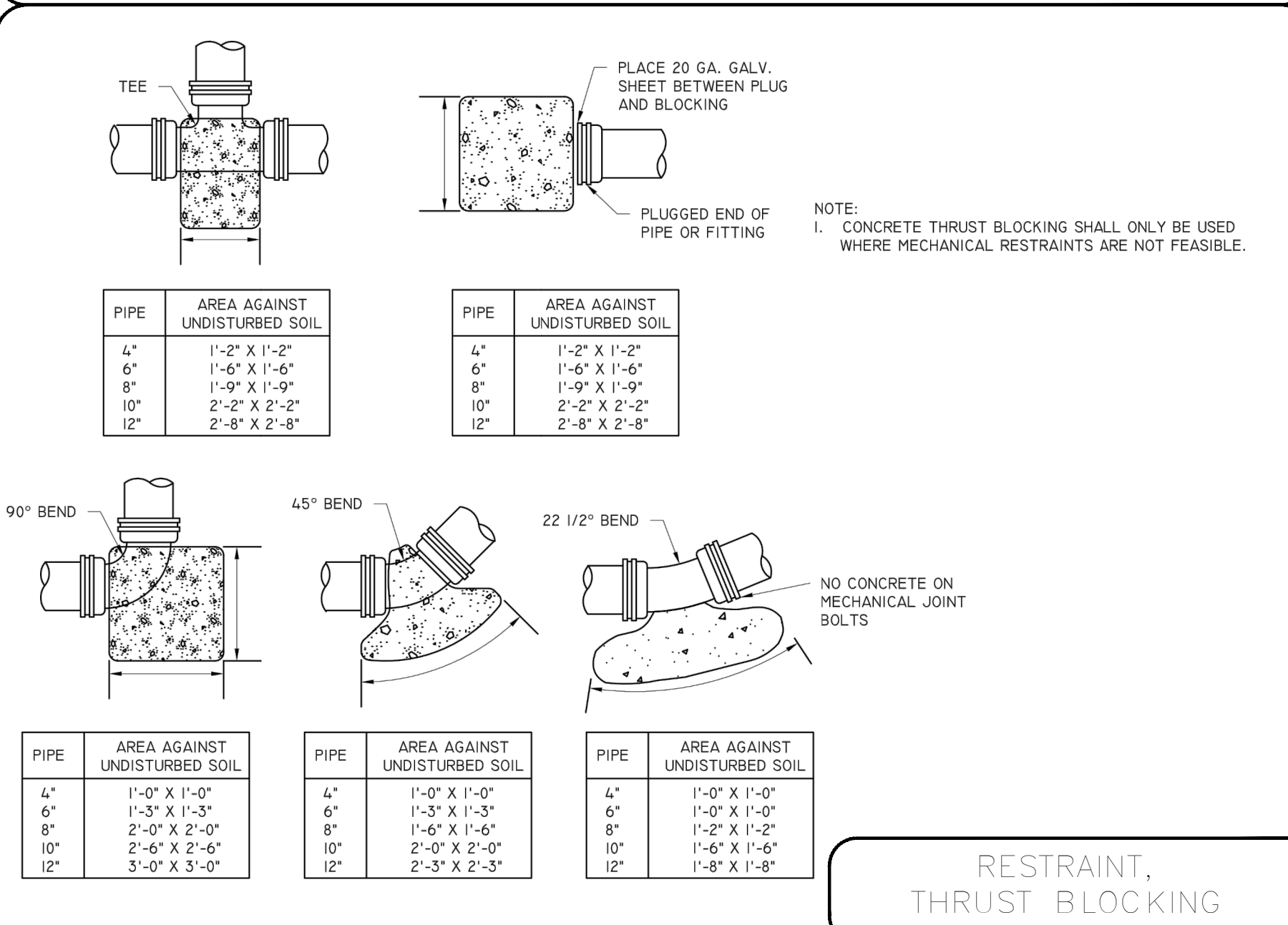
TYPICAL BEDDING DETAIL

PAVED AREA DETAIL

BEDDING PRESSURE PIPE DETAIL



RESTRAINT, MECHANICAL

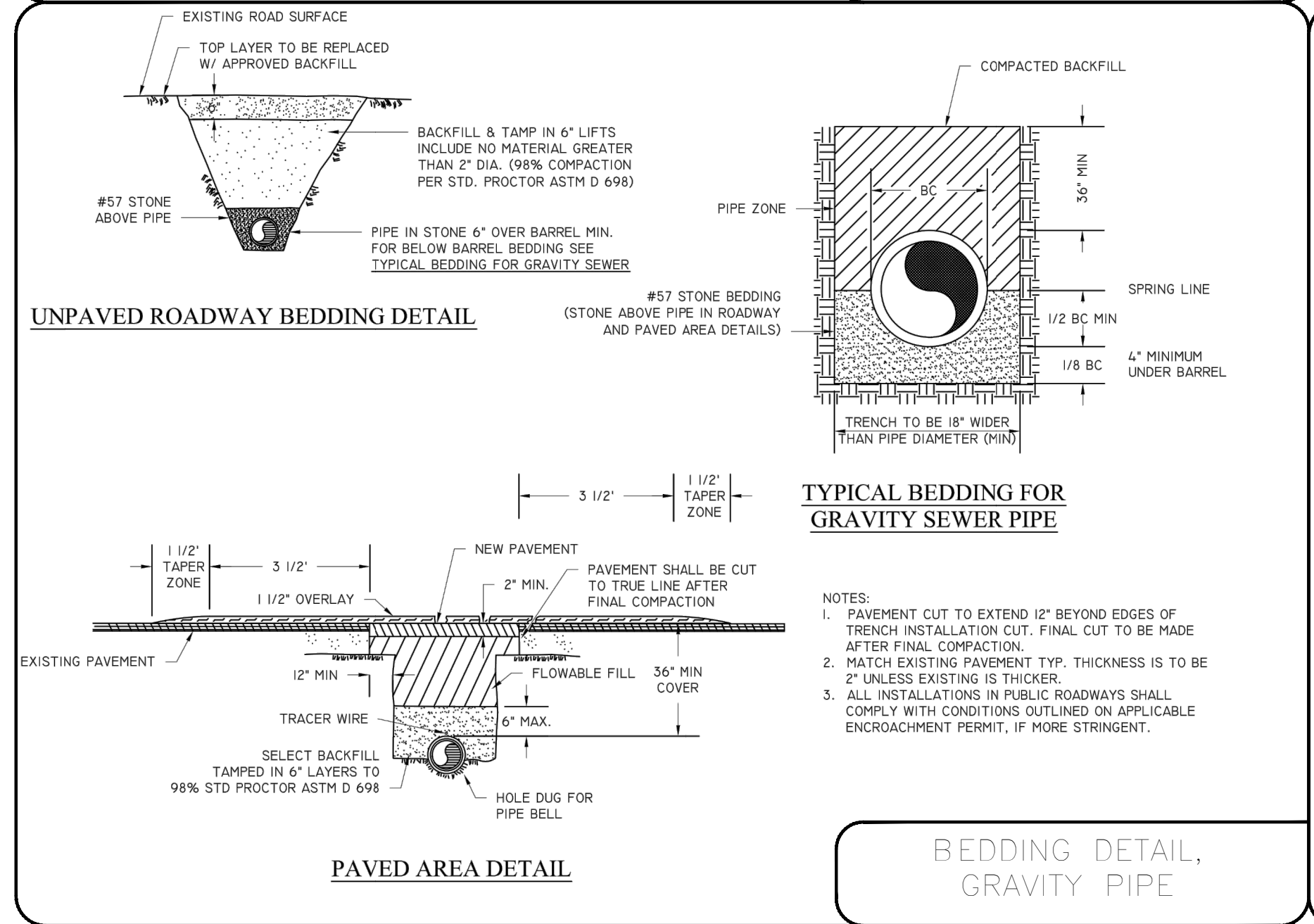


RESTRAINT, THRUST BLOCKING

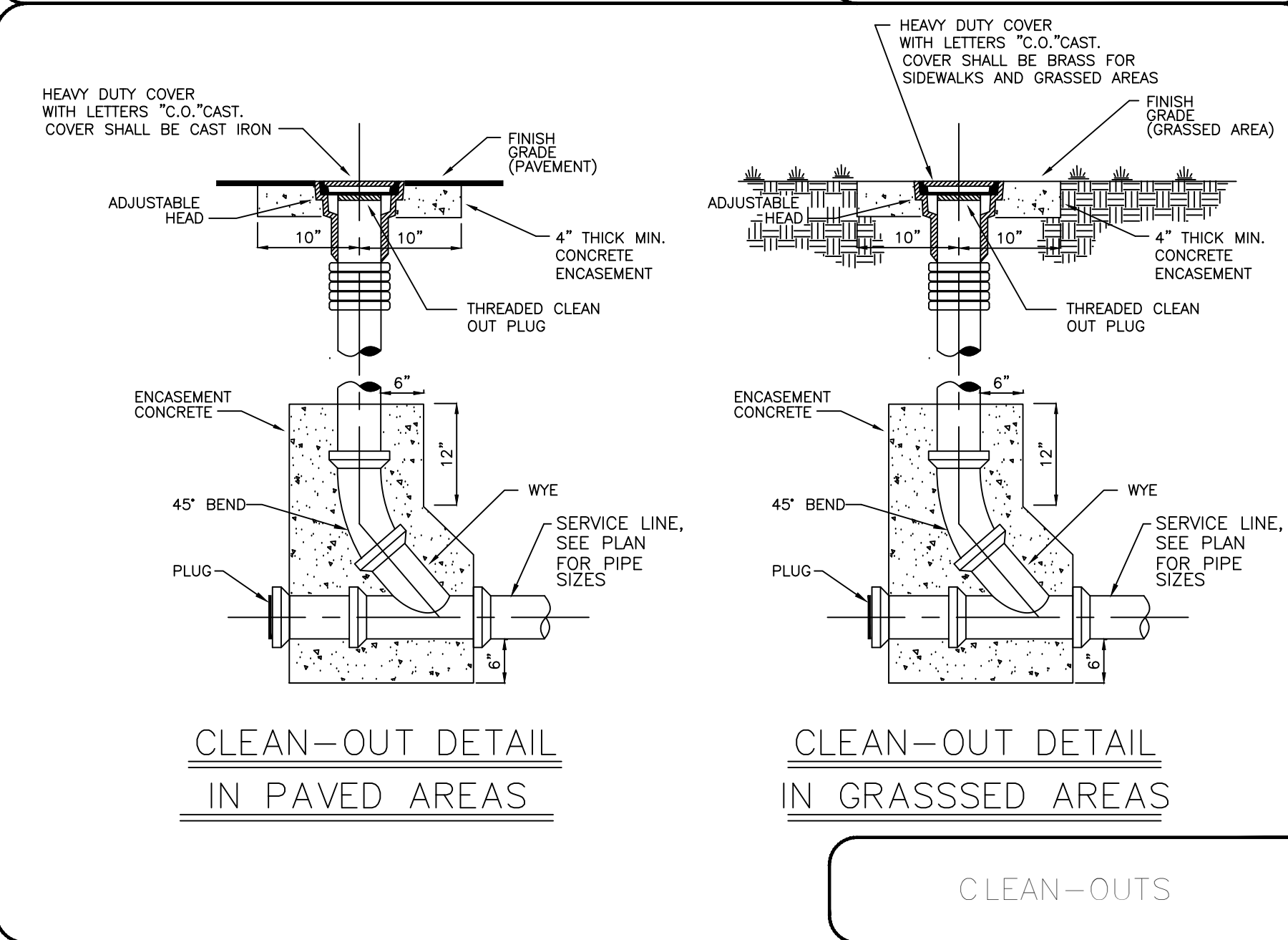
NOTES FOR WATER SYSTEM:
1. WATER INSTALLATION SHALL BE IN ACCORDANCE WITH "TEN STATES STANDARDS", SCDHEC REGULATIONS, AND CITY OF WALTERBORO SPECIFICATIONS.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING ALL TAPS. TAPS REQUIRING A SLEEVE SHALL BE NO CLOSER TO A JOINT THAN 4 FEET.
3. THRUST BLOCKING SHALL BE USED ONLY ON WET TAPS. CONTRACTOR SHALL NOTIFY CITY OF WALTERBORO INSPECTOR A MINIMUM OF 72 HOURS (THREE FULL WORKING DAYS) PRIOR TO MAKING ANY WET TAP.
4. CONTRACTOR SHALL MAINTAIN BETWEEN 36" - 48" COVER OVER TOP OF PIPE.
5. MEGALUG, FORD SERIES 1400, OR SIGMA ONE-LOK RETAINER GLANDS SHALL BE USED FOR ALL FITTINGS, VALVES, AND HYDRANTS.
6. WHERE POSSIBLE, HORIZONTAL WATERLINES SHALL BE DEFLECTED IN LIEU OF USING BENDS. DEFLECTIONS SHALL NOT EXCEED 75% OF MANUFACTURER'S SPECIFICATIONS.
7. WHERE WATER AND SANITARY SEWER LINES CROSS WITHIN 18", THE LINE LAID LAST SHALL HAVE A FULL LENGTH OF PIPE INSTALLED WITH ITS MIDPOINT VERTICALLY IN LINE WITH THE OTHER LINE. THE CROSSING SHALL BE AT NOT LESS THAN A 45 DEGREE ANGLE.

NOTES FOR WASTEWATER SYSTEM:
1. WASTEWATER INSTALLATION SHALL BE IN ACCORDANCE WITH "TEN STATES STANDARDS", SCDHEC REGULATIONS AND CITY OF WALTERBORO.
2. CONNECTIONS TO EXISTING MANHOLES SHALL BE MADE IN THE PRESENCE OF A CITY OF WALTERBORO REPRESENTATIVE. CONTRACTOR SHALL NOTIFY CITY AT LEAST 72 HOURS BEFORE CONNECTION BEGINS.
3. CONNECTIONS TO GRAVITY LINES AND MANHOLES SHALL BE EQUAL TO OR GREATER THAN 90 DEGREES TO THE DOWNSTREAM LINE.
4. ALL 6" SEWER SERVICES SHALL BE SDR 26 PVC AND LAID ON A MINIMUM SLOPE OF 1.0% UNLESS OTHERWISE STATED. THE SERVICES SHALL BE CONNECTED TO MANHOLES WHERE REASONABLY POSSIBLE.
5. ALL GRAVITY MAINS SHALL BE SDR 26 PVC UNLESS CONDITIONS REQUIRE PVC C900, C905, OR DUCTILE IRON PIPE.
6. DIP OR PVC C900/C905 FOR WASTEWATER SHALL BE USED:
6.1. WITH LESS THAN 3' OF COVER OR GREATER THAN 18' OF COVER;
6.2. CROSSING OVER STORM DRAINAGE PIPE WITH LESS THAN 2' OF CLEARANCE;
6.3. CROSSING UNDER STORM DRAINAGE PIPE WITH LESS THAN 3' OF CLEARANCE;
6.4. CROSSING WATER MAINS WITH LESS THAN 18" CLEARANCE;
6.5. WITHIN CASINGS

WATER & WASTEWATER SYSTEM NOTES



BEDDING DETAIL, GRAVITY PIPE



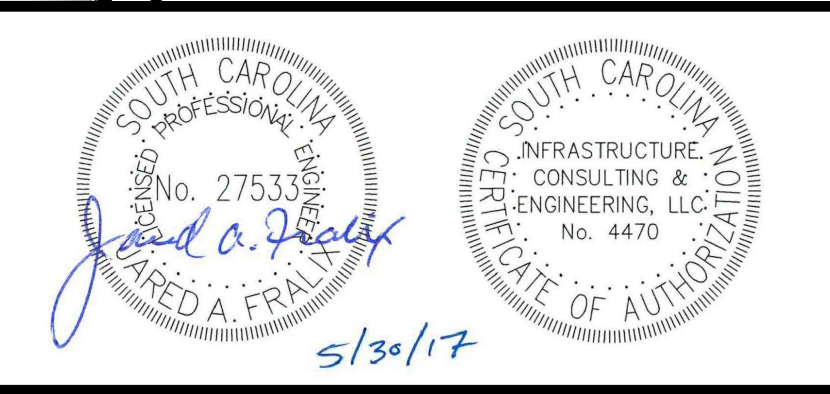
CLEAN-OUT DETAIL IN PAVED AREAS

CLEAN-OUT DETAIL IN GRASSED AREAS

CLEAN-OUTS

PROJECT INFORMATION

DESIGNED BY:	AW
DRAWN BY:	AW
CHECKED BY:	JF
PROJECT NUMBER:	16-32
ORIGINAL DATE:	05/30/17



INFRASTRUCTURE CONSULTING & ENGINEERING

26 JOHN GALT ROAD, STE. A, BEAUFORT, SC 29906 | 843-522-0246 | WWW.ICE-ENG.COM
COLUMBIA | NORTH CHARLESTON | RALEIGH | ATLANTA | AUSTIN | TAMPA | OTHER MAJOR CITIES

COLLETON RECREATION CENTER EXPANSION

COLLETON COUNTY WALTERBORO, SC

UTILITY DETAILS **C6.1**

REV. NO.	BY	DATE	DESCRIPTION OF REVISION

GENERAL NOTES

1.0 THIS PROJECT HAS BEEN DESIGNED FOR THE WEIGHTS AND MATERIALS INDICATED ON THE DRAWINGS AND FOR THE LIVE LOADS INDICATED IN THE DESIGN DATA.
 1.1 COORDINATE THESE DRAWINGS WITH THE ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING, AND CIVIL DRAWINGS.
 1.2 THE CONTRACTOR SHALL REFER TO THE ARCHITECTURAL, MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS FOR SLEEVES, CURBS, INSERTS OR OPENINGS, ETC. NOT HEREIN INDICATED.

1.3 THE CONTRACTOR SHALL COORDINATE INSTALLATION OF ELEVATORS WITH EQUIPMENT MANUFACTURER. THIS INCLUDES ANY EMBEDDED ITEMS FOR GUIDE RAIL SUPPORTS, EDGE OF SLAB DIMENSIONS FOR CLEAR HOISTWAY, HOIST BEAMS, AND OTHER ITEMS REQUIRED FOR COMPLETE INSTALLATION OF ELEVATORS.
 1.4 SLAB OPENINGS SMALLER THAN 10" AND NOT INDICATED ON PLAN SHALL BE CORE DRILLED IN FIELD U.N.O. SEE MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS FOR LOCATIONS OF THESE OPENINGS.

1.5 WORK NOT INCLUDED ON THE DRAWINGS BUT IMPLIED TO BE SIMILAR TO THAT SHOWN AT CORRESPONDING PLACES ELSEWHERE ON THE DRAWINGS SHALL BE REPEATED.
 1.6 IN CASE OF CONFLICT BETWEEN THE NOTES, DETAILS AND SPECIFICATIONS, THE MOST RIGID REQUIREMENTS SHALL GOVERN.
 1.7 THE CONTRACTOR SHALL SUBMIT FOR REVIEW, DRAWINGS AND CALCULATIONS SIGNED AND SEALED BY A STRUCTURAL ENGINEER IN THE STATE OF SOUTH CAROLINA FOR THE METAL STAIRS AND RAILINGS. REVIEW SHALL BE FOR GENERAL CONFORMANCE TO LOCAL BUILDING CODES, DESIGN PARAMETERS LISTED IN THE GENERAL NOTES AND GEOMETRY DESIGNATED IN THE DRAWINGS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING AND INSTALLING EMBEDS AND HARDWARE AS REQUIRED BY THE STAIR DESIGN.

1.8 SEE ARCHITECTURAL DRAWINGS FOR LOCATIONS OF MASONRY AND DRYWALL NON-LOAD BEARING PARTITIONS. PROVIDE COMPRESSIBLE FIRESAFING AT TOP OF WALL AS REQUIRED.

2.0 FOUNDATION NOTES
 2.1 GEOTECHNICAL INFORMATION FOR THIS PROJECT (PENDING).

2.2 SEE THE SPECIFICATION REQUIREMENTS FOR EXCAVATION AND PREPARATION OF THE FOUNDATION AND SLAB ON GRADE SUBGRADE INCLUDING COMPACTION PROCEDURES.
 2.3 EXCAVATIONS FOR FOOTINGS SHALL HAVE THE SIDES AND BOTTOM TEMPORARILY LINED WITH 6 MIL POLYETHYLENE IF PLACEMENT OF CONCRETE DOES NOT OCCUR WITHIN 24 HOURS OF THE EXCAVATION OF THE FOOTING.
 2.4 FOUNDATION CONDITIONS NOTED DURING CONSTRUCTION WHICH DIFFER FROM THOSE DESCRIBED IN THE GEOTECHNICAL REPORT SHALL BE REPORTED TO THE GENERAL CONTRACTOR BEFORE FURTHER CONSTRUCTION IS ATTEMPTED. SEE PROJECT SPECIFICATIONS. ALL BASEMENT WALLS UNLESS NOTED ARE DESIGNED AS LATERALLY SUPPORTED AT THE TOP. THEREFORE, THE 1ST FLOOR FRAME AND SLAB SHALL BE INSTALLED BEFORE BACKFILLING WALLS. ALSO, THE BASEMENT SLAB ON GRADE SHALL BE INSTALLED BEFORE BACKFILL AT PERIMETER BUILDING BASEMENT WALLS.

2.5 NO FOOTINGS OR SLABS SHALL BE POURED INTO OR AGAINST SUBGRADE CONTAINING FREE WATER, FROST, ICE OR LOOSE MATERIAL.
 2.6 SEE PLUMBING, ELECTRICAL & CIVIL DRAWINGS FOR REQUIRED UNDERSLAB UTILITIES.
 2.7 SEE SPECIFICATIONS FOR ALL WATERPROOFING DETAILS AND MATERIALS AS REQUIRED.
 2.8 IF UNDERMINING OF FOOTING OCCURS, FILL VOIDS WITH 2500 PSI CONCRETE. DO NOT ATTEMPT TO REPLACE AND RECOMPACT SOIL.

3.0 CONCRETE
 3.1 CONCRETE SHALL HAVE THE UNIT WEIGHT AND THE MINIMUM COMPRESSIVE STRENGTHS (f'c) AT 28 DAYS AS SHOWN ON THE CONCRETE MATERIALS SCHEDULE. (DWG 5002) SEE SPECIFICATIONS FOR FURTHER INFORMATION.
 3.2 ENTRAIN AIR TO PRODUCE TOTAL AIR CONTENT ACCORDING TO THE SPECIFICATIONS. FOR CONCRETE EXPOSED TO FREEZING TEMPERATURES (EXTERIOR FOOTINGS, SLAB TURNDOWNS, EXTERIOR SLABS AND SLABS-ON-GRADE, EXTERIOR RETAINING WALLS, AND EXTERIOR GRADE BEAMS).
 3.3 GROUT FOR BASE PLATES SHALL BE NON-SHRINKABLE GROUT AND SHALL HAVE A MINIMUM SPECIFIED COMPRESSIVE STRENGTH AT 28 DAYS OF 5000 PSI U.N.O.
 3.4 NO CALCIUM CHLORIDE SHALL BE USED IN ANY CONCRETE.
 3.5 MIXING, TRANSPORTING AND PLACING OF CONCRETE SHALL CONFORM TO ACI-301.
 3.6 ALL CONCRETE WORK SHALL CONFORM TO THE REQUIREMENTS OF ACI-318, "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE", AND CONTRACT SPECIFICATIONS. WHEN THERE IS A CONFLICT BETWEEN ACI AND SPECIFICATIONS, THE MORE STRINGENT SHALL GOVERN.
 3.7 CHAMFER ALL EXPOSED EXTERNAL CORNERS OF CONCRETE WITH 3/4" X 45 DEGREE CHAMFER U.N.O.
 3.8 CONCRETE REINFORCEMENT BARS SHALL CONFORM TO ASTM A615, GRADE 60. REINFORCING BARS SHALL NOT BE JACK WELDED, WELDED, HEATED OR CUT, UNLESS INDICATED ON THE CONTRACT DOCUMENTS. ALL LAP SPICES SHALL BE CLASS "B" U.N.O.
 3.9 HORIZONTAL FOOTING AND HORIZONTAL WALL REINFORCEMENT SHALL BE CONTINUOUS AND SHALL HAVE 90 DEGREE BENDS AND EXTENSIONS, OR CORNER BARS OF EQUIVALENT SIZE LAPPED WITH A CLASS B TENSION SPICE AT CORNERS AND INTERSECTIONS. TOP BAR CRITERIA SHALL APPLY IF 12" OR MORE OF FRESH CONCRETE IS PLACED BELOW BAR.

3.10 SLABS-ON-GRADE SHALL HAVE CONSTRUCTION JOINTS OR CRACK CONTROL JOINTS AS SHOWN ON THE DRAWINGS. CONSTRUCTION JOINTS CAN BE USED AT CONTROL JOINT LOCATIONS AT CONTRACTORS OPTION. SEE SLAB PLANS & JOINT DETAILS FOR ADDITIONAL INFORMATION.
 3.11 SEE SPECIFICATIONS FOR ALL WATERPROOFING/DAMP-PROOFING DETAILS.
 3.12 ALL WELDED WIRE FABRIC SHALL CONFORM TO THE STANDARDS OF ASTM A-185. SUPPLY IN FLAT SHEETS.
 3.13 ALL CONCRETE REINFORCEMENT SHALL BE DETAILED, FABRICATED, LABELED, SUPPORTED, AND SPACED IN FORMS AND SECURED IN PLACE IN ACCORDANCE WITH THE PROCEDURES AND REQUIREMENTS OUTLINED IN THE LATEST EDITION OF THE "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE", ACI 318, AND THE "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES", ACI 315, LATEST EDITION.

3.14 SHOP DRAWINGS SHOWING REINFORCING DETAILS, INCLUDING STEEL SIZES, SPACING AND PLACEMENT SHALL BE SUBMITTED FOR REVIEW PRIOR TO FABRICATION.
 3.15 ALL WELDED WIRE FABRIC SHALL BE LAPPED TWO (2) FULL MESH PANELS AND TIED SECURELY.
 3.16 ALL DOWELS SHALL MATCH SIZE AND NUMBER OF MAIN REINFORCING, U.N.O. ON DRAWINGS.
 3.17 ADDITIONAL BARS SHALL BE PROVIDED AROUND ALL FLOOR AND WALL OPENINGS AS SHOWN ON THE DRAWINGS.

3.18 SEE ARCHITECTURAL DRAWINGS FOR TYPE AND LOCATION OF ALL FLOOR FINISHES.
 3.19 THE CONTRACTOR SHALL COORDINATE ADDITIONAL WALL/SLAB OPENINGS NOT SHOWN ON STRUCTURAL DRAWINGS. SEE MECHANICAL, ELECTRICAL, PLUMBING AND CIVIL DRAWINGS.
 3.20 U.N.O., ALL CURBS SHALL BE REINFORCED WITH AT LEAST 1 #4 CONTINUOUS AND #4 AT 12" O.C. DOWELS TO STRUCTURE BELOW.
 3.21 THE SUB-CONTRACTOR SHALL VERIFY ALL OPENINGS, PAD SIZES, AND ANCHOR BOLTS WITH EQUIPMENT SELECTED.
 3.22 FOR ALL WALLS & PIERS, PROVIDE DOWELS INTO FOOTING AT EACH VERT. REINF. BAR, U.N.O. DOWEL SIZE SHALL BE SAME AS VERT. REINF.

3.23 ALL DEFORMED BAR ANCHORS SHALL BE TRS NELSON DIVISION OR EQUAL 1/2" DIA. U.N.O. CONFORMING TO ASTM A-496 WITH A MINIMUM TENSILE STRENGTH OF 80,000 PSI. ANCHOR DIMENSIONS SHALL BE IN ACCORDANCE WITH ASTM D-19. INSTALL ANCHORS IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS BY AUTOMATIC END WELDING AS INDICATED ON THE DRAWINGS. NO UNAUTHORIZED OR FIELD WELDING SHALL BE MADE WITHOUT AUTHORIZATION FROM THE MANUFACTURER.
 3.24 ALL REINFORCING INDICATED TO BE WELDED SHALL BE IN ACCORDANCE WITH ASTM A706. "LOW ALLOY STEEL DEFORMED BARS FOR CONCRETE REINFORCEMENT". ANY INSTALLATIONS USING MANUFACTURER'S EQUIPMENT SHALL BE PER MANUFACTURER'S RECOMMENDATIONS.
 3.25 PROVIDED CONCRETE POUR STOPS OR FORM AS REQUIRED FOR INSTALLATION OF ALL CONCRETE WORK.
 3.26 PROVIDE ADDITIONAL 2-#4 x 3'-0" REINFORCING BARS IN SLAB-ON-GRADE AT ALL RE-ENTRANT CORNERS. PLACE BARS AT MID-DEPTH OF SLAB WITH A CLEARANCE OF 2" FROM CORNER U.N.O.

4.0 CONCRETE MASONRY
 4.1 MASONRY CONSTRUCTION AND MATERIALS SHALL CONFORM TO ALL REQUIREMENTS OF THESE CONTRACT DOCUMENTS AND THE PROJECT SPECIFICATIONS.
 4.2 THE SPECIFIED ULTIMATE COMPRESSIVE STRENGTH OF CONCRETE MASONRY (f'm) ON THE NET AREA IS A MINIMUM OF 1500 PSI.
 4.3 PROVIDE TWO #5 BARS CONTINUOUS IN ALL BOND BEAMS, UNLESS OTHERWISE INDICATED IN THE DRAWINGS. REINFORCEMENT PLACED IN BOND BEAMS SHALL CONTINUOUS WITH STANDARD ACI HOOKS AT EACH END. PROVIDE STANDARD BAR SPLICES AS SPECIFIED. MAXIMUM BOND BEAM SPACING SHALL BE 4'-0" OC UNO.
 4.4 PROVIDE VERTICAL REINFORCEMENT IN ALL WALLS AS SHOWN. PROVIDE VERTICAL BARS AT EACH END OF ALL WALLS AS SHOWN. PROVIDE VERTICAL BARS ON EACH SIDE OF OPENINGS IN ALL WALLS AS SHOWN. PROVIDE STANDARD BAR SPLICES AS SPECIFIED. ALL VERTICAL REINFORCEMENT EXTENDS FULL HEIGHT OF WALL. SEE TYPICAL MASONRY DETAILS DWG 55.01 AND OTHER SECTIONS AND DETAILS AS INDICATED ON DRAWINGS.
 4.5 BLOCK CELLS THAT REQUIRE VERTICAL REINFORCING BARS AS INDICATED ON THE CONTRACT DRAWINGS AND/OR SPECS SHALL BE PLACED IN CENTERS OF BLOCK CELLS UNO. PROVIDE #5 BAR AT 32" MINIMUM VERTICAL REINFORCING AT ALL INTERIOR NON-STRUCTURAL, CMU WALLS UNO.
 4.6 PROVIDE JOINT REINFORCEMENT @ 16" O.C. MAX. VERTICALLY (U.N.O.) PROVIDE BRICK TIES @ 16" O.C. MAX. VERTICALLY AND HORIZONTALLY (U.N.O.) ADJUSTABLE SEISMIC MASONRY VENDOR ANCHORS ARE REQUIRED SUBJECT TO COMPLIANCE WITH REQUIREMENTS. USE HOHMANN & BARNARD, INC.; HOT DIPPED GALV. 345BT WITH SEISMIC INTERLOCK SYSTEM (CONTINUOUS WIRE) OR EQUAL.
 4.7 PROVIDE CONTROL JOINTS AT MAJOR CHANGES IN WALL HEIGHT, CHANGES IN WALL THICKNESS, AT FLOOR CONTROL JOINTS, AT WALL OPENINGS, AND NEAR RETURN ANGLES OF L, T, AND U SHAPED STRUCTURES. CONTROL JOINT SPACING SHALL NOT EXCEED THE DISTANCES INDICATED ON THE ARCHITECTURAL DRAWINGS.
 4.8 GROUT FOR MASONRY SHALL BE NORMAL WEIGHT AND HAVE A MINIMUM COMPRESSIVE STRENGTH OF 2000 PSI AT 28 DAYS. GROUT SHALL CONFORM TO ASTM C476. GROUT LIFTS SHALL NOT EXCEED 4'-0".
 4.9 FILL ALL BOND AND LINTEL BEAMS AND CELLS AT VERTICAL REINFORCEMENT WITH GROUT. USE MORTAR TYPE AS INDICATED IN THE SPECIFICATIONS.
 4.11 CONCRETE MASONRY UNITS SHALL BE AS INDICATED IN SPECIFICATIONS.

4.12 ALL CELLS, OPEN CAVITIES, AND AIR SPACES BELOW GRADE SHALL BE GROUTED.
 4.13 BOND BEAMS AND REINFORCING SHALL BE DISCONTINUOUS AT CONTROL JOINTS (UNO). MAXIMUM CONTROL JOINT SPACING SHALL BE AS INDICATED ON THE ARCHITECTURAL DRAWINGS.
 4.14 CONTRACTOR SHALL COORDINATE LOCATION OF ALL OPENINGS SEE ARCH., MECH., ELEC., AND PLUMBING DWGS. FOR SIZE AND LOCATION OF OPENINGS.
 4.15 SEE DRAWING 55.01 FOR TYPICAL MASONRY SECTIONS AND DETAILS.
 4.16 MASONRY WALLS SHALL NOT BE BACK FILLED PRIOR TO THE MORTAR AND GROUT ATTAINING THEIR RESPECTIVE MAXIMUM DESIGN STRENGTHS PER SPECIFICATIONS.
 4.17 SEE CONCRETE NOTES FOR ADDITIONAL REBAR REQUIREMENTS.
 4.18 WHERE INTERIOR NON-LOAD BEARING MASONRY WALLS INTERSECT OTHER MASONRY WALLS AND ARE NOT CONNECTED THROUGH THE INTERLOCK OF THE MASONRY UNITS, THESE WALLS SHALL BE ANCHORED TOGETHER BY STEEL CONNECTORS GROUDED INTO THE WALLS AT A MAXIMUM VERTICAL SPACING OF 4'-0" O.C. THE STEEL CONNECTORS SHALL BE A MINIMUM SIZE OF 1/4" x 1 1/2" x 2'-4". INCLUDE 2" LONG 90 DEGREE BEND AT EACH END TO FORM A "U" OR "Z" SHAPE.
 4.19 ALL MASONRY WORK SHALL CONFORM TO THE REQUIREMENTS OF ACI-530, (CURRENT EDITION) "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES" AND CONTRACT SPECIFICATIONS. WHEN THERE IS A CONFLICT BETWEEN ACI AND SPECIFICATIONS, THE MORE STRINGENT SHALL GOVERN.

5.0 STEEL DECK
 5.1 STEEL DECK SHALL BE ASTM A446 HAVING A MINIMUM YIELD STRENGTH OF 33,000 PSI AS PER THE STEEL DECK INSTITUTE DESIGN MANUAL.
 5.2 STEEL DECK SHALL BE ERECTED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND ERECTION LAYOUTS AND CONNECTED TO SUPPORTING MEMBERS AS INDICATED BELOW.
 5.3 ROOF DECK
 5.3.1 STEEL ROOF DECK SHALL BE 1 1/2", 20 GAGE GALVANIZED (UNPAINTED) WIDE RIB (S.D.I. TYPE WR 20) U.N.O.
 5.3.2 ROOF DECK SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES:
 MOMENT OF INERTIA, I 0.167 IN⁴/FT WIDTH
 SECTION MODULUS (TOP OF DECK), S_n 0.190 IN³/FT WIDTH
 SECTION MODULUS (BOT. OF DECK), S_p 0.184 IN³/FT WIDTH
 IN ADDITION TO MEETING THE MINIMUM REQUIREMENTS ABOVE, THE DECK MANUFACTURER SHALL DESIGN THE ROOF DECK AND ATTACHMENTS TO STEEL FOR THE ROOF LOADS, INCLUDING DECK UPLIFT. ALL ROOF DECK SHALL HAVE A MINIMUM 3-SPAN CONDITION.
 ROOF DECK SHALL BE CONNECTED TO SUPPORTS WITH #12 TEK SCREWS IN THE BOTTOM OF THE FLUTES USING A S.D.I. 36/5 PATTERN U.N.O. DECK SIDELAPS SHALL BE FASTENED USING #10 SCREWS WITH A MINIMUM 9-SIDE LAPS CONNECTIONS PER SPAN. ALL ENDLAPS SHALL BE A MINIMUM OF 2" AND SHALL OCCUR OVER SUPPORTS. MINIMUM DIAPHRAGM SHEAR STRENGTH Q = 400 PLF U.N.O.
 5.3.3 ROOF DECK AT GYMNASIUM:
 STEEL ROOF DECK AT SHALL BE 3" DEEP, 22 GAGE, GALVANIZED TYPE 3N. THE ROOF DECK SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES:
 MOMENT OF INERTIA, I 0.770 IN⁴/FT WIDTH
 SECTION MODULUS (TOP OF DECK), S_n 0.433 IN³/FT WIDTH
 SECTION MODULUS (BOT. OF DECK), S_p 0.380 IN³/FT WIDTH
 IN ADDITION TO MEETING THE MINIMUM REQUIREMENTS ABOVE, THE DECK MANUFACTURER SHALL DESIGN THE ROOF DECK AND ATTACHMENTS TO STEEL FOR THE ROOF LOADS, INCLUDING DECK UPLIFT. ALL ROOF DECK SHALL HAVE A MINIMUM 3-SPAN CONDITION.
 ROOF DECK SHALL BE WELDED TO SUPPORTS WITH 5/8" DIA. PUDDLE WELDS IN THE BOTTOM OF THE FLUTES USING A S.D.I. 24/4 PATTERN U.N.O. DECK SIDELAPS SHALL BE FASTENED USING #10 SCREWS WITH A MINIMUM 9-SIDE LAPS CONNECTIONS PER SPAN. ALL ENDLAPS SHALL BE A MINIMUM OF 2" AND SHALL OCCUR OVER SUPPORTS. MINIMUM DIAPHRAGM SHEAR STRENGTH Q = 400 PLF U.N.O.

5.3.4 DO NOT SUSPEND PIPES, DUCTS, OR CEILING FROM ROOF DECK.

6.0 STRUCTURAL STEEL
 6.1 STRUCTURAL STEEL ROLLED SHAPES AND PLATES SHALL CONFORM TO THE MATERIAL INFORMATION SCHEDULE ON SHEET 50.02. DIMENSIONS AND PROPERTIES SHALL BE IN ACCORDANCE TO ASTM A6.
 6.2 ANCHOR BOLTS SHALL CONFORM TO ASTM A36, OR A307 U.N.O.
 6.3 CONNECTION BOLTS FOR STRUCTURAL STEEL MEMBERS SHALL BE 3/4" DIA A325-N, U.N.O. AND SHALL CONFORM TO ASTM A325; NUTS SHALL CONFORM TO ASTM A563; WASHERS SHALL CONFORM TO ASTM F436. CONNECTION BOLTS SHALL HAVE A HARDENED WASHER PLACED UNDER THE ELEMENT TO BE TIGHTENED.
 6.4 DETAILING OF STRUCTURAL STEEL CONNECTIONS MUST BE CONSISTENT WITH RECOGNIZED, PUBLISHED METHODS SUCH AS IN THE AISC "MANUAL OF STEEL CONSTRUCTION", CURRENT EDITION, "ENGINEERING FOR STEEL CONSTRUCTION", OR "VOLUME II CONNECTIONS MANUAL OF STEEL CONSTRUCTION."
 6.5 SECTION A7 OF AISC CURRENT EDITION IS AMENDED SUCH THAT THE FABRICATOR IS RESPONSIBLE FOR THE DESIGN AND DETAILING OF ALL CONNECTIONS.
 6.6 SEE DWG. S4.01 FOR STANDARD FRAMING CONNECTIONS. STRUCTURAL STEEL CONNECTIONS SHALL BE DETAILED BY THE CONTRACTOR IN ACCORDANCE WITH THE AISC "MANUAL OF STEEL CONSTRUCTION—ALLOWABLE STRESS DESIGN", CURRENT EDITION. CONNECTIONS SHALL BE DESIGNED AND DETAILED FOR THE END REACTIONS DETERMINED FROM PART 2 —"ALLOWABLE UNIFORM LOAD TABLES" FROM THE AISC MANUAL OF STEEL CONSTRUCTION, LATEST EDITION OR A MINIMUM OF 18 KIPS, WHICHEVER IS GREATER.
 6.7 ALL CONNECTIONS FOR BEAMS WHICH SUPPORT A CONCRETE SLAB (COMPOSITE BEAMS) SHALL BE DESIGNED USING THE END REACTION SHOWN ON THE FRAMING PLANS OR NOTE 6.8 ON THIS DRAWING.
 6.8 COMPOSITE BEAM CONNECTIONS SHALL BE DESIGNED AND DETAILED FOR THE GREATER OF THE FOLLOWING: 18 KIPS, THE LOAD NOTED ON PLANS AS [##], OR THE END REACTION DETERMINED FROM PART 2 — "ALLOWABLE UNIFORM LOAD TABLES" FROM THE AISC MANUAL OF STEEL CONSTRUCTION.
 6.9 ALL MEMBERS AND CONNECTIONS ON THE CONTRACT DRAWINGS AND CONNECTIONS FOR ANY PORTION OF THE STRUCTURE NOT SHOWN SHALL BE DESIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF SOUTH CAROLINA DETAILED AND SUBMITTED FOR APPROVAL AND SHOWN ON THE SHOP DRAWINGS.
 6.10 ALTERNATIVE CONNECTION DETAILS MAY BE SUBMITTED ON SHOP DRAWINGS BY THE CONTRACTOR ONLY IF ACCOMPANIED BY COMPLETE STRUCTURAL CALCULATIONS PREPARED AND SEALED BY AN ENGINEER, LICENSED IN THE STATE OF SOUTH CAROLINA AND SUBMITTED FOR APPROVAL.
 6.11 CALCULATIONS FOR DETAILS MUST SHOW A RATIONAL ANALYSIS OF A COMPLETE LOAD PATH, INCLUDING LOCAL EFFECTS ON WEBS, FLANGES, ETC. OF THE CONNECTED MEMBERS AND THE DEVICES (PLATES, SEAT BRACKETS, BOLTS, WEBS, ETC) AFFECTING ALL CONNECTIONS. FAILURE TO SUBMIT SUCH CALCULATIONS FOR REVIEW CONCURRENT WITH SHOP DRAWING ERECTION PLANS AND DETAILS WILL BE CAUSE FOR RESUBMITAL.
 6.12 ALL SHEAR TAB CONNECTIONS SUBMITTED AS AN ALTERNATE FOR APPROVAL SHALL BE DESIGNED USING A FLEXIBLE SUPPORT CONDITION.
 6.13 BEAM AND GIRDER CONNECTIONS SHALL BE DESIGNED SUCH THAT ALL ADDITIONAL STRESSES DUE TO CONNECTION ECCENTRICITY SHALL BE DEVELOPED BY THE CONNECTION AND NOT INDUCE ANY ADDITIONAL STRESSES INTO SUPPORTING MEMBERS.
 6.14 STRUCTURAL STEEL DETAILING, FABRICATION AND ERECTION SHALL CONFORM TO THE AISC "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS — ALLOWABLE STRESS DESIGN AND PLASTIC DESIGN" (CURRENT EDITION), AND THE AISC "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES" (CURRENT EDITION).
 6.15 WELDING SHALL CONFORM TO THE AMERICAN WELDING SOCIETY STRUCTURAL WELDING CODE AWS D1.1. ELECTRODES FOR SHOP AND FIELD WELDS SHALL BE CLASS E70XX. ALL WELDING SHALL BE DONE BY QUALIFIED, CERTIFIED WELDERS PER THE ABOVE STANDARD.
 6.16 SHOP AND FIELD TESTING OF WELDS AND BOLTS SHALL BE AS OUTLINED IN THE SPECIFICATIONS.
 6.17 ALL WELDS NOT INDICATED SHALL BE A MINIMUM OF 1/4" ALL AROUND U.N.O.
 6.18 THERE SHALL BE NO FIELD CUTTING OF STRUCTURAL STEEL MEMBERS FOR THE WORK OF OTHER TRADES WITHOUT PRIOR APPROVAL OF THE STRUCTURAL ENGINEER.
 6.19 FOR FLOOR AND ROOF OPENINGS, THE FABRICATOR SHALL VERIFY OPENING LOCATIONS WITH EQUIPMENT SELECTED AND MAKE ANY NECESSARY MODIFICATIONS AT NO ADDITIONAL COST. THE CONTRACTOR SHALL COORDINATE MECHANICAL UNITS AND OPENINGS & ARCHITECTURAL ITEMS REQUIRED FOR COMPLETE INSTALLATION OF WORK. IT IS THE RESPONSIBILITY OF FABRICATOR TO RECEIVE ALL NECESSARY INFORMATION PRIOR TO FABRICATION OF THE STEEL.
 6.20 ALL STRUCTURAL STEEL WHICH IS TO BE SPRAYED WITH FIREPROOFING SHALL NOT BE PRIMED OR PAINTED. STEEL WHICH IS NOT SPRAYED WITH FIREPROOFING SHALL BE PRIMED AND PAINTED PER SPECIFICATIONS. FOR STEEL BEAMS THAT ARE PRIMED, THE TOP FLANGE RECEIVING STEEL STUDS SHALL NOT BE PRIMED PAINTED.
 6.21 ALL PLATES NOT INDICATED SHALL BE 5/16" MIN. THICKNESS. ALL ANGLES NOT INDICATED SHALL BE 3x3x5/16" MIN.
 6.22 SEE MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS FOR ADDITIONAL OPENINGS NOT SHOWN. SEE DWG. S4.01 FOR TYPICAL FRAMING DETAILS.
 6.23 FOR ARCHITECTURAL WELDS PROVIDE 3/16" FILLET OR STITCH WELD 2" LONG AT 12" O.C. U.N.O. MIN. WHERE WELDS ARE PERMANENTLY EXPOSED TO VIEW PROVIDE CONTINUOUS WELD IN ACCORDANCE WITH NOTE 6.17.
 6.24 ALL EXPOSED STEEL SHALL BE HOT DIPPED GALVANIZED.

7.0 NOT USED
 8.0 STEEL JOISTS
 8.1 THE DETAILING, FABRICATION AND ERECTION OF STEEL JOISTS SHALL CONFORM TO THE LATEST STANDARD SPECIFICATIONS OF THE STEEL JOIST INSTITUTE. JOISTS SHALL EXTEND TO WITHIN 5/16" OF CENTERLINE OF SUPPORTING BEAMS AT ABUTTING JOISTS SPANS AND AT LEAST 2" PAST CENTERLINE OF SUPPORTING BEAMS ELSEWHERE AND IN ANY CASE JOIST ENDS SHALL BEAR A MINIMUM OF 2 1/2" ON STEEL SUPPORTS AND SHALL BE ANCHORED WITH A MINIMUM OF TWO 3/16"x1" FILLET WELDS (OR BOLTED CONNECTION) AND A MINIMUM OF 4" ON MASONRY OR CONCRETE SUPPORTS, BEARING ON A STEEL PLATE. BRIDGING SHALL BE AS SHOWN ON PLANS AS A MINIMUM AND WELDED TO INSIDE OF TOP AND BOTTOM CHORDS AND ANCHORED IN ACCORDANCE WITH SJI SPECIFICATIONS AT THEIR ENDS. EXTEND TOP AND BOTTOM CHORDS AS REQUIRED.
 8.2 WHERE BOTTOM CHORD EXTENSIONS ARE REQUIRED, ALL DEAD LOADS SHALL BE IN PLACE PRIOR TO ATTACHMENT OF BOTTOM CHORD TO ADJACENT MEMBER.
 8.3 FOR CONCENTRATED LOADS GREATER THAN 200 LBS ON JOIST, NOT FALLING DIRECTLY OVER A JOIST CHORD PANEL POINT, PROVIDE WEB REINFORCING ANGLES FROM THE SUPPORT POINT TO A BOTTOM CHORD PANEL POINT. USE L 2x2x3/16" OF EACH SIDE OF JOIST AND USE 3/16" FILLET WELD OR LEAST THICKNESS OF MATERIAL USED (WHICHEVER IS LESS), U.N.O. MAXIMUM POINT LOAD NOT TO EXCEED 500 LBS U.N.O.
 8.4 WHERE JOISTS ARE ADJACENT TO WIDE FLANGE BEAMS, ALL LINES OF BRIDGING SHALL BE ANCHORED TO THE WIDE FLANGE BEAMS.
 8.5 ALL ROOF JOISTS SHALL BE PROVIDED WITH SINGLE LINES OF BOTTOM CHORD BRIDGING FOR UPLIFT AT FIRST BOTTOM CHORD PANEL POINT AT EACH END OF JOIST, FOR CLARITY, THIS BRIDGING IS NOT SHOWN ON THE ROOF FRAMING PLANS.
 8.6 THE CAMBER FOR STEEL JOISTS SHALL BE AS SPECIFIED BY JOIST MANUFACTURER TO SUSTAIN THE LOADS AND CONDITIONS AS SPECIFIED.
 8.7 STEEL JOISTS FOR ROOFS SHALL BE DESIGNED FOR A NET UPLIFT AS SPECIFIED. ADDITIONAL BRIDGING MAY BE ADDED IF REQUIRED BY STEEL JOIST MANUFACTURER.
 8.8 OPENINGS FOR DUCTS, VENTS, MECHANICAL EQUIPMENT, ETC. ARE TO BE FRAMED PER DWG. S4.01 UNLESS OTHERWISE SHOWN. MECHANICAL CONTRACTOR TO PROVIDE EXACT SIZES AND LOCATIONS FOR OPENINGS TO BE COORDINATED BY THE JOIST FABRICATOR.

STEEL JOISTS (CONT.)

8.9 STEEL JOIST SIZES INDICATED ARE BASED UPON THE GRAVITY LOADS REQUIRED. SPECIAL JOISTS OR JOISTS OF LARGER SIZES SHALL BE PROVIDED AS REQUIRED BY THE STEEL JOIST MANUFACTURER TO ACCOMMODATE SITUATIONS AND LOADS INDICATED ON THE DRAWINGS, SUCH AS HANGER LOADS, UPLIFT LOADS, WIND LOADS, CHORD EXTENSION LOADS, ETC. ALL JOIST SIZES SHOWN ON DRAWINGS ARE GIVEN AS MINIMUM AND SHALL MEET THE MINIMUM UNIFORM LOAD CARRY CAPACITIES AS SPECIFIED BY THE STEEL JOIST INSTITUTE. STEEL JOISTS DRAWINGS SHALL BEAR THE SEAL AND SIGNATURE OF A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF SOUTH CAROLINA.
 8.10 JOISTS SHALL BE DESIGNED FOR LOAD REVERSAL AS REQUIRED.
 8.11 JOISTS SHALL BE DESIGNED FOR CONCENTRATED LOADS APPLIED CONCURRENTLY WITH THE APPLICABLE LOAD CONDITIONS INCLUDING ROOF LIVE LOADS. BOTTOM CHORD PANEL POINTS SHALL BE DESIGNED FOR MAXIMUM HANGER LOADS OF 500 LBS APPLIED AT ANY PANEL POINT.
 8.12 ALL STEEL JOISTS SHALL BE PRIMED UNLESS FIREPROOFED.
 8.13 ALL BRIDGING SHOWN IS THE MINIMUM REQUIRED.
 8.14 MINIMUM JOIST SEAT END BEARING BOUNDARY SHEAR 'Q' = 400 LF U.N.O. ALL K-SERIES JOIST SEATS SHALL BE 2 1/2" MIN. U.N.O. ALL LH-SERIES JOIST SEATS SHALL BE 5" MIN. U.N.O.
 8.15 JOIST LOAD TO BE APPLIED AT CENTER OF CMU WALL SO THAT IT DOES NOT CREATE AN ECCENTRIC CONDITION (TYP)

9.0 NOT USED
 10.0 PRE-ENGINEERED METAL BUILDING
 10.1 CONTRACTOR SHALL MAINTAIN A SET OF THE LATEST PRE-ENGINEERED METAL BUILDING DRAWINGS ON SITE. THESE SHALL BE MADE AVAILABLE FOR REVIEW BY THE ENGINEER OR BUILDING INSPECTOR UPON REQUEST.
 10.2 FOUNDATION DESIGN SHALL BE VERIFIED WITH COLUMN REACTION REPORT TO BE PROVIDED BY THE PRE-ENGINEERED METAL BUILDING SUPPLIER.
 10.3 THE DESIGN SHALL BE THE RESPONSIBILITY OF THE PRE-ENGINEERED BUILDING MANUFACTURER AND SHALL BE PREPARED UNDER THE DIRECT SUPERVISION OF A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF SOUTH CAROLINA.
 10.4 DESIGN CRITERIA

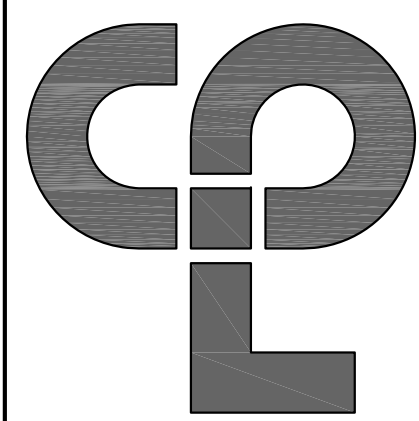
A. PRIMARY AND SECONDARY STRUCTURAL MEMBERS AND EXTERIOR COVERING MATERIALS: METAL BUILDING MANUFACTURER'S ASSOCIATION'S (MBMA) "DESIGN PRACTICES MANUAL".
 B. STRUCTURAL STEEL MEMBERS: AMERICAN INSTITUTE OF STEEL CONSTRUCTION'S (AISC) "SPECIFICATIONS FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS".
 C. LIGHT GAGE STEEL MEMBERS: AMERICAN IRON AND STEEL INSTITUTE'S (AISI) "SPECIFICATION FOR THE DESIGN OF COLD FORMED STEEL STRUCTURAL MEMBERS" AND "DESIGN OF LIGHT GAGE STEEL DIAPHRAGMS".
 D. FOR WELDED CONNECTIONS: AMERICAN WELDING SOCIETY'S (AWS) "STANDARD CODE FOR ARC AND GAS WELDING IN BUILDING CONSTRUCTION".

10.5 DESIGN LOADS: BASIC DESIGN LOADS, AS WELL AS AUXILIARY AND COLLATERAL LOADS, ARE INDICATED BELOW.
 A. GRAVITY LIVE LOADS, WIND AND SEISMIC LOADS AS INDICATED IN "DESIGN CRITERIA" SECTION OF THESE NOTES.
 B. BASIC DESIGN LOADS INCLUDE, IN ADDITION TO DEAD LOAD, LIVE LOAD, WIND LOAD & SEISMIC LOAD.
 C. COLLATERAL LOADS INCLUDE ADDITIONAL DEAD LOADS OVER AND ABOVE THE WEIGHT OF THE METAL BUILDING SYSTEM SUCH AS MECHANICAL SYSTEMS AND LIGHTING LOADS.
 D. DESIGN EACH MEMBER TO WITHSTAND STRESSES RESULTING FROM COMBINATIONS OF LOADS THAT PRODUCE ALLOWABLE STRESSES IN THAT MEMBER, AS PRESCRIBED IN MBMA'S "DESIGN PRACTICES MANUAL".

10.6 SUBMIT COMPLETE DESIGN CALCULATIONS AND ERECTION DRAWINGS SHOWING ANCHOR BOLT SETTINGS, SIDEWALL, ENDWALL, AND ROOF FRAMING, TRANSVERSE CROSS SECTIONS, COVERING AND TRIM DETAILS, AND ACCESSORY INSTALLATION DETAILS TO CLEARLY INDICATE PROPER ASSEMBLY OF BUILDING COMPONENTS.
 10.7 DESIGN CALCULATIONS AND ERECTION DRAWINGS SHALL BE SEALED AND SIGNED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF SOUTH CAROLINA.
 10.8 FRAMES SHALL BE DESIGNED ON THE BASIS OF ELASTIC BEHAVIOR.
 10.9 STRUCTURAL PLATE OR BAR STOCK SHALL HAVE A MINIMUM YIELD OF 50 ksi
 10.10 COLD-FORMED STRUCTURAL STEEL SHALL HAVE A MINIMUM YIELD STRENGTH OF 55 ksi.
 10.11 PRE-ENGINEERED METAL BUILDING MFG. SHALL PROVIDE COLUMN REACTION REPORT TO STRUCTURAL ENGINEER OF RECORD FOR VERIFICATION OF FOUNDATION DESIGN.

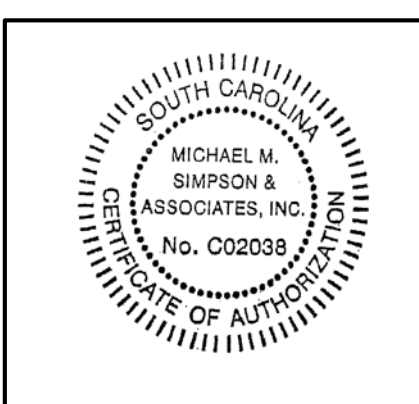
MMSA, Inc.

Michael M. Simpson & Associates, Inc.
 Consulting Structural Engineers
 30 Patewood Drive, Suite 100
 Greenville, S.C. 29615
 (864) 331-1201



Clark Patterson Lee
 ARCHITECTURE | ENGINEERING | PLANNING
 6302 Fairview Rd., Suite 102
 Charlotte, North Carolina, 28210
 Tel: (800) 274-9000
 Fax: (704) 331-0402
 www.clarkpatterson.com
 N.C. Engineering Firm License No. C-2194

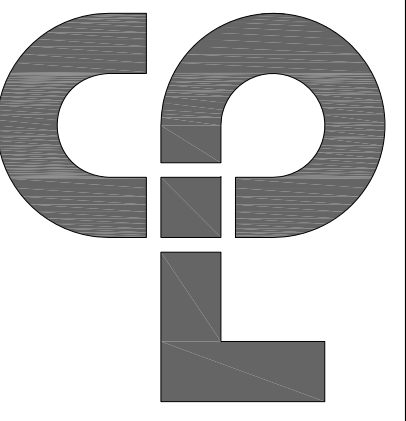
NO.	DATE	BY	CHKD	TML	DESCRIPTION
1	5/30/2017	TML	TML		ISSUED FOR BIDS



COLLETON COUNTY
 RECREATION CENTER ADDITION AND RENOVATION
 280 RECREATION LN., WALTERBORO, SC 29488

DATE	DRAWN	CHECKED
5/30/2017	TML	MG
SCALE	AS NOTED	
SHEET TITLE	GENERAL NOTES	

PROJECT NUMBER	13674.00
DRAWING NUMBER	S001



Clark Patterson Lee ARCHITECTURE | ENGINEERING | PLANNING

6302 Fairview Rd., Suite 102 Charlotte, North Carolina, 28210 Tel: (800) 274-9000 Fax: (704) 331-0402 www.clarkpatterson.com N.C. Engineering Firm License No.: C-2194

STRUCTURAL DESIGN CRITERIA

ALL DESIGNS SHALL CONFORM TO THE PROVISIONS OF THE INTERNATIONAL BUILDING CODE, 2015 EDITION.

1.0 DESIGN LOADS

Table with columns: DEAD LOADS, ROOF DEAD LOADS, MAXIMUM GRAVITY LOADS, MINIMUM GRAVITY LOADS. Includes values for Roofing Material (7 PSF), Roof Deck (3 PSF), Joists (7 PSF), Insulation (3 PSF), Ceilings (2 PSF), Miscellaneous (8 PSF).

1.2 LIVE LOADS (PER IBC 2015 EDITION)

Table with columns: ROOF LIVE LOADS (20 PSF), FIRST FLOOR LIVE LOADS (Mechanical/Electrical: 150 PSF, All other areas: 100 PSF).

1.3 SNOW LOAD (PER IBC 2015 EDITION)

1.3.1 DESIGN PARAMETERS: FLAT ROOF SNOW LOAD = 10 PSF, SNOW LOAD IMPORTANCE FACTOR, I = 1.10, SNOW EXPOSURE FACTOR = 1.0

1.4 WIND LOAD (PER IBC 2015 EDITION, ASCE 7-10)

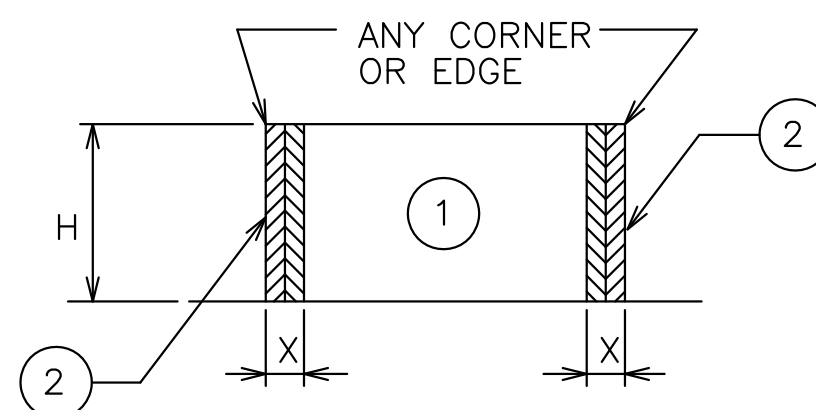
1.4.1 BASIC WIND SPEED VULT = 146 MPH (3 SECOND GUST) EXPOSURE C; RISK CATEGORY III NOTE: BUILDING IS LOCATED WITHIN HURRICANE PRONE REGION

1.4.2 DESIGN WIND PRESSURE - MAIN WIND FORCE RESISTING SYSTEM

Table showing wind pressure values for all areas, UNO, interior and end zones for windward and leeward directions, and exposure factor X = 15 ft.

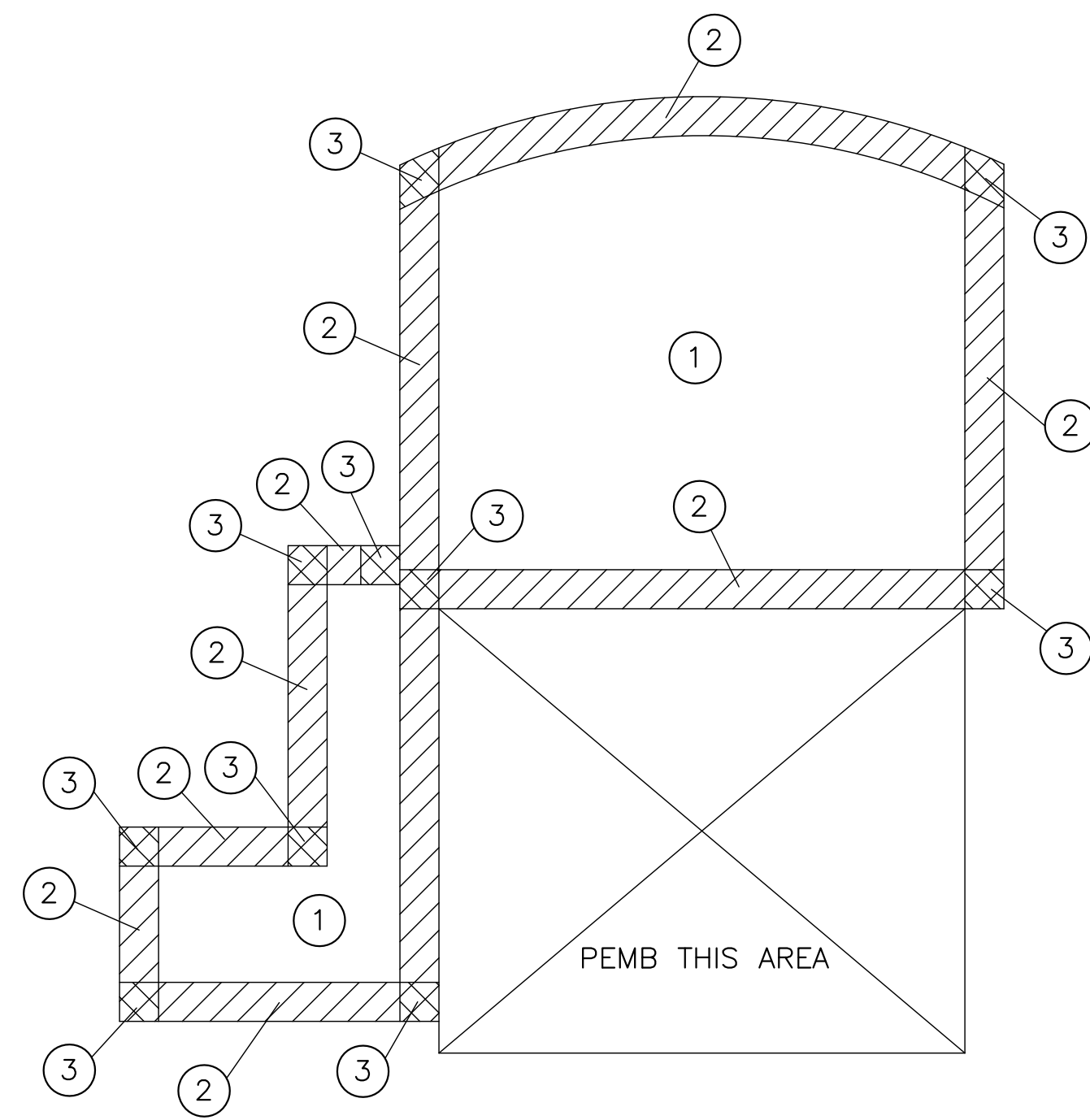
1.4.3 DESIGN WIND PRESSURE - WALL COMPONENTS & CLADDING

EXTERIOR WALL SYSTEMS & THEIR ATTACHMENTS TO THE PRIMARY STRUCTURE SHALL BE DESIGNED FOR THE PRESSURES SHOWN IN THE DIAGRAM BELOW:



PRESSURE ON EXTERIOR WALL SYSTEMS FOR BUILDINGS WITH MEAN ROOF HEIGHT (H) = AS SHOWN

Table showing wind pressure values for all areas, U.N.O., based on area size (10, 50, 100 ft^2) and height H (0-60 ft).



1.4.4 DESIGN WIND PRESSURE - ROOF UPLIFT JOISTS, LIGHT GAGE TRUSSES, ROOF DECK & FASTENERS SHALL BE DESIGNED FOR THE WIND PRESSURES SHOWN BELOW

Table showing uplift pressure values (psf) for tributary areas A <= 10ft^2, A = 50ft^2, and A >= 100ft^2 across zones 1, 2, and 3, and exposure factor X.

"T" = TYPICAL ROOF AREA EXCLUDING OVERHANG "+ " = PRESSURES ACTING TOWARD SURFACES "- " = PRESSURES ACTING AWAY FROM SURFACES

1.5 SEISMIC LOAD (PER IBC 2015, ASCE 7-10)

- 1.5.1 RISK CATEGORY: III (TABLE 1604.5)
1.5.2 SEISMIC IMPORTANCE FACTOR: Ie = 1.25
1.5.3 SPECTRAL ACCELERATION COEFFICIENTS: Ss = 0.772 S1 = 0.245
1.5.4 SPECTRAL RESPONSE COEFFICIENTS: SDS = 0.613 SD1 = 0.312
1.5.5 SOIL SITE CLASS: D
1.5.6 BASIC SEISMIC-FORCE-RESISTING SYSTEM: BUILDING FRAME SYSTEM SPECIAL REINFORCED MASONRY SHEAR WALLS
1.5.7 DESIGN BASE SHEAR ANALYSIS PROCEDURE: V = 0.153 x W KIPS EQUIVALENT LATERAL FORCE PROCEDURE, TABLE 1616.6.3
1.5.8 SEISMIC DESIGN CATEGORY: D
1.5.9 SEISMIC RESPONSE COEFFICIENT: Cs = 0.153
1.5.10 RESPONSE MODIFICATION COEFFICIENT: R = 5.0

2.0 FOUNDATION DESIGN CRITERIA

- 2.1 MINIMUM FOOTING BEARING DEPTH BELOW GRADE IS 18 INCHES.
2.2 MINIMUM FACTOR OF SAFETY FOR STABILITY AGAINST SLIDING, OVERTURNING AND UPLIFT FOR INDIVIDUAL COMPONENTS IS 1.5
2.3 ALLOWABLE SOIL BEARING CAPACITY = 2000 PSF
2.4 MODULUS OF SUBGRADE K = 175 PSI/IN

CONCRETE MATERIALS SCHEDULE table with columns: STRUCTURAL ELEMENT, f'c CONCRETE COMPRESSIVE STRENGTH @ 28 DAYS (PSI), REMARKS. Includes entries for All Footings U.N.O., Slab-on-Grade, and All Other Concrete.

STEEL MATERIALS SCHEDULE table with columns: STRUCTURAL ELEMENT, YIELD STRENGTH (KSI), REMARKS. Includes entries for Beams & Girders, Columns, Connections, Plates & All Others, Anchor Bolts, and Tubing.

CONCRETE COVER SCHEDULE table with columns: ELEMENT, MINIMUM CONCRETE COVER PROTECTION FOR REINFORCEMENT BARS SHALL BE AS FOLLOWS: (SEE ACI 318-14, SECTION 7.7 FOR CONDITIONS NOT NOTED). DIMENSIONS FOR PLACEMENT GIVEN IN SECTIONS AND DETAILS SHALL SUPERSEDE MINIMUM COVER REQUIREMENTS GIVEN HERE.

STANDARD HOOKS IN TENSION PER ACI 318-14 table with columns: BAR SIZE, HOOK DEVELOPMENT LENGTH Ldh (INCHES), f'c 4000 PSI, f'c 3000 PSI. Includes hook extension diagram.

- NOTES: 1. CONCRETE IS NORMAL WEIGHT CONCRETE. 2. BAR YIELD STRENGTH, fy = 60 KSI. 3. SIDE COVER REQUIREMENTS OF ACI SECT. 12.5.3.2 ARE ASSUMED TO NOT BE MET. 4. TIE OR STIRRUP REQUIREMENTS OF ACI SECT. 12.5.3.2 ARE ASSUMED TO NOT BE MET. 5. REDUCTION FOR EXCESS REINFORCEMENT IS NOT TAKEN. 6. HOOK DEVELOPMENT LENGTH IS VALID FOR 180° HOOKS ALSO.

MINIMUM LAP SPLICES OF REINFORCING BARS IN TENSION (PER ACI 318-14) table with columns: BAR SIZE, CENTER TO CENTER BAR SPACING, LESS THAN 4db, 4db OR MORE, (-TOP BARS-), (-OTHER BARS-), 4db, 1 1/2". Includes notes on yield strength and concrete strength.

Revision Schedule table with columns: NO., DATE, BY, CHKD, TMS, DESCRIPTION.

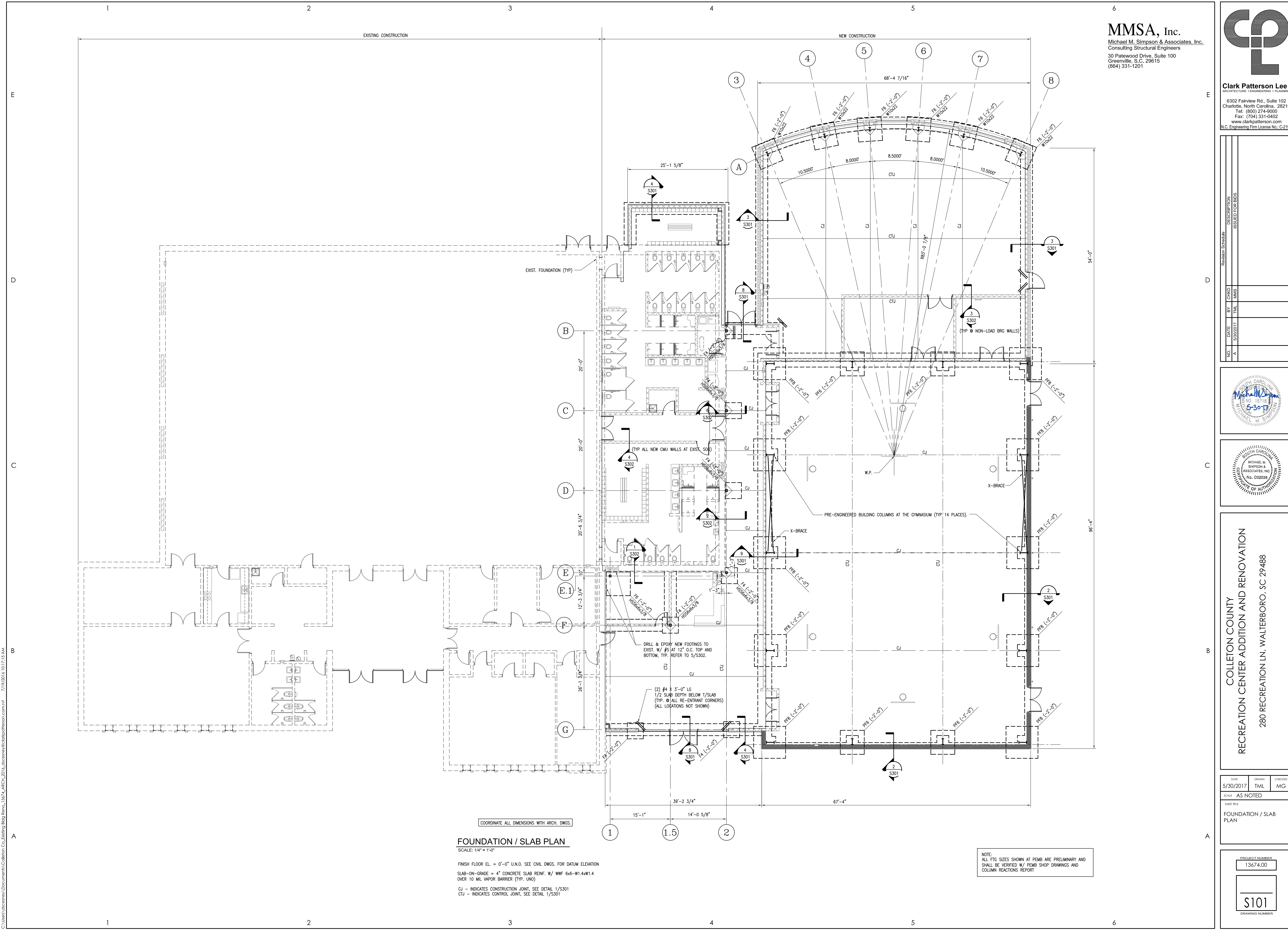


COLLETON COUNTY RECREATION CENTER ADDITION AND RENOVATION 280 RECREATION LN., WALTERBORO, SC 29488

Table with columns: DATE (5/30/2017), DRAWN (TML), CHECKED (MG), SCALE (AS NOTED), SHEET TITLE (BASIS OF DESIGN).

Table with columns: PROJECT NUMBER (13674.00), DRAWING NUMBER (S002).

C:\Users\kaceman\Documents\Coleton CC_Engineering\Blog\Bentz_13674_ARCH\2017\20170515.dwg 7/19/2016 10:13:54 AM

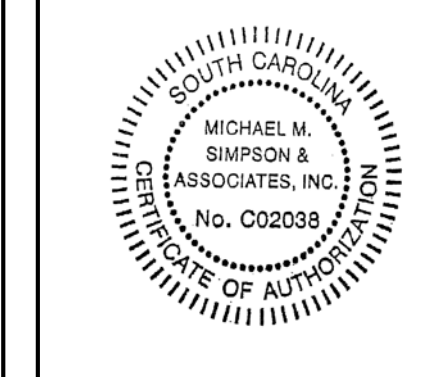
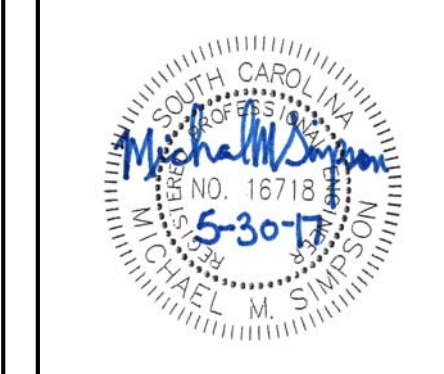


FOUNDATION / SLAB PLAN
 SCALE: 1/4" = 1'-0"

FINISH FLOOR EL. = 0'-0" U.N.O. SEE C.M.L. DWGS. FOR DATUM ELEVATION
 SLAB-ON-GRADE = 4" CONCRETE SLAB REINF. W/ WWF 6x6-W1.4xW1.4
 OVER 10 MIL VAPOR BARRIER (TYP. UNG)
 CJ - INDICATES CONSTRUCTION JOINT, SEE DETAIL 1/S301
 CTJ - INDICATES CONTROL JOINT, SEE DETAIL 1/S301

NOTE:
 ALL FTG SIZES SHOWN AT PEBM ARE PRELIMINARY AND
 SHALL BE VERIFIED W/ PEBM SHOP DRAWINGS AND
 COLUMN REACTIONS REPORT

NO.	DATE	BY	CHKD	DESCRIPTION
1	5/30/2017	TML	MMS	ISSUED FOR BIDS



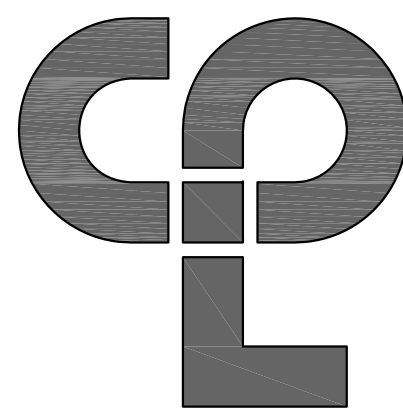
COLLETON COUNTY
 RECREATION CENTER ADDITION AND RENOVATION
 280 RECREATION LN., WALTERBORO, SC 29488

DATE	DRAWN	CHECKED
5/30/2017	TML	MG

SCALE AS NOTED

SHEET TITLE
 FOUNDATION / SLAB PLAN

PROJECT NUMBER 13674.00
DRAWING NUMBER S101



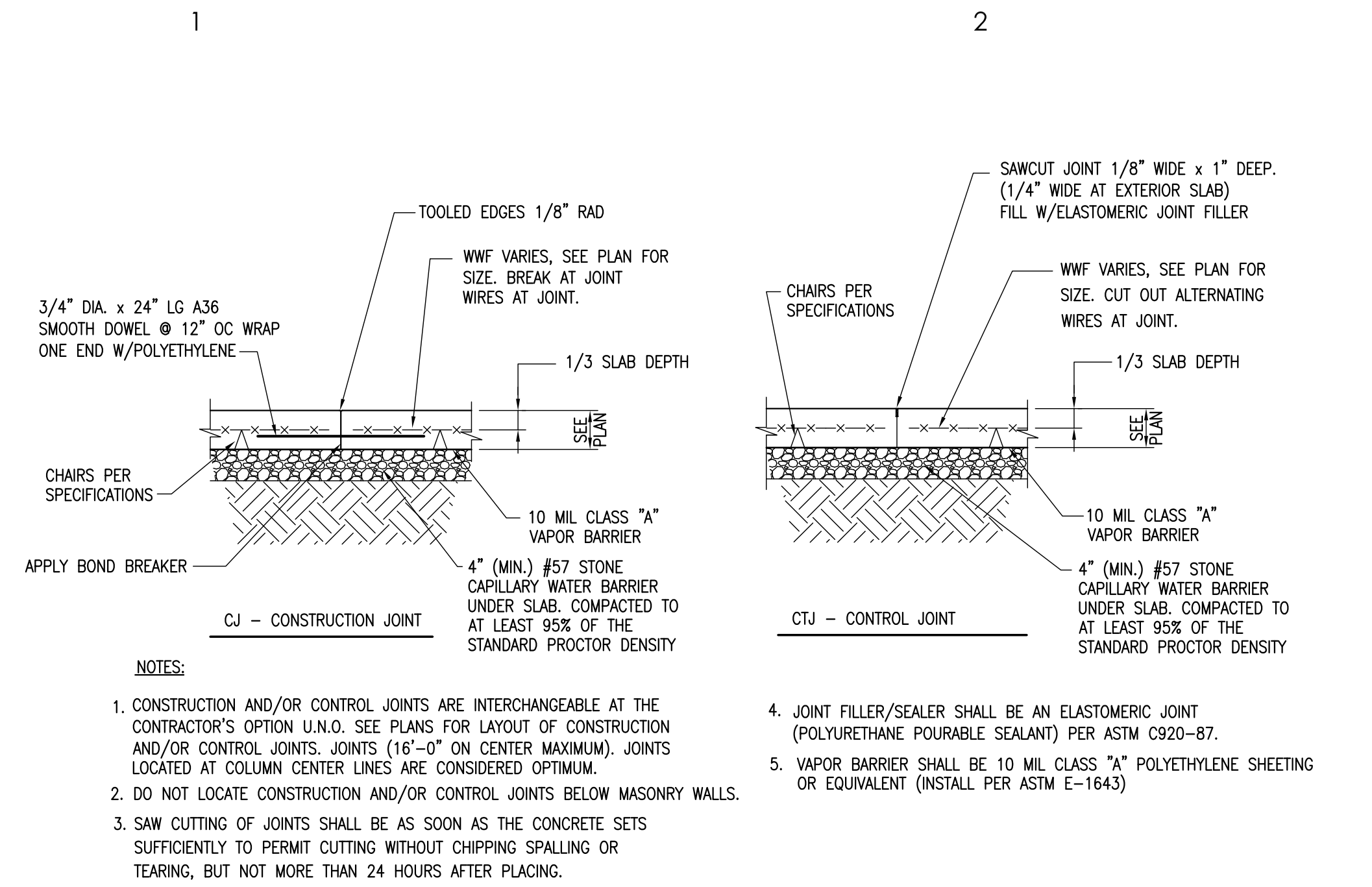
NO.	DATE	BY	CHECKED	DESCRIPTION
	5/30/2017	TML	MG	ISSUED FOR BIDS



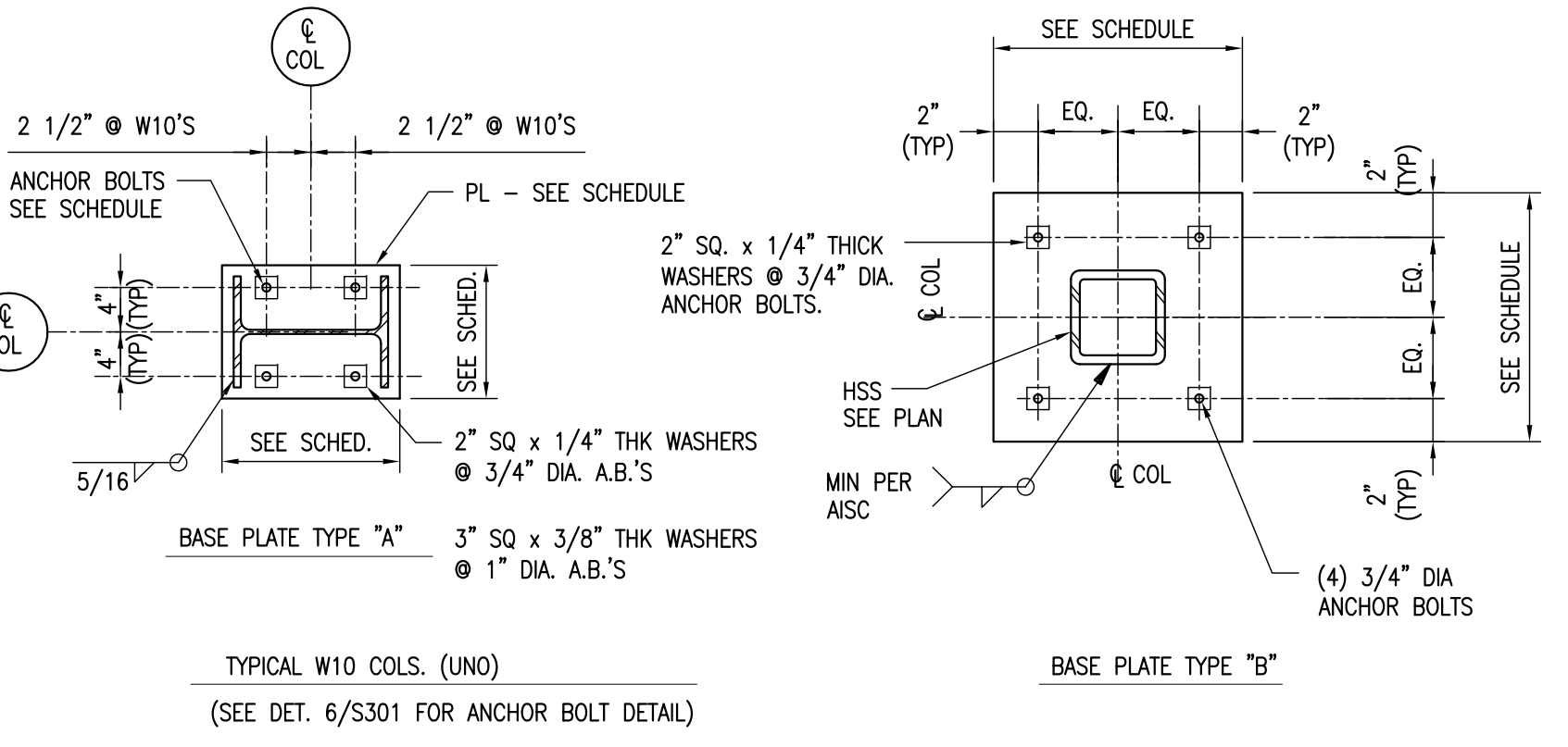
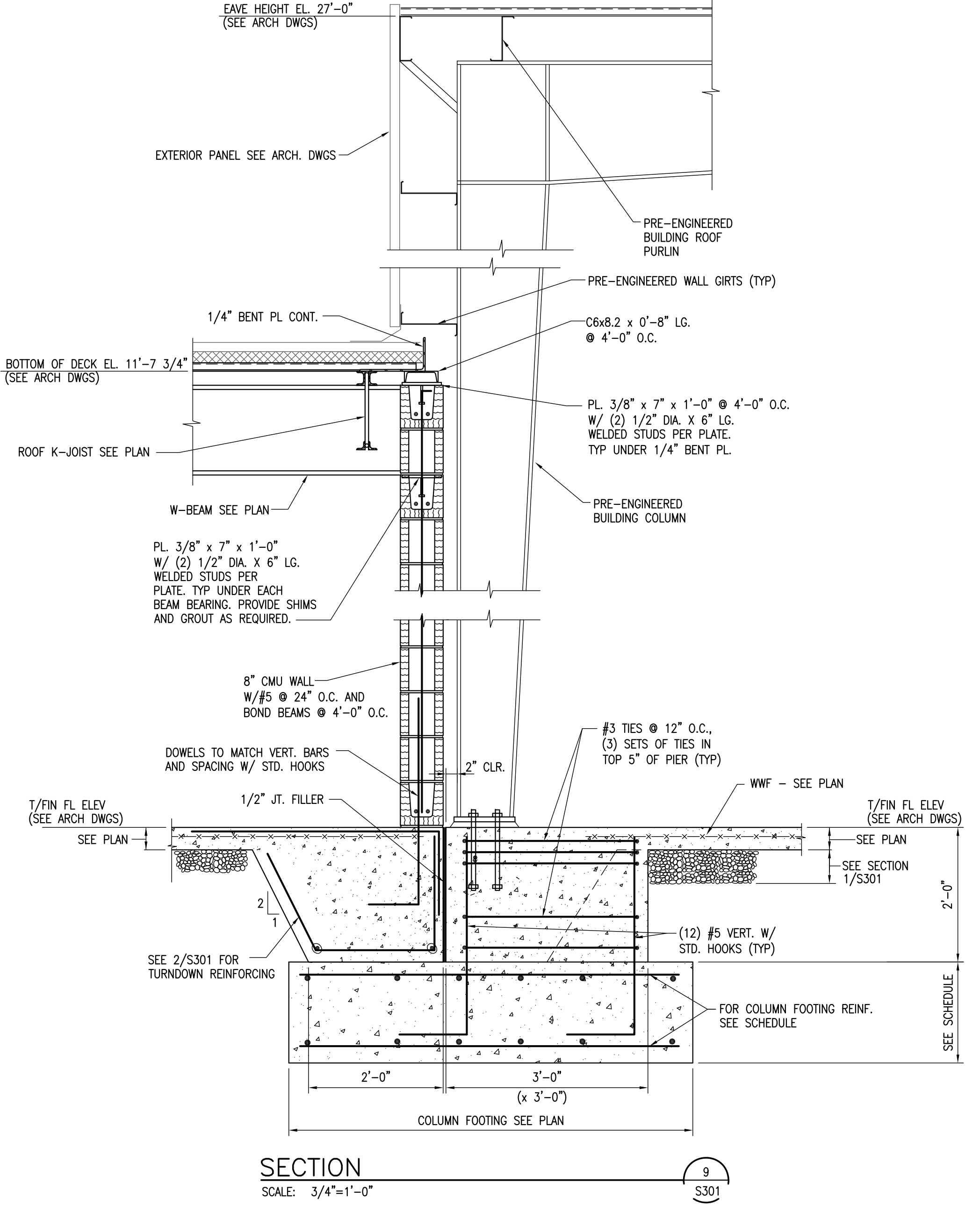
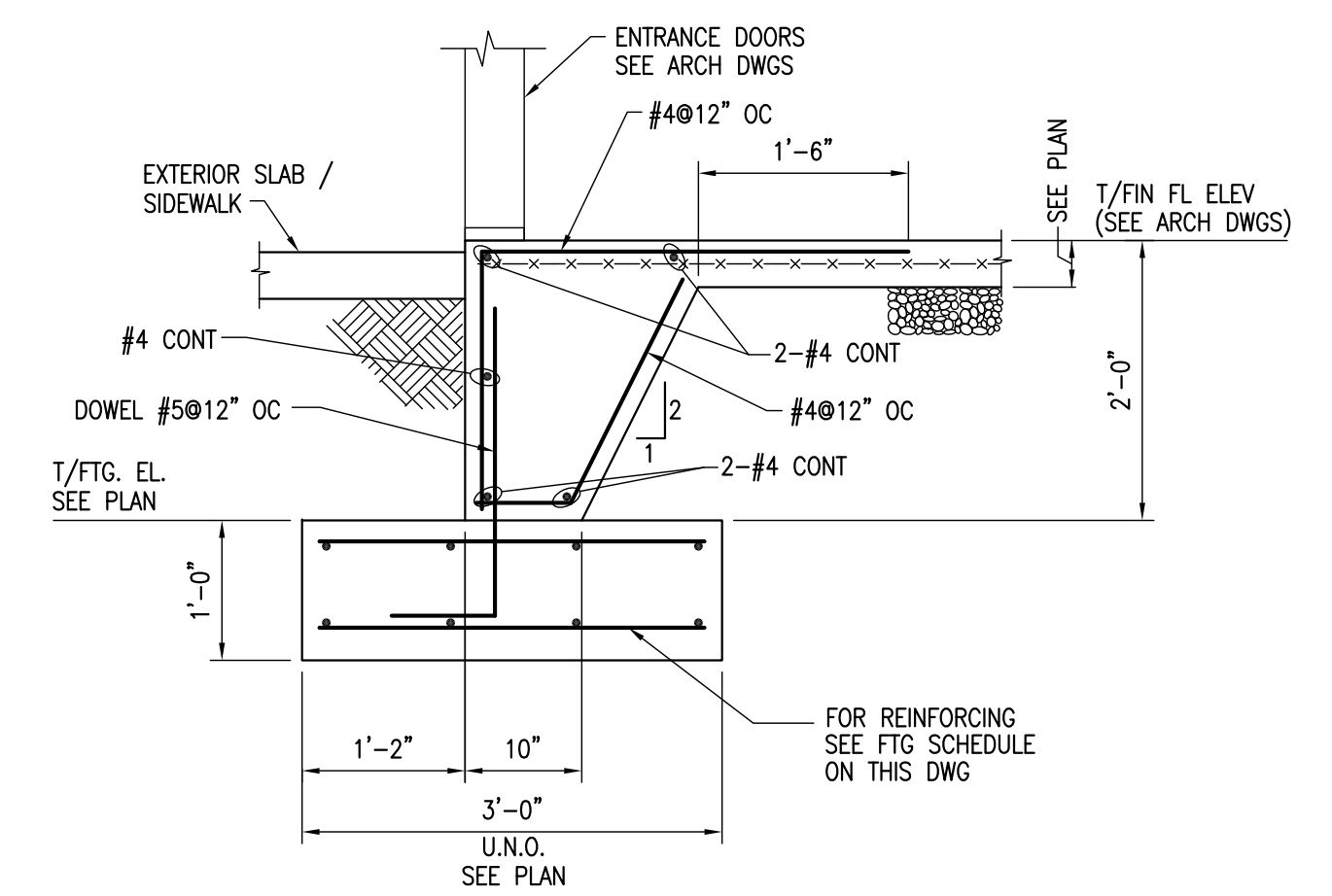
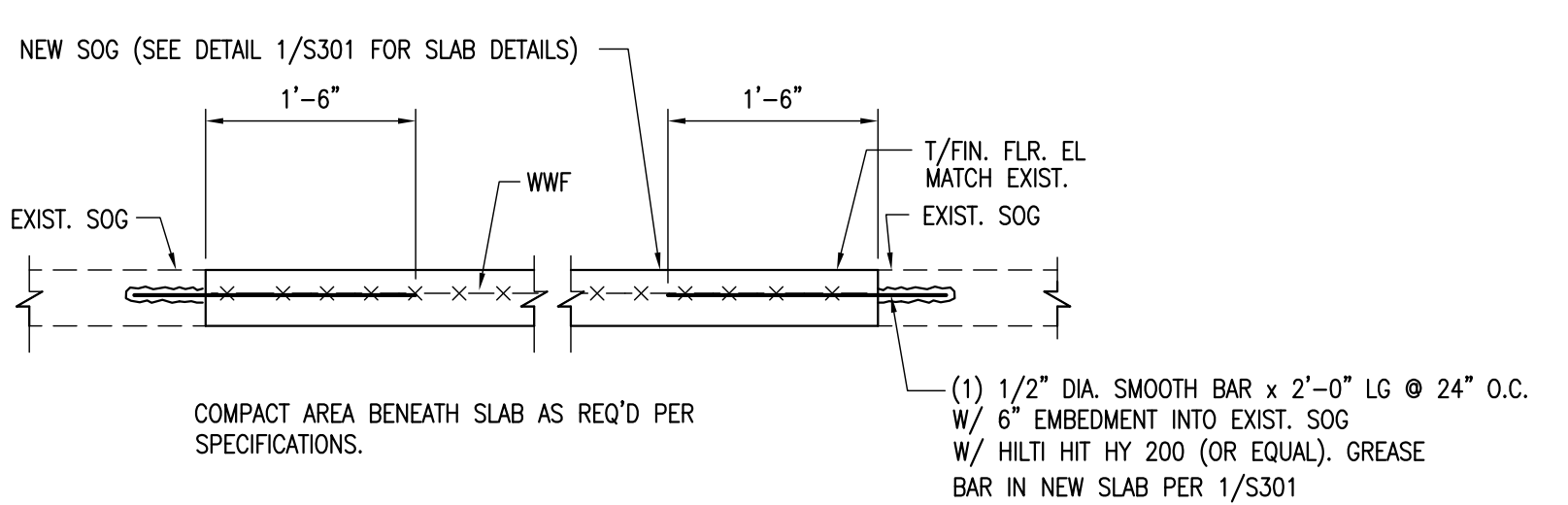
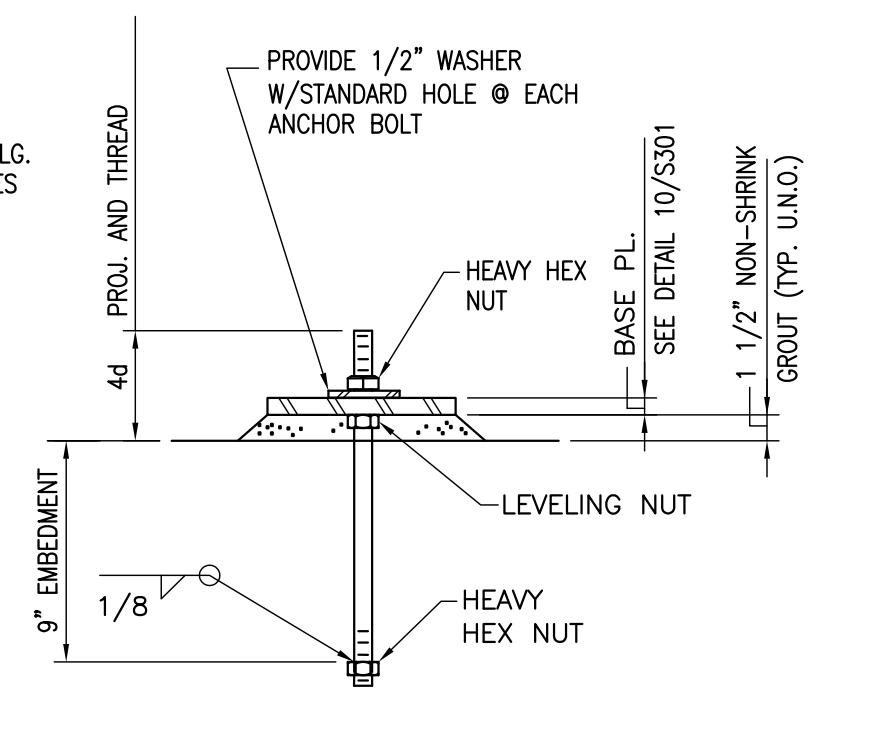
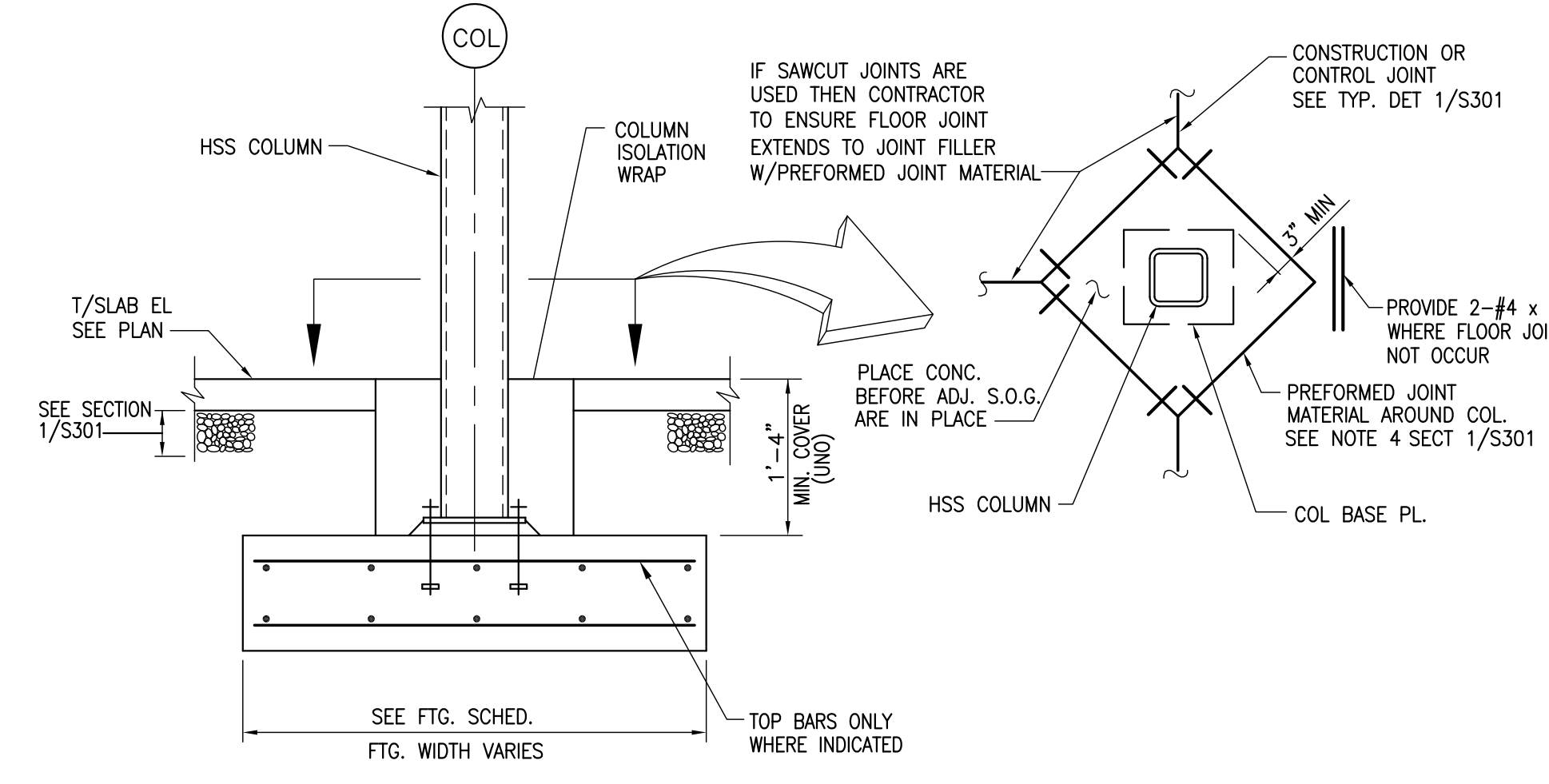
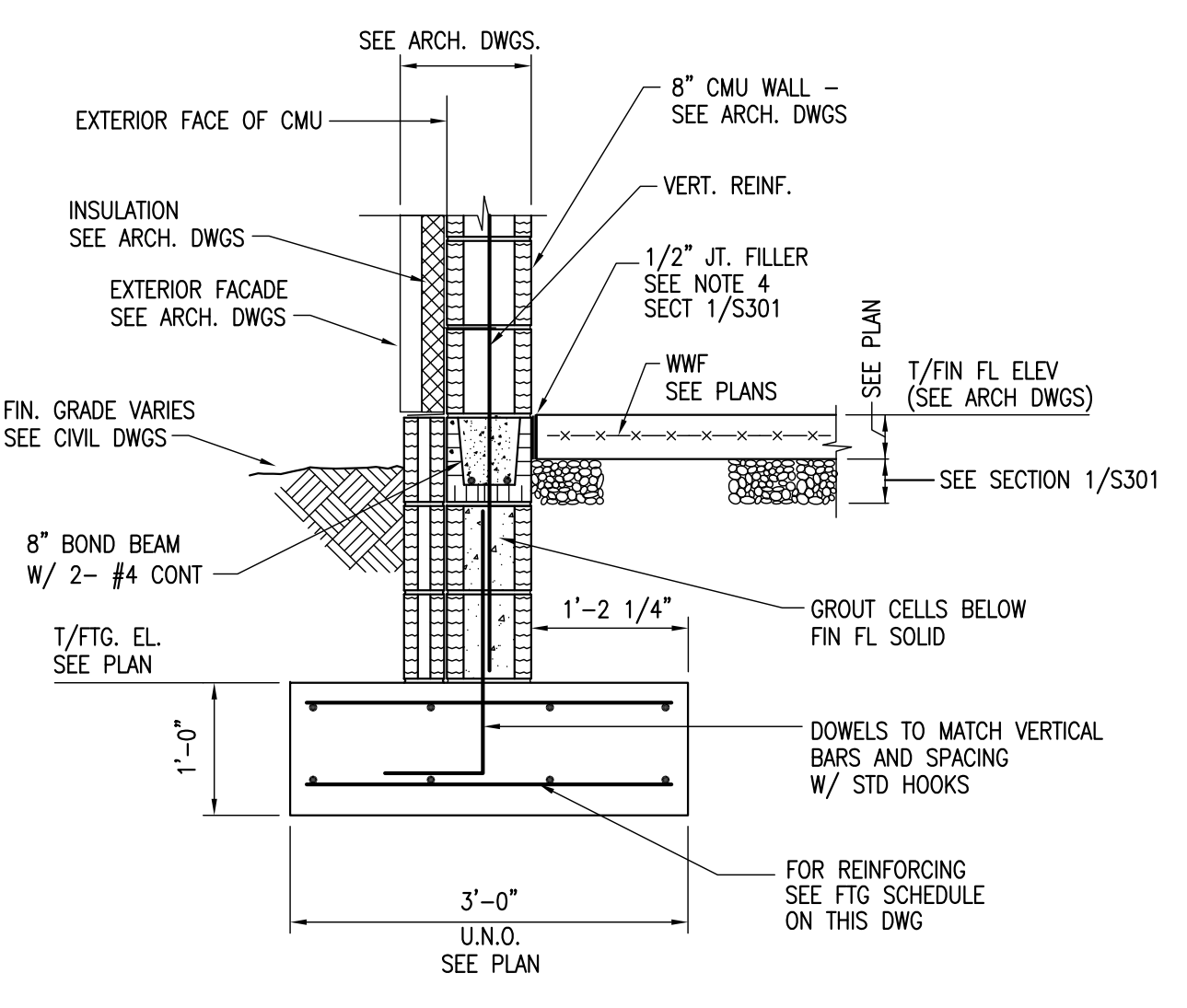
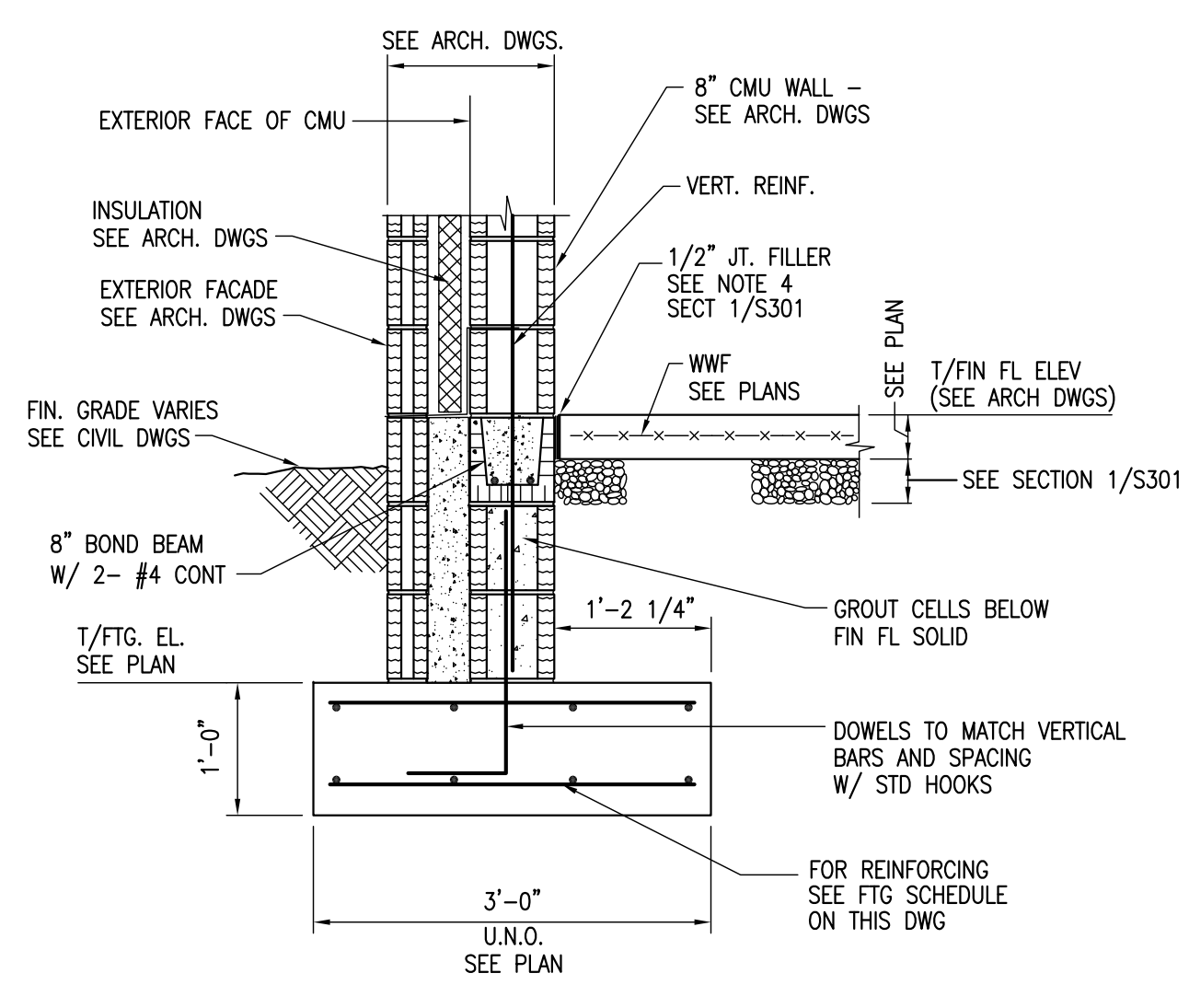
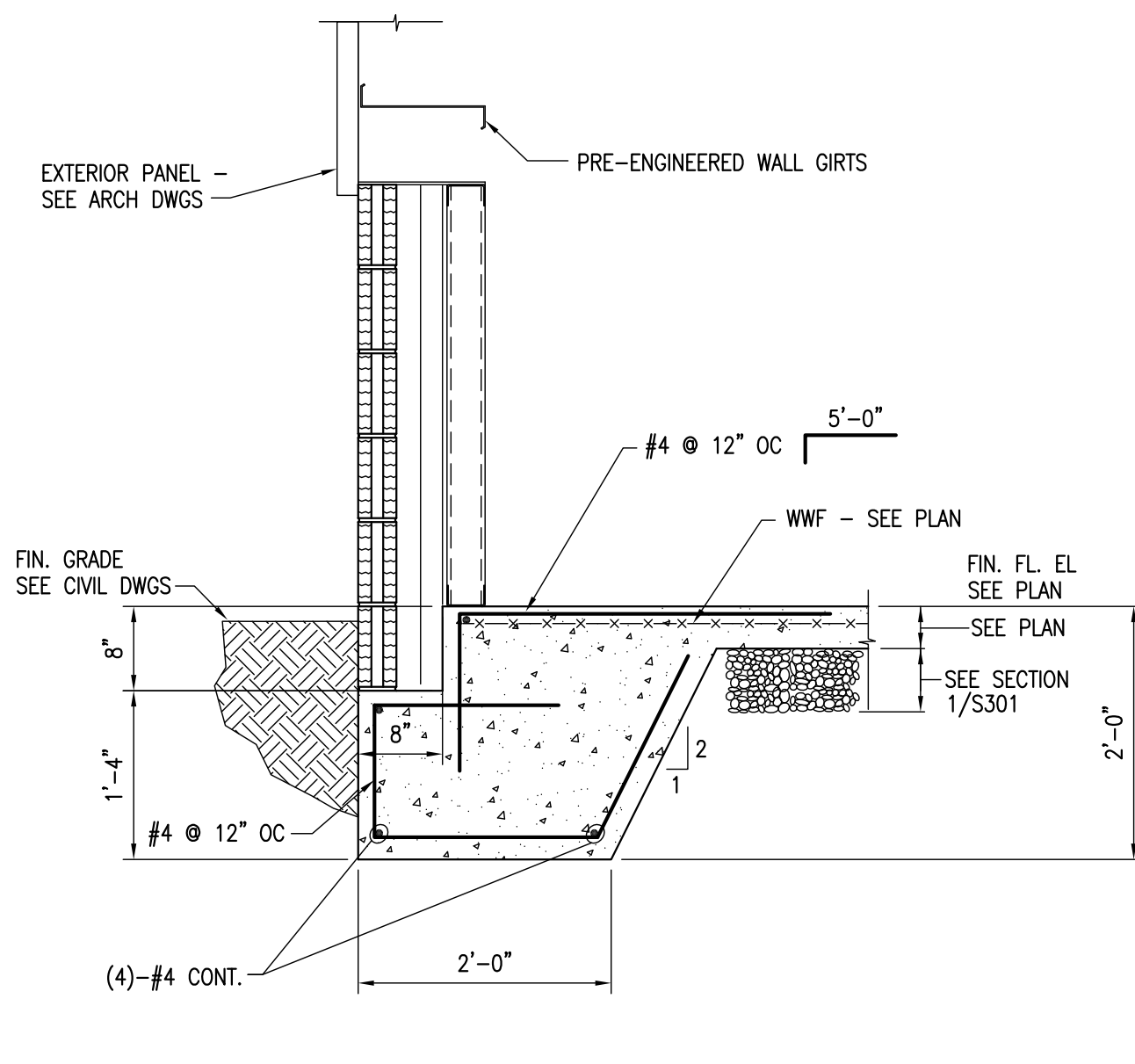
DATE	DRAWN	CHECKED
5/30/2017	TML	MG

SCALE: AS NOTED
 SHEET TITLE: SECTIONS AND DETAILS

PROJECT NUMBER: 13674.00
DRAWING NUMBER: S301



- NOTES:**
- CONSTRUCTION AND/OR CONTROL JOINTS ARE INTERCHANGEABLE AT THE CONTRACTOR'S OPTION U.N.O. SEE PLANS FOR LAYOUT OF CONSTRUCTION AND/OR CONTROL JOINTS. JOINTS (16'-0" ON CENTER MAXIMUM), JOINTS LOCATED AT COLUMN CENTER LINES ARE CONSIDERED OPTIMUM.
 - DO NOT LOCATE CONSTRUCTION AND/OR CONTROL JOINTS BELOW MASONRY WALLS.
 - SAW CUTTING OF JOINTS SHALL BE AS SOON AS THE CONCRETE SETS SUFFICIENTLY TO PERMIT CUTTING WITHOUT CHIPPING SPALLING OR TEARING, BUT NOT MORE THAN 24 HOURS AFTER PLACING.
 - JOINT FILLER/SEALER SHALL BE AN ELASTOMERIC JOINT (POLYURETHANE POURABLE SEALANT) PER ASTM C920-87.
 - VAPOR BARRIER SHALL BE 10 MIL CLASS "A" POLYETHYLENE SHEETING OR EQUIVALENT (INSTALL PER ASTM E-1643)



BASE PLATE SCHEDULE

COLUMN SIZE	WIDTH (N)	LENGTH (N)	THICKNESS (N)	ANCHOR BOLTS (N)
HSS 6x6	16	16	3/4"	3/4" DIA.
W10'S	13	13	3/4"	3/4" DIA.

REINFORCING SCHEDULE FOR SQUARE FOOTINGS

DESIGNATION	SIZE	DEPTH (IN)	BOTTOM REINFORCING	TOP REINFORCING	REMARKS
F4	4'-0"	12	4 - #5 E.W.		
F5	5'-0"	12	5 - #5 E.W.		
F6	6'-0"	14	7 - #5 E.W.		
PF6	6'-0"	14	7 - #5 E.W.		
PF8	8'-0"	19	6 - #7 E.W.		

