

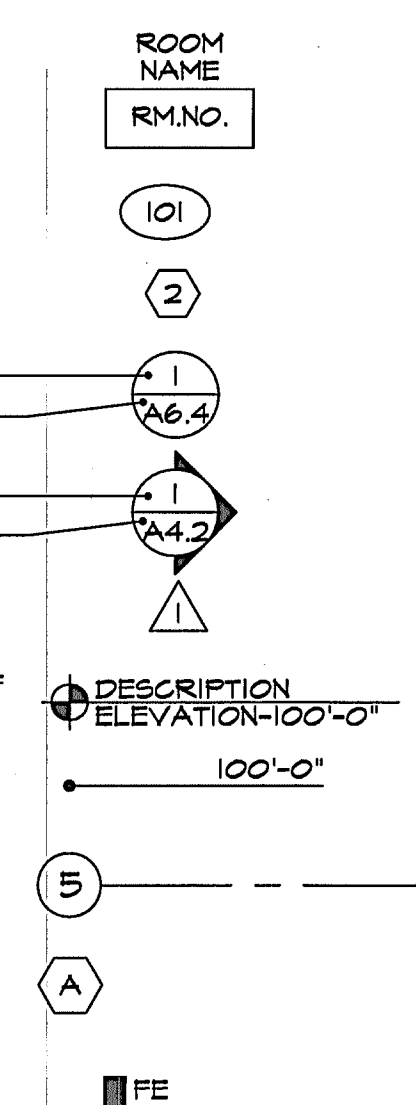
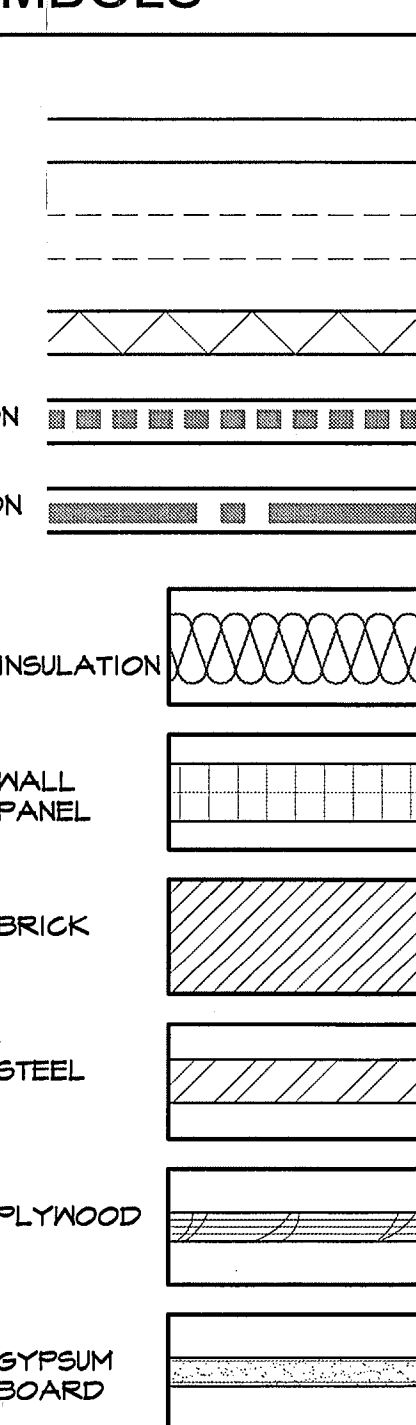
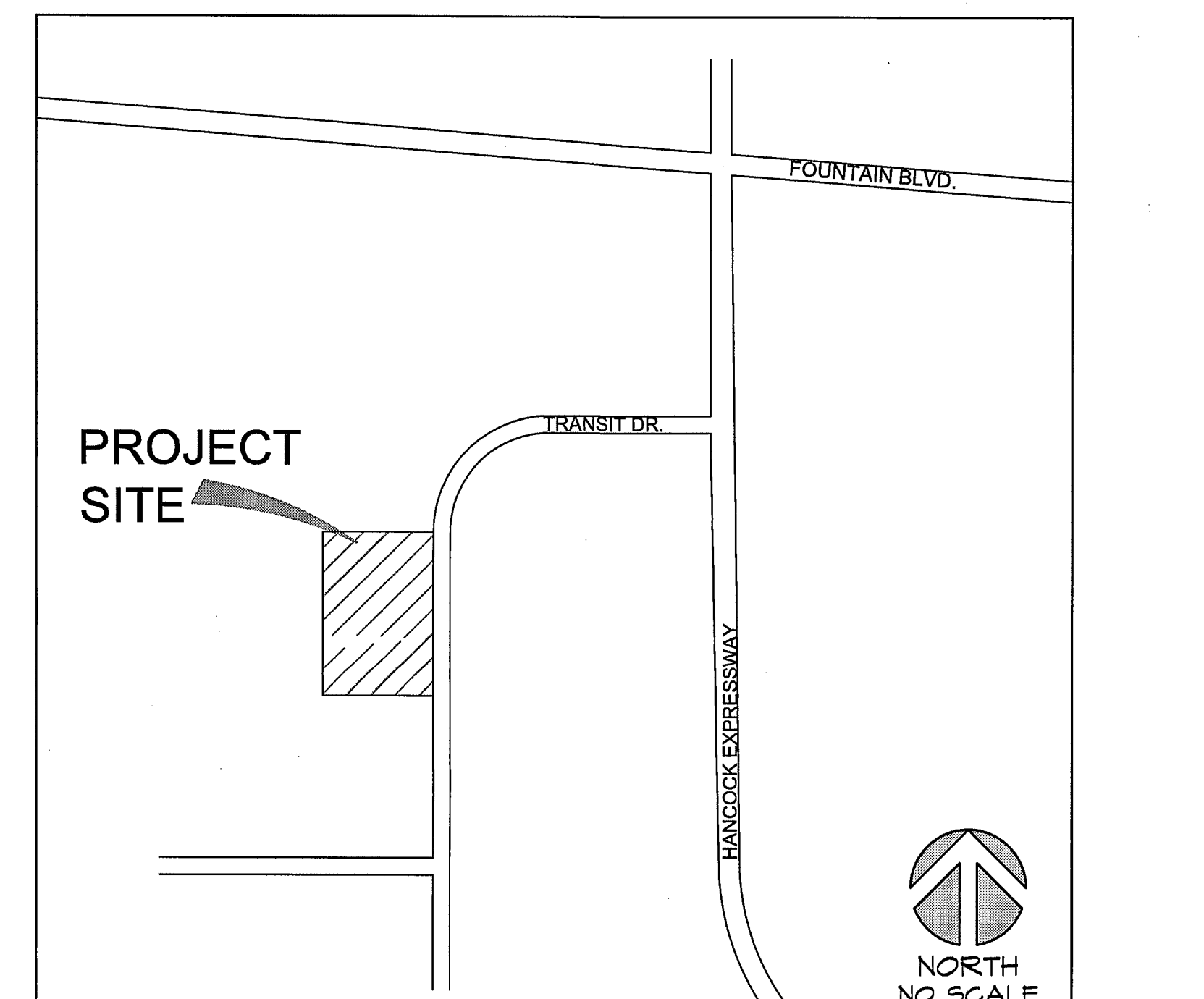
# SERVICE CONTRACTOR FACILITY ONE

## CITY OF COLORADO SPRINGS, METRO TRANSIT DIVISION

**DESIGN EDGE**  
 architecture interior design  
 711 N. CASCADE AVE. SUITE 100  
 COLORADO SPRINGS, CO 80903  
 TELEPHONE: (719) 667-1972  
 482 S. BROADWAY  
 DENVER, COLORADO 80209  
 TELEPHONE: (303) 260-7277

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 ACTION.

REGISTRATION:

DRAWING SYMBOLS	GENERAL NOTES	CODE STATEMENT	DRAWING INDEX																																																																																																																																								
<p>ROOM NAME AND NUMBER</p> <p>OPENING NUMBER</p> <p>CONSTRUCTION NOTE</p> <p>DETAIL REFERENCE NUMBER</p> <p>SHEET NUMBER</p> <p>SECTION / ELEVATION NUMBER</p> <p>SHEET NUMBER</p> <p>REVISION NOTE</p> <p>ELEVATION REFERENCE TO TOP OF FLOOR SLAB. ELEVATION VARIES</p> <p>SPOT ELEVATION</p> <p>STRUCTURAL GRID</p> <p>EXTERIOR WINDOW FRAME NOTE</p> <p>FIRE EXTINGUISHER CABINET</p> 	<ol style="list-style-type: none"> <li>CONTRACTOR SHALL NOTIFY ARCHITECT OF ANY CONFLICTS OR OMISSIONS IMMEDIATELY PRIOR TO THE PERFORMANCE OF THE WORK IN QUESTION. DO NOT SCALE DRAWINGS. WRITTEN DIMENSIONS GOVERN ALL PARTITION LOCATIONS. ALL DOOR AND OPENING LOCATIONS SHALL BE INDICATED ON PLAN. IN CASE OF CONFLICT, NOTIFY THE ARCHITECT. ALL DIMENSIONS MARKED "CLEAR" SHALL BE MAINTAINED AND SHALL ALLOW FOR THICKNESS OF ALL FINISHES INCLUDING CARPET, PAD, TILE, SHEET VINYL, MAINSCOT, ETC.</li> <li>ITEMS INDICATED IN THIS SET OF DOCUMENTS ARE NOT TO BE ALTERED WITHOUT WRITTEN CONSENT FROM THE ARCHITECT OR ENGINEER. IF ALTERATIONS MADE BY THE OWNER OR CONTRACTOR, THE ARCHITECT AND/OR ENGINEER ASSUME NO RESPONSIBILITY FOR SUCH CHANGES.</li> <li>STRUCTURAL PORTIONS OF THE PROJECT ARE TO BE DESIGN BUILD. THOSE SUB-CONTRACTORS SHALL BE RESPONSIBLE FOR THE DESIGN OF THEIR WORK BY AN ENGINEER LICENSED IN THE APPLICABLE JURISDICTION(S).</li> <li>PROVIDE A.D.A. SIGNAGE FOR THE RESTROOMS PER IBC SECTION 1101.1.</li> <li>PROJECT SHALL COMPLY WITH CFR 41 PART 27</li> </ol>	<p><b>GOVERNING CODES</b></p> <p>2005 PIKES PEAK REGIONAL BUILDING CODE          2003 INTERNATIONAL BUILDING CODE          2003 INTERNATIONAL CONSERVATION CODE          2003 INTERNATIONAL MECHANICAL CODE          2003 INTERNATIONAL FUEL GAS CODE          2003 INTERNATIONAL PLUMBING CODE          2005 NATIONAL ELECTRICAL CODE          2003 (CG/ANSI A11.1) ASSEMBLY STANDARDS          2003 INTERNATIONAL FIRE CODE, PLUS AMENDMENTS</p> <p><b>CODE DATA</b></p> <p>OCCUPANCY CLASSIFICATION B          CONSTRUCTION TYPE V-B NON SPRINKLED</p> <p><b>EXTERIOR WALL PROTECTION</b>          ALL WALLS NON PROTECTED DUE TO REQUIRED DISTANCE SEPARATION</p> <p><b>FLOOR / CEILING ASSEMBLY REQUIREMENT</b>          NON-RATED</p> <p><b>ROOF / CEILING ASSEMBLY</b>          NON-RATED</p> <p><b>FIRE SPRINKLERS</b>          NON SPRINKLED</p> <p><b>AREA AND HEIGHT CALCULATION</b></p> <p>SQUARE FOOTAGE (BASIC ALLOWED) B OCCUPANCY = 9,000 GSF</p> <table border="1"> <tr> <td>BUILDING AREA</td> <td>ACTUAL</td> <td>ALLOWED</td> </tr> <tr> <td>1ST FLOOR</td> <td>3560 GSF</td> <td>9000 GSF</td> </tr> </table> <p>NUMBER OF STORIES PER TABLE 503 ONE TWO</p> <table border="1"> <tr> <td>BUILDING HEIGHT</td> <td>18'-0" (TOP OF PARAPET)</td> <td>60'-0"</td> </tr> </table> <p><b>OCCUPANCY LOAD CALCULATION</b></p> <p>OCCUPANCY LOAD FACTOR = 100 GROSS          TOTAL NO. OF OCCUPANTS = 3560/100 = 36 OCCUPANTS</p> <p><b>PLUMBING FIXTURE CALCULATION</b></p> <p>TOTAL NO. OF MEN: 18          TOTAL NO. OF WOMEN: 18</p> <table border="1"> <thead> <tr> <th rowspan="2">FIXTURE TYPE</th> <th colspan="2">REQUIRED</th> <th colspan="2">PROVIDED</th> </tr> <tr> <th>MEN</th> <th>WOMEN</th> <th>MEN</th> <th>WOMEN</th> </tr> </thead> <tbody> <tr> <td>TOILETS</td> <td></td> <td></td> <td></td> <td>2</td> </tr> <tr> <td>URINALS</td> <td>NONE</td> <td></td> <td></td> <td></td> </tr> <tr> <td>LAVATORIES</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> </tr> <tr> <td>MOP SINK</td> <td></td> <td>(ONE)</td> <td></td> <td>(ONE)</td> </tr> <tr> <td>DRINKING FOUNTAIN</td> <td></td> <td></td> <td></td> <td>SINK IN BREAK AREA FOR WATER</td> </tr> </tbody> </table>	BUILDING AREA	ACTUAL	ALLOWED	1ST FLOOR	3560 GSF	9000 GSF	BUILDING HEIGHT	18'-0" (TOP OF PARAPET)	60'-0"	FIXTURE TYPE	REQUIRED		PROVIDED		MEN	WOMEN	MEN	WOMEN	TOILETS				2	URINALS	NONE				LAVATORIES	2	2	2	2	MOP SINK		(ONE)		(ONE)	DRINKING FOUNTAIN				SINK IN BREAK AREA FOR WATER	<p><b>DATA SHEET</b></p> <p>T.1 PROJECT INFORMATION SHEET</p> <p><b>CIVIL</b></p> <p>1/4 GRADING AND EROSION CONTROL PLAN          COVER SHEET          2/4 GRADING AND EROSION CONTROL PLAN          3/4 GRADING AND EROSION CONTROL DETAILS          4/4 POND OUTFALL DETAILS</p> <p>1/2 PARTIAL DETAIL GRADING PLAN          2/2 PARTIAL DETAIL GRADING PLAN</p> <p>1/1 UTILITY SERVICE PLAN</p> <p><b>LANDSCAPE AND IRRIGATION</b></p> <p>LP-01 LANDSCAPE PLAN          LP-02 LANDSCAPE NOTES AND DETAILS          IR-1 IRRIGATION PLAN          IR-2 IRRIGATION NOTES          IR-3 DRIP DETAILS</p> <p><b>ARCHITECTURAL</b></p> <p>A1.00 TRASH ENCLOSURE DETAIL          A1.0 COLD STEEL FRAMING NOTES AND DETAILS          A1.1 FIRST FLOOR PLAN          A1.2 REFLECTED CEILING PLAN          A1.3 ROOF PLAN          A2.1 BUILDING ELEVATIONS          A3.1 BUILDING SECTIONS,          A4.1 WALL SECTIONS          A4.2 WALL SECTIONS &amp; DETAILS          A5.1 INTERIOR ELEVATIONS          A6.1 OPENING ELEVATIONS &amp; SCHEDULES, OPENING DETAILS</p> <p><b>STRUCTURAL</b></p> <p>S1 FOUNDATION PLAN          S2 FOUNDATION DETAILS AND NOTES</p> <p><b>MECHANICAL</b></p> <p>M1 HVAC SCHEDULES          M2 HVAC PLAN          M3 HVAC DETAILS</p> <p><b>PLUMBING</b></p> <p>P1 PLUMBING LEGENDS          P2 PLUMBING SCHEDULES          P3 UNDERGROUND PLUMBING PLAN          P4 PLUMBING PLAN          P5 ROOF PLUMBING PLAN          P6 PLUMBING RISER DIAGRAMS          P7 PLUMBING DETAILS</p> <p><b>ELECTRICAL</b></p> <p>E1 ELECTRICAL LEGENDS, NOTES &amp; ONE-LINE DIAGRAM          E2 ELECTRICAL SITE PLAN &amp; DETAILS          E3 LIGHTING PLAN          E4 POWER PLAN          E5 ELECTRICAL SCHEDULES</p> <p><i>A5-Built</i>          RFI 04 - sheets E-2 - LP-01          RFI 08 - sheet E-2          RFI 09 - sheet A 4.2          RFP-02 - sheets 20ff &amp; 40ff.          RFP-03 - sheet P.4.          RFP-04 - sheet P.2          RFP-05 - sheet E-3 - E-2.</p>																																																																																													
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<p><b>GRAPHIC SYMBOLS</b></p> <p>CONTINUOUS LINE INDICATES NEW WALL PARTITION</p> <p>OVERHEAD LINES (ROOF, ETC.)</p> <p>NEW METAL STUD PARTITION</p> <p>ONE HOUR RATED WALL CONSTRUCTION</p> <p>TWO HOUR RATED WALL CONSTRUCTION</p> <p>EARTH</p> <p>CONCRETE</p> <p>GRAVEL</p> <p>METAL STUD</p> <p>WOOD STUD FRAMING</p> <p>WOOD BLOCKING</p> <p>INSULATION</p> <p>WALL PANEL</p> <p>BRICK</p> <p>STEEL</p> <p>PLYWOOD</p> <p>GYPSUM BOARD</p> 	<p><b>ABBREVIATIONS</b></p> <table border="1"> <tr> <td>ACP</td> <td>ACOUSTICAL CEILING PANEL</td> <td>MAX</td> <td>MAXIMUM</td> </tr> <tr> <td>AFF</td> <td>ABOVE FINISH FLOOR</td> <td>MIN</td> <td>MINIMUM</td> </tr> <tr> <td>ALUM</td> <td>ALUMINUM</td> <td>MO</td> <td>MASONRY OPENING</td> </tr> <tr> <td>ANOD</td> <td>ANODIZED</td> <td>MT</td> <td>CONCRETE MICROTOPPING</td> </tr> <tr> <td>∠</td> <td>ANGLE</td> <td>NIC</td> <td>NOT IN CONTRACT</td> </tr> <tr> <td>BBT</td> <td>BIO-BASED TILE</td> <td>NO</td> <td>NUMBER</td> </tr> <tr> <td>BD</td> <td>BOARD</td> <td>NTS</td> <td>NOT TO SCALE</td> </tr> <tr> <td>BM</td> <td>BEAM</td> <td>OC</td> <td>ON CENTER</td> </tr> <tr> <td>B.O.</td> <td>BOTTOM OF</td> <td>OD</td> <td>OVERFLOW DRAIN</td> </tr> <tr> <td>BTM</td> <td>BOTTOM</td> <td>+/-</td> <td>PLUS OR MINUS</td> </tr> <tr> <td>CJ</td> <td>CONTROL JOINT</td> <td>CLF</td> <td>CENTER LINE</td> </tr> <tr> <td>CLF</td> <td>CHAIN-LINK FENCE</td> <td>CMU</td> <td>CONCRETE MASONRY UNIT</td> </tr> <tr> <td>CMU</td> <td>CONCRETE MASONRY UNIT</td> <td>CONC</td> <td>CONCRETE</td> </tr> <tr> <td>CONC</td> <td>CONCRETE</td> <td>CT</td> <td>CERAMIC TILE</td> </tr> <tr> <td>CT</td> <td>CERAMIC TILE</td> <td>DIA</td> <td>DIAMETER</td> </tr> <tr> <td>DIA</td> <td>DIAMETER</td> <td>(E)</td> <td>EXISTING</td> </tr> <tr> <td>(E)</td> <td>EXISTING</td> <td>EIFS</td> <td>EXTERIOR INSULATION &amp; FINISH SYSTEM</td> </tr> <tr> <td>EIFS</td> <td>EXTERIOR INSULATION &amp; FINISH SYSTEM</td> <td>EJ</td> <td>EXPANSION JOINT</td> </tr> <tr> <td>EJ</td> <td>EXPANSION JOINT</td> <td>ELEV</td> <td>ELEVATION</td> </tr> <tr> <td>ELEV</td> <td>ELEVATION</td> <td>EQ</td> <td>EQUAL</td> </tr> <tr> <td>EQ</td> <td>EQUAL</td> <td>EWAC</td> <td>ELECTRIC WATER COOLER</td> </tr> <tr> <td>EWAC</td> <td>ELECTRIC WATER COOLER</td> <td>FD</td> <td>FLOOR DRAIN</td> </tr> <tr> <td>FD</td> <td>FLOOR DRAIN</td> <td>FEC</td> <td>FIRE EXTINGUISHER CABINET</td> </tr> <tr> <td>FEC</td> <td>FIRE EXTINGUISHER CABINET</td> <td>FMC</td> <td>FLOORING MATERIAL CHANGE</td> </tr> <tr> <td>FMC</td> <td>FLOORING MATERIAL CHANGE</td> <td>FRT</td> <td>FIRE RETARDANT TREATED</td> </tr> <tr> <td>FRT</td> <td>FIRE RETARDANT TREATED</td> <td>FV</td> <td>FIELD VERIFY</td> </tr> <tr> <td>FV</td> <td>FIELD VERIFY</td> <td>GA</td> <td>GAUGE</td> </tr> <tr> <td>GA</td> <td>GAUGE</td> <td>GB</td> <td>GYPSUM BOARD</td> </tr> <tr> <td>GB</td> <td>GYPSUM BOARD</td> <td>GC</td> <td>GENERAL CONTRACTOR</td> </tr> <tr> <td>GC</td> <td>GENERAL CONTRACTOR</td> <td>GYP</td> <td>GYPSUM</td> </tr> <tr> <td>GYP</td> <td>GYPSUM</td> <td>HM</td> <td>HOLLOW METAL</td> </tr> <tr> <td>HM</td> <td>HOLLOW METAL</td> <td>LAM</td> <td>LAMINATE</td> </tr> <tr> <td>LAM</td> <td>LAMINATE</td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> </tr> </table>	ACP	ACOUSTICAL CEILING PANEL	MAX	MAXIMUM	AFF	ABOVE FINISH FLOOR	MIN	MINIMUM	ALUM	ALUMINUM	MO	MASONRY OPENING	ANOD	ANODIZED	MT	CONCRETE MICROTOPPING	∠	ANGLE	NIC	NOT IN CONTRACT	BBT	BIO-BASED TILE	NO	NUMBER	BD	BOARD	NTS	NOT TO SCALE	BM	BEAM	OC	ON CENTER	B.O.	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COLORADO SPRINGS, CO 80903          CONTACT: BILL BOTTINI          TEL: 719/ 385 7459          FAX: 719/ 385 5419</p> <p><b>ARCHITECT</b>          DESIGN EDGE, P.C.          711 N. CASCADE AVE. SUITE 100          COLORADO SPRINGS, CO 80903          CONTACT: SWAGATA GUHA          TEL: 719/ 667.1472 (X 114)          FAX: 719/ 667.1471</p> <p><b>STRUCTURAL ENGINEER</b>          RMS ENGINEERS, INC.          2410 AUSTIN BLUFFS PARKWAY          COLORADO SPRINGS, CO 80918          CONTACT: MARK WEIDHAAS, P.E.          TEL: 719/ 548.0800          FAX: 719/ 548.0223</p> <p><b>CIVIL ENGINEER</b>          WESTWORKS ENGINEERING          1023 WEST COLORADO AVENUE          COLORADO SPRINGS,          COLORADO 80904          CONTACT: CHAD KUZBEK, PE.          TEL: 719/ 685 1670 EXT. 20          FAX: 719/ 685 1429</p> <p><b>MECHANICAL / PLUMBING ENGINEER</b>          MEP ENGINEERING          3565 S. YOSEMITE STREET          DENVER,          COLORADO 80231          CONTACT: MARK BROWN, PE.          TEL: 303/ 436 1633          FAX: 303/ 434 3299</p> <p><b>ELECTRICAL ENGINEER</b>          MEP ENGINEERING          3565 S. YOSEMITE STREET          DENVER,          COLORADO 80231          CONTACT: KEVIN PRZYTARSKI, PE.          TEL: 303/ 436 1633          FAX: 303/ 434 3299</p> <p><i>BLDg # 1</i>  <i>A5-Built</i>  <i>4-18-11</i></p>
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<p style="text-align: center;"><b>SERVICE CONTRACTOR FACILITY 1</b></p> <p style="text-align: center;">CITY OF COLORADO SPRINGS METRO TRANSIT DIVISION              1070 TRANSIT DRIVE, COLORADO SPRINGS CO 80903</p> <p style="text-align: right;">ISSUE DATES:              ISSUED FOR BID 03/24/2010              RBD PLAN REVIEW 10/08/2010              RBD PLAN REVIEW 10/28/2010              CHANGES</p> <p style="text-align: right;">PROJECT NO. 9016              DRAWN BY: SGT              CHECKED BY: SGT              DATE: 10/28/2010</p> <p style="text-align: right;">SHEET TITLE:              DRAWING INDEX; PARTICIPANTS;              CODE STATEMENT; VICINITY MAP              GENL. NOTES; ABBREVIATIONS;              DRAWING &amp; MATERIAL SYMBOLS</p> <p style="text-align: right;">SHEET NO. <b>T-1</b></p>																																																																																																																																											



**GENERAL NOTES:**

- ALL PAVING AND CURB & GUTTER SHALL BE CONSTRUCTED SO AS NOT TO OBSTRUCT THE DRAINAGE PATHS. GRADES SHALL BE MAINTAINED AS SHOWN IN THESE PLANS FOR THE DRAINAGE PATHS. IF THIS CANNOT BE ACCOMPLISHED, THEN THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY FOR CORRECTION.
- POSITIVE DRAINAGE AWAY FROM THE BUILDING SHALL BE MAINTAINED DURING AND AFTER SITE CONSTRUCTION. SWALES SHALL BE CONSTRUCTED AROUND BUILDINGS TO DIRECT DRAINAGE AWAY FROM STRUCTURES.
- SITE CONSTRUCTION INCLUDING PAVING AND CURB & GUTTER INSTALLATION SHALL MAINTAIN POSITIVE DRAINAGE AS SHOWN ON THIS PLAN. STANDING WATER OR PONDING ANYWHERE ON THE SITE IS UNACCEPTABLE.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE EXISTENCE AND LOCATION OF ALL UNDERGROUND UTILITIES ALONG THE ROUTE OF THE WORK. THE OMISSION FROM OR THE INCLUSION OF UTILITY LOCATIONS ON THE PLANS IS NOT TO BE CONSIDERED AS THE NONEXISTENCE OF OR A DEFINITE LOCATION OF EXISTING UNDERGROUND UTILITIES.

**BASIC GRADING, EROSION AND STORMWATER QUALITY REQUIREMENTS AND GENERAL PROHIBITIONS:**

- \*INFORMATION TAKEN FROM THE CITY OF COLORADO SPRINGS DRAINAGE CRITERIA MANUAL VOLUME 2, HEREIN REFERRED TO AS THE "MANUAL."
- STORMWATER DISCHARGES FROM CONSTRUCTION SITES SHALL NOT CAUSE OR THREATEN TO CAUSE POLLUTION, CONTAMINATION, OR DEGRADATION OF STATE WATERS.
  - CONCRETE WASH WATER SHALL NOT BE DISCHARGED TO OR ALLOWED TO RUNOFF TO STATE WATERS, INCLUDING ANY SURFACE OR SUBSURFACE STORM DRAINAGE SYSTEM FACILITIES.
  - BUILDING, CONSTRUCTION, EXCAVATION, OR OTHER WASTE MATERIALS SHALL NOT BE TEMPORARILY PLACED OR STORED IN THE STREET, ALLEY, OR OTHER PUBLIC WAY, UNLESS IN ACCORDANCE WITH AN APPROVED TRAFFIC CONTROL PLAN. BMP'S MAY BE REQUIRED BY CITY ENGINEERING IF DEEMED NECESSARY, BASED ON SPECIFIC CONDITIONS AND CIRCUMSTANCES (E.G., ESTIMATED TIME OF EXPOSURE, SEASON OF THE YEAR, ETC.).
  - VEHICLE TRACKING OF SOILS OFF-SITE SHALL BE MINIMIZED.
  - ALL WASTES COMPOSED OF BUILDING MATERIALS MUST BE REMOVED FROM THE CONSTRUCTION SITE FOR DISPOSAL IN ACCORDANCE WITH LOCAL AND STATE REGULATORY REQUIREMENTS. NO BUILDING MATERIAL WASTES OR UNUSED BUILDING MATERIALS SHALL BE BURIED, DUMPED, OR DISCHARGED AT THE SITE.
  - NO CHEMICALS ARE TO BE USED BY THE CONTRACTOR, WHICH HAVE THE POTENTIAL TO BE RELEASED IN STORMWATER UNLESS PERMISSION FOR THE USE OF A SPECIFIC CHEMICAL IS GRANTED IN WRITING BY THE CITY ENGINEER. IN GRANTING THE USE OF SUCH CHEMICALS, SPECIAL CONDITIONS AND MONITORING MAY BE REQUIRED.
  - BULK STORAGE STRUCTURES FOR PETROLEUM PRODUCTS AND OTHER CHEMICALS SHALL HAVE ADEQUATE PROTECTION SO AS TO CONTAIN ALL SPILLS AND PREVENT ANY SPILLED MATERIAL FROM ENTERING STATE WATERS, INCLUDING ANY SURFACE OR SUBSURFACE STORM DRAINAGE SYSTEM OR FACILITIES.
  - ALL PERSONS ENGAGED IN EARTH DISTURBANCE SHALL IMPLEMENT AND MAINTAIN ACCEPTABLE SOIL EROSION AND SEDIMENT CONTROL MEASURES INCLUDING BMP'S IN CONFORMANCE WITH THE EROSION CONTROL TECHNICAL STANDARDS OF THE MANUAL AND IN ACCORDANCE WITH THE EROSION AND STORMWATER QUALITY CONTROL PLAN APPROVED BY THE CITY OF COLORADO SPRINGS, IF REQUIRED.
  - ALL TEMPORARY EROSION CONTROL FACILITIES INCLUDING BMP'S AND ALL PERMANENT FACILITIES INTENDED TO CONTROL EROSION OF ANY EARTH DISTURBANCE OPERATIONS, SHALL BE INSTALLED AS DEFINED IN THE APPROVED PLANS AND THE MANUAL AND MAINTAINED THROUGHOUT THE DURATION OF THE EARTH DISTURBANCE OPERATION. THE INSTALLATION OF THE FIRST LEVEL OF TEMPORARY EROSION CONTROL FACILITIES AND BMP'S SHALL BE INSTALLED AND INSPECTED PRIOR TO ANY EARTH DISTURBANCE OPERATIONS TAKING PLACE.
  - ANY EARTH DISTURBANCE SHALL BE CONDUCTED IN SUCH A MANNER SO AS TO EFFECTIVELY REDUCE ACCELERATED SOIL EROSION AND RESULTING SEDIMENTATION.
  - ALL EARTH DISTURBANCES SHALL BE DESIGNED, CONSTRUCTED, AND COMPLETED IN SUCH A MANNER SO THAT THE EXPOSED AREA OF ANY DISTURBED LAND SHALL BE LIMITED TO THE SHORTEST PRACTICAL PERIOD OF TIME.
  - ALL WORK AND EARTH DISTURBANCE SHALL BE DONE IN A MANNER THAT MINIMIZES POLLUTION OF ANY ON-SITE OR OFF-SITE WATERS, INCLUDING WETLANDS.
  - SUSPENDED SEDIMENT CAUSED BY ACCELERATED SOIL EROSION SHALL BE MINIMIZED IN RUNOFF WATER BEFORE IT LEAVES THE SITE OF THE EARTH DISTURBANCE.
  - ANY TEMPORARY OR PERMANENT FACILITY DESIGNED AND CONSTRUCTED FOR THE CONVEYANCE OF STORMWATER AROUND, THROUGH, OR FROM THE EARTH DISTURBANCE AREA SHALL BE DESIGNED TO LIMIT THE DISCHARGE TO A NON-EROSIVE VELOCITY.
  - TEMPORARY SOIL EROSION CONTROL FACILITIES SHALL BE REMOVED AND EARTH DISTURBANCE AREAS GRADED AND STABILIZED WITH PERMANENT SOIL EROSION CONTROL MEASURES PURSUANT TO THE STANDARDS AND SPECIFICATIONS PRESCRIBED IN THE MANUAL, AND IN ACCORDANCE WITH THE PERMANENT EROSION CONTROL FEATURES SHOWN ON THE EROSION AND STORMWATER QUALITY CONTROL PLANS APPROVED BY THE CITY OF COLORADO SPRINGS, IF REQUIRED.
  - SOIL EROSION CONTROL MEASURES FOR ALL SLOPES, CHANNELS, DITCHES, OR ANY DISTURBED LAND AREA SHALL BE COMPLETED WITHIN TWENTY ONE (21) CALENDAR DAYS AFTER FINAL GRADING, OR FINAL EARTH DISTURBANCE, HAS BEEN COMPLETED. DISTURBED AREAS AND STOCKPILES WHICH ARE NOT AT FINAL GRADE BUT WILL REMAIN DORMANT FOR LONGER THAN 30 DAYS SHALL ALSO BE MULCHED WITHIN 21 DAYS AFTER INTERIM GRADING. AN AREA THAT IS GOING TO REMAIN IN AN INTERIM STATE FOR MORE THAN 60 DAYS SHALL ALSO BE SEEDED. ALL TEMPORARY SOIL EROSION CONTROL MEASURES AND BMP'S SHALL BE MAINTAINED UNTIL PERMANENT SOIL EROSION CONTROL MEASURES ARE IMPLEMENTED.
  - NO PERSON SHALL CAUSE, PERMIT, OR CONTRIBUTE TO THE DISCHARGE INTO THE MUNICIPAL SEWER POLLUTANTS THAT COULD CAUSE THE CITY OF COLORADO SPRINGS TO BE IN VIOLATION OF ITS COLORADO DISCHARGE PERMIT SYSTEM MUNICIPAL STORMWATER DISCHARGE PERMIT.
  - THE OWNER, SITE DEVELOPER, CONTRACTOR, AND/OR THEIR AUTHORIZED AGENTS SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL CONSTRUCTION DEBRIS, DIRT, TRASH, ROCK, SEDIMENT, AND SAND THAT MAY ACCUMULATE IN THE STORM SEWER OR OTHER DRAINAGE CONVEYANCE SYSTEM AND STORMWATER APPURTENANCES AS A RESULT OF SITE DEVELOPMENT.
  - NO PERSON SHALL CAUSE THE IMPEDIMENT OF STORMWATER FLOW IN THE FLOW LINE OF THE CURB AND GUTTER, INCLUDING THE TEMPORARY OR PERMANENT RAMPING WITH MATERIALS FOR VEHICLE ACCESS.
  - INDIVIDUALS SHALL COMPLY WITH THE "COLORADO WATER QUALITY CONTROL ACT" (TITLE 25, ARTICLE 8, CRS), AND THE "CLEAN WATER ACT" (33 USC 1344), REGULATIONS PROMULGATED, CERTIFICATIONS OR PERMITS ISSUED, IN ADDITION TO THE REQUIREMENTS INCLUDED IN THE MANUAL. IN THE EVENT OF CONFLICTS BETWEEN THESE REQUIREMENTS AND WATER QUALITY CONTROL LAWS, RULES, OR REGULATIONS OF OTHER FEDERAL OR STATE AGENCIES, THE MORE RESTRICTIVE LAWS, RULES, OR REGULATIONS SHALL APPLY.
  - THE QUANTITY OF MATERIALS STORED ON THE PROJECT SITE SHALL BE LIMITED, AS MUCH AS PRACTICAL, TO THAT QUANTITY REQUIRED TO PERFORM WORK IN AN ORDERLY SEQUENCE. ALL MATERIALS STORED ON-SITE SHALL BE STORED IN A NEAT, ORDERLY MANNER, IN THEIR ORIGINAL CONTAINERS, WITH ORIGINAL MANUFACTURER'S LABELS. MATERIALS SHALL NOT BE STORED IN A LOCATION WHERE THEY MAY BE CARRIED BY STORMWATER RUNOFF INTO A STATE WATER AT ANY TIME.
  - SPILL PREVENTION AND CONTAINMENT MEASURES SHALL BE USED AT STORAGE, AND EQUIPMENT FUELING AND SERVICING AREAS TO PREVENT THE POLLUTION OF ANY STATE WATERS, INCLUDING WETLANDS. ALL SPILLS SHALL BE CLEANED UP IMMEDIATELY AFTER DISCOVERY, OR CONTAINED UNTIL APPROPRIATE CLEANUP METHODS CAN BE EMPLOYED. MANUFACTURER'S RECOMMENDED METHODS FOR SPILL CLEANUP SHALL BE FOLLOWED, ALONG WITH PROPER DISPOSAL METHODS.

**STANDARD GRADING AND EROSION CONTROL PLAN NOTES**

- ANY LAND DISTURBANCE BY ANY OWNER, DEVELOPER, BUILDER, CONTRACTOR, OR OTHER PERSON SHALL COMPLY WITH THE BASIC GRADING, EROSION AND STORMWATER QUALITY CONTROL REQUIREMENTS AND GENERAL PROHIBITIONS NOTED IN THE DRAINAGE CRITERIA MANUAL VOLUME 2.
- NO CLEARING, GRADING, EXCAVATION, FILLING OR OTHER LAND DISTURBING ACTIVITIES SHALL BE PERMITTED UNTIL SIGNOFF AND ACCEPTANCE OF THE GRADING PLAN AND EROSION AND STORMWATER QUALITY CONTROL PLAN IS RECEIVED FROM CITY ENGINEERING.
- THE INSTALLATION OF THE FIRST LEVEL OF TEMPORARY EROSION CONTROL FACILITIES AND BMP'S SHALL BE INSTALLED AND INSPECTED PRIOR TO ANY EARTH DISTURBANCE OPERATIONS TAKING PLACE. CALL CITY STORMWATER INSPECTIONS, 385-5980, 48 HOURS PRIOR TO CONSTRUCTION.
- SEDIMENT (MUD AND DIRT) TRANSPORTED ONTO A PUBLIC ROAD, REGARDLESS OF THE SIZE OF THE SITE, SHALL BE CLEANED AT THE END OF EACH DAY.
- CONCRETE WASH WATER SHALL NOT BE DISCHARGED TO OR ALLOWED TO RUNOFF TO STATE WATERS, INCLUDING ANY SURFACE OR SUBSURFACE STORM DRAINAGE SYSTEM OR FACILITIES.
- SOIL EROSION CONTROL MEASURES FOR ALL SLOPES, CHANNELS, DITCHES, OR ANY DISTURBED LAND AREA SHALL BE COMPLETED WITHIN TWENTY-ONE (21) CALENDAR DAYS AFTER FINAL GRADING OR FINAL EARTH DISTURBANCE HAS BEEN COMPLETED. DISTURBED AREAS AND STOCKPILES WHICH ARE NOT AT FINAL GRADE BUT WILL REMAIN DORMANT FOR LONGER THAN 30 DAYS SHALL ALSO BE MULCHED WITHIN 21 DAYS AFTER INTERIM GRADING. AN AREA THAT IS GOING TO REMAIN IN AN INTERIM STATE FOR MORE THAN 60 DAYS SHALL ALSO BE SEEDED. ALL TEMPORARY SOIL EROSION CONTROL MEASURES AND BMP'S SHALL BE MAINTAINED UNTIL PERMANENT SOIL EROSION CONTROL MEASURES ARE IMPLEMENTED.
- THE GRADING AND EROSION CONTROL PLAN WILL BE SUBJECT TO RE-REVIEW AND RE-ACCEPTANCE BY THE CITY OF COLORADO SPRINGS ENGINEERING SHOULD ANY OF THE FOLLOWING OCCUR: GRADING DOES NOT COMMENCE WITHIN 12 MONTHS OF THE CITY ENGINEER'S ACCEPTANCE OF THE PLAN, A CHANGE IN PROPERTY OWNERSHIP, PROPOSED DEVELOPMENT CHANGES, OR PROPOSED GRADING REVISIONS.
- THE PLAN SHALL NOT SUBSTANTIALLY CHANGE THE DEPTH OF COVER, OR ACCESS TO UTILITY FACILITIES. ADDITIONALLY, THE PLAN SHALL NOT INCREASE OR DIVERT WATER TOWARDS UTILITY FACILITIES. ANY CHANGES TO UTILITY FACILITIES TO ACCOMMODATE THE PLAN, MUST BE DISCUSSED AND AGREED TO BY THE AFFECTED UTILITY PRIOR TO IMPLEMENTING THE PLAN. THE RESULTING COST TO RELOCATE OR PROTECT UTILITIES, OR PROVIDE INTERIM ACCESS IS AT THE EXPENSE OF THE PLAN APPLICANT.

**TIMING**

ANTICIPATED STARTING AND COMPLETION TIME PERIOD OF SITE GRADING: SUMMER 2010  
 EXPECTED DATE ON WHICH THE FINAL STABILIZATION WILL BE COMPLETED: FALL 2011

**AREAS**

TOTAL AREA OF THE SITE TO BE CLEARED, EXCAVATED, OR GRADED: 1.1 ACRES

**RECEIVING WATERS**

NAME OF RECEIVING WATERS: MISCELLANEOUS DRAINAGE BASIN

**SOILS**

NELSON-TASSEL FINE SANDY LOAMS

REV.	DESCRIPTION	DATE
1	ADDRESS COMMENTS FROM S.E.R.T.	04/29/10

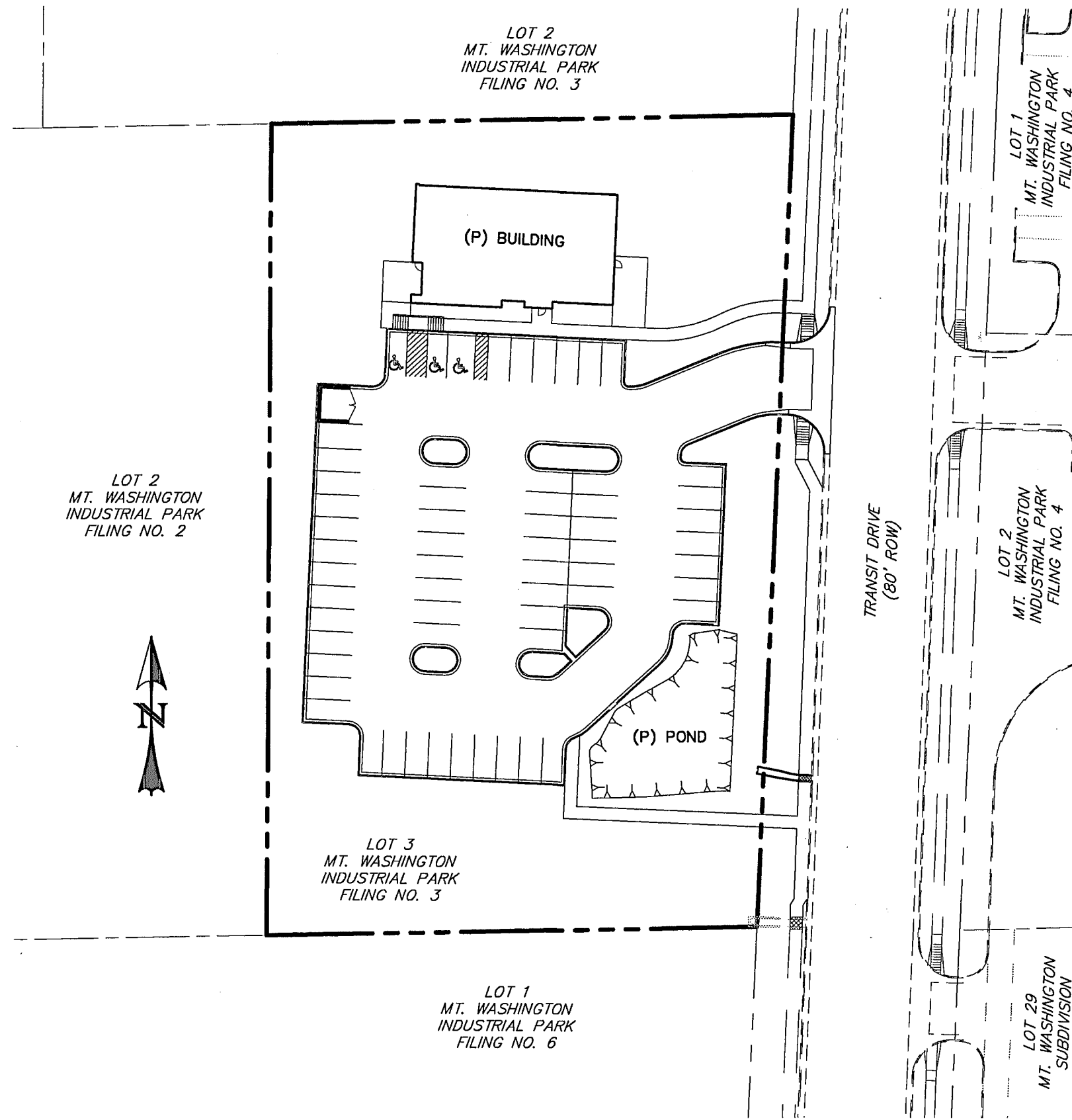


# MOUNTAIN METRO TRANSIT

## 1070 TRANSIT DRIVE

### GRADING, EROSION CONTROL & STORMWATER QUALITY PLAN

CITY OF COLORADO SPRINGS, EL PASO COUNTY, COLORADO



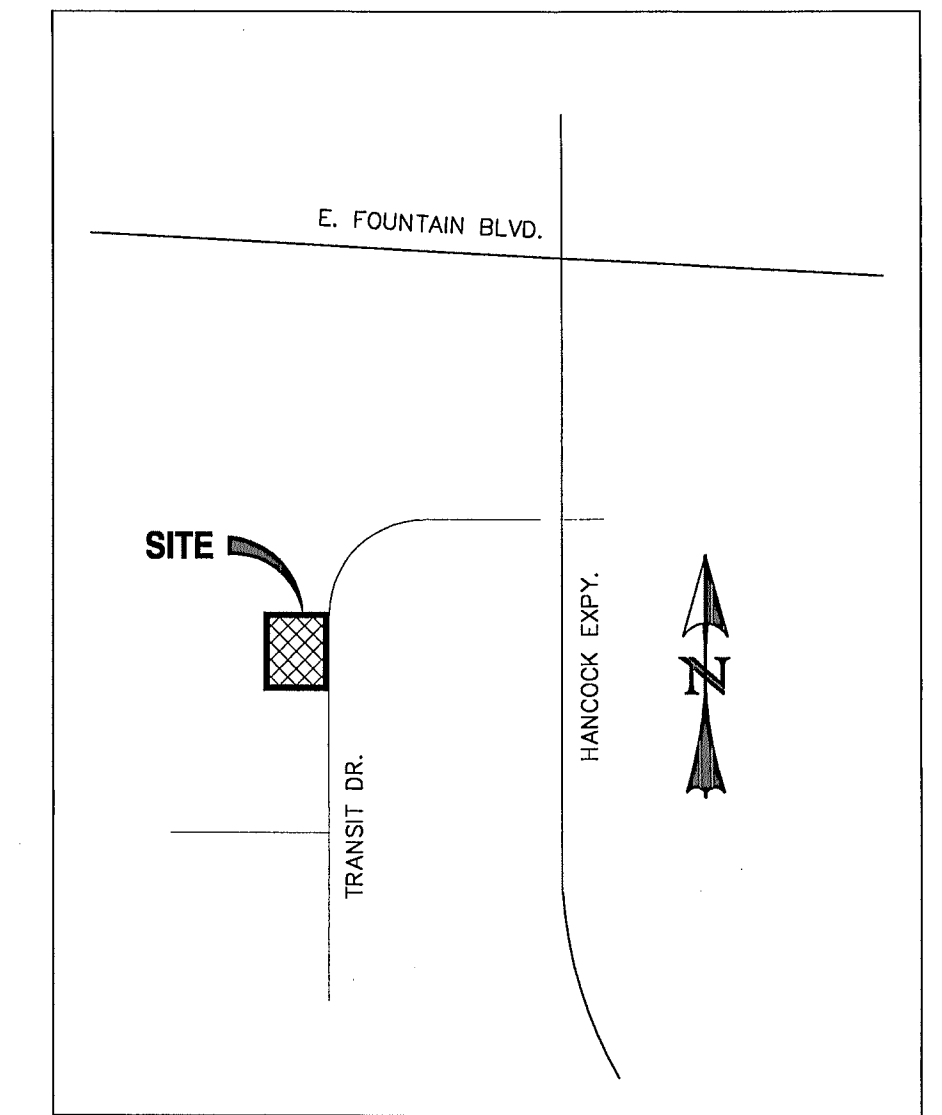
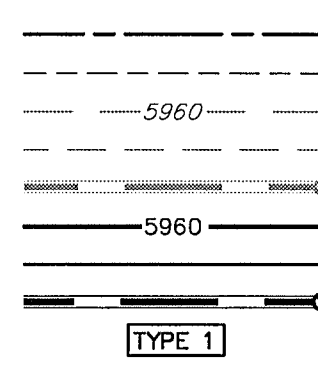
**SITE MAP**  
SCALE: N.T.S.

GRADING & EROSION CONTROL OPINION OF PROBABLE COST			
DESCRIPTION	QUANTITY	UNIT COST	TOTAL COST
CONCRETE WASHOUT	1 EA	\$ 760 /EA	\$ 760
DRILL SEEDING	0.7 AC	\$ 525 /AC	\$ 368
CURB SOCK	4 EA	\$ 10 /EA	\$ 40
SLT FENCE	494 LF	\$ 2.5 /LF	\$ 1,235
VEHICLE TRACKING CONTROL	1 EA	\$ 1,325 /EA	\$ 1,325
WATER QUALITY POND W/ OUTFALL	1 LS	\$ 5,000 /LS	\$ 5,000
<b>SUB-TOTAL</b>			<b>\$ 8,728</b>
MAINTENANCE	1 LS	40 %	\$ 3,491
<b>TOTAL</b>			<b>\$ 12,219</b>

NOTE: THIS OPINION OF PROBABLE COST IS MADE ON THE BASIS OF EXPERIENCE AND QUALIFICATIONS AND REPRESENTS WESTWORKS ENGINEERING'S BEST JUDGMENT AS AN EXPERIENCED AND QUALIFIED PROFESSIONAL FIRM, FAMILIAR WITH THE CONSTRUCTION INDUSTRY. WESTWORKS ENGINEERING CANNOT AND WILL NOT GUARANTEE THAT ACTUAL CONSTRUCTION COSTS WILL NOT VARY FROM THIS OPINION OF PROBABLE COST.

**LEGEND**

EXISTING (E)	ANGLE POINT AP, ANG PNT	LOT LINE
PROPOSED (P)	CURB RETURN CR	EASEMENT
ADDRESS (1234)	BEGIN TRANSITION BT	(E) CONTOUR, INDEX
CURB AND GUTTER C&G	END TRANSITION ET	(E) CONTOUR
EASEMENT ESMT	INVERT INV	(E) STORM SEWER
ELEVATION EL, ELEV	STORM SIM	(P) CONTOUR, INDEX
TEMPORARY TEMP	TOP OF WALL TOW	(P) CONTOUR
LINEAR FEET LF	BOTTOM OF WALL BOW	(P) STORM SEWER, MH
RIGHT-OF-WAY ROW	TYPICAL TYP	CURB TYPE CALL-OUT
CENTERLINE CL	GRADE BREAK GB	
FLOWLINE FL	BOUNDARY	
RADIUS R	RIGHT-OF-WAY	



**VICINITY MAP**  
SCALE: N.T.S.

**ENGINEER'S STATEMENT**

THIS EROSION AND STORMWATER QUALITY CONTROL/GRADING PLAN WAS PREPARED UNDER MY DIRECTION AND SUPERVISION AND IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. IF SUCH WORK IS PERFORMED IN ACCORDANCE WITH THE GRADING AND EROSION CONTROL PLAN, THE WORK WILL NOT BECOME A HAZARD TO LIFE AND LIMB, ENDANGER PROPERTY, OR ADVERSELY AFFECT THE SAFETY, USE, OR STABILITY OF A PUBLIC WAY, DRAINAGE CHANNEL, OR OTHER PROPERTY.

CHAD D. KUZBEK, COLORADO P.E. NO. 35751  
 FOR AND ON BEHALF OF WESTWORKS ENGINEERING  
 1023 W. COLORADO AVENUE  
 COLORADO SPRINGS, CO 80904

DATE: \_\_\_\_\_  
 PHONE: (719) 685-1670  
 EMAIL: chad@westworksen지니어링.com  
 FAX: (719) 685-1429

**DEVELOPER/OWNER'S STATEMENT**

THE OWNER WILL COMPLY WITH THE REQUIREMENTS OF THE EROSION AND STORMWATER QUALITY CONTROL PLAN INCLUDING TEMPORARY BMP INSPECTION REQUIREMENTS AND FINAL STABILIZATION REQUIREMENTS. I ACKNOWLEDGE THE RESPONSIBILITY TO DETERMINE WHETHER THE CONSTRUCTION ACTIVITIES ON THESE PLANS REQUIRE COLORADO DISCHARGE PERMIT SYSTEM (CDPS) PERMITTING FOR STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY.

DEVELOPER/OWNER SIGNATURE: \_\_\_\_\_

DATE: \_\_\_\_\_

NAME OF DEVELOPER/OWNER: \_\_\_\_\_

DBA: \_\_\_\_\_

PHONE: \_\_\_\_\_

TITLE: \_\_\_\_\_

FAX: \_\_\_\_\_

NAME: \_\_\_\_\_

EMAIL: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

**CITY OF COLORADO SPRINGS GRADING AND EROSION CONTROL REVIEW**

THIS GRADING PLAN IS FILED IN ACCORDANCE WITH SECTION 7.7.1503 (ENACTED AS ORD. 82-56) OF THE CODE OF THE CITY OF COLORADO SPRINGS, 2001, AS AMENDED. EROSION CONTROL IS REVIEWED IN ACCORDANCE WITH THE DRAINAGE CRITERIA MANUAL, VOLUME 1 (OCTOBER 1994) AND VOLUME 2 (AUGUST 2002); LATEST REVISIONS.

FOR THE CITY ENGINEER: \_\_\_\_\_

DATE: \_\_\_\_\_

NOTES: \_\_\_\_\_

**BENCHMARK**

NORTHWESTERLY PROPERTY CORNER; A REBAR AND CAP MARKED "PLS 13226".  
 ELEVATION = 6009.41 [NGVD 1929 FIMS DATUM]

**BASIS OF BEARING:**

ASSUMED: NORTH BOUNDARY WHICH BEARS S88°49'07"W A DISTANCE OF 205.99 FEET.

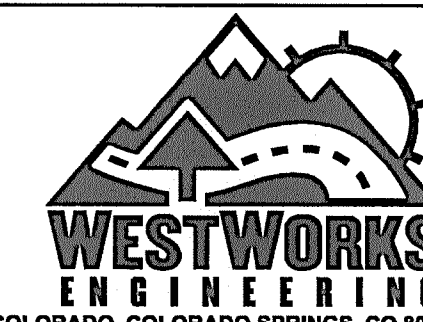
**SHEET INDEX:**

TITLE SHEET	1 OF 4
DETAILED GRADING & EROSION CONTROL PLAN	2 OF 4
DETAIL SHEET	3 OF 4
POND OUTFALL DETAIL SHEET	4 OF 4

PREPARED FOR:  
**CITY OF COLORADO SPRINGS**  
 TRANSIT DIVISION  
 1015 TRANSIT DRIVE  
 COLORADO SPRINGS, CO 80903

PREPARED UNDER MY DIRECT SUPERVISION FOR AND BEHALF OF  
**WESTWORKS ENGINEERING.**

CHAD D. KUZBEK, COLORADO PE #35751 DATE: \_\_\_\_\_



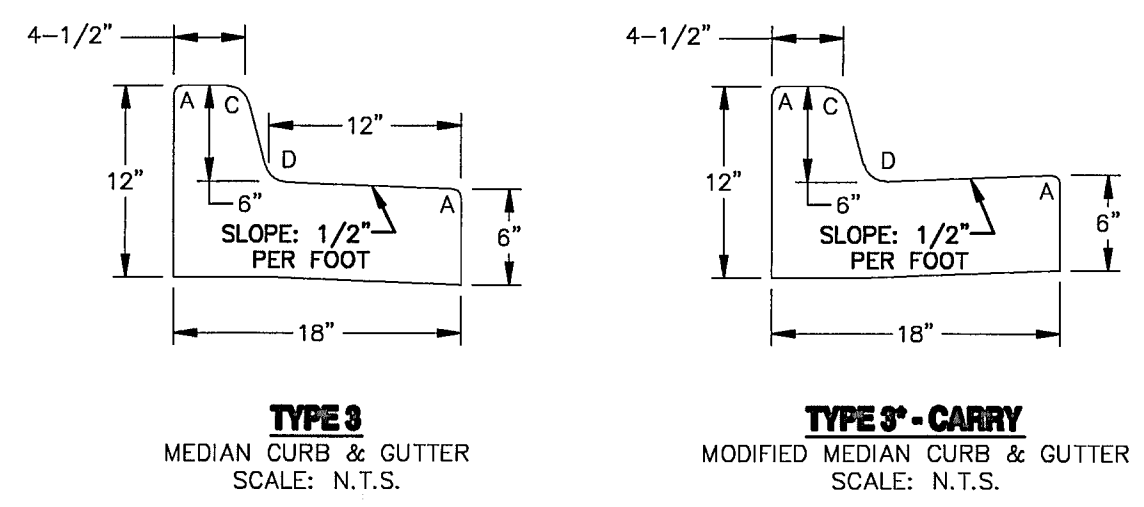
1023 W. COLORADO COLORADO SPRINGS, CO 80904 (719) 685-1670

**MOUNTAIN METRO TRANSIT**  
**1070 TRANSIT DRIVE**

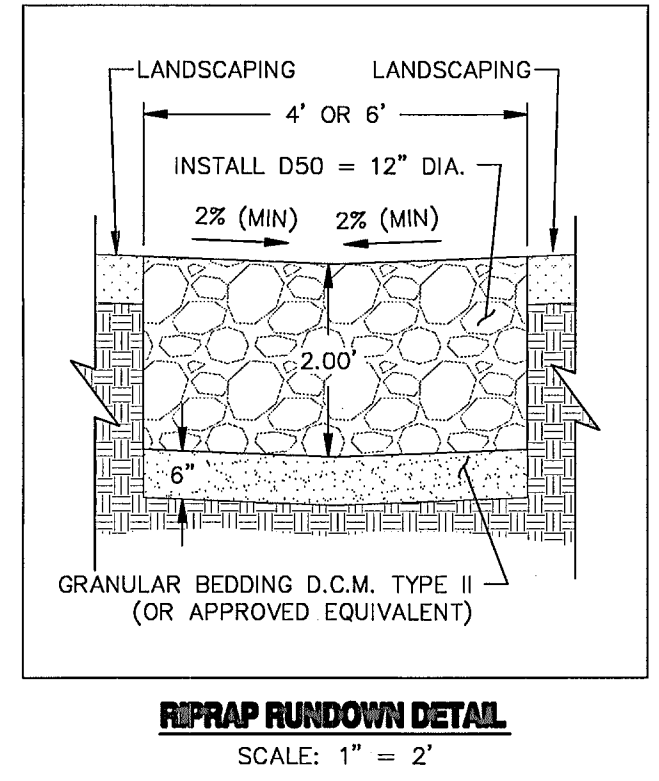
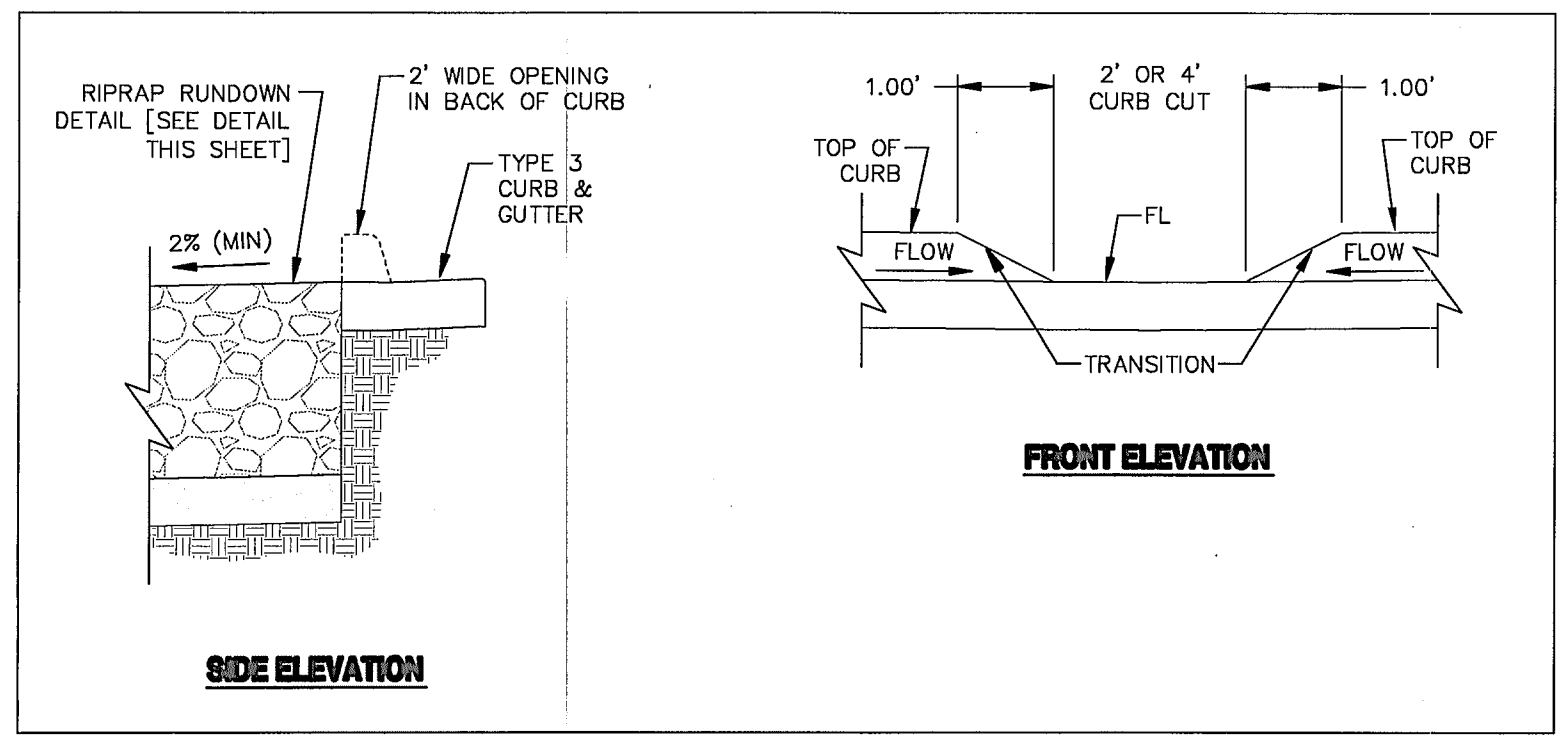
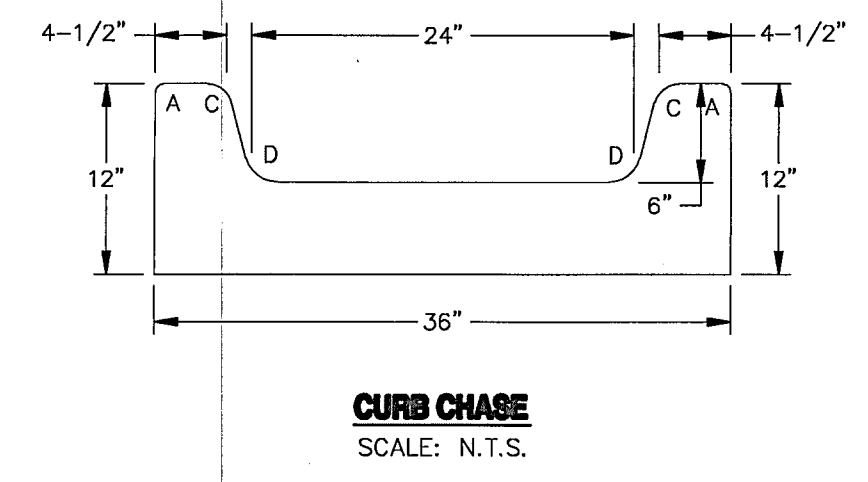
**GRADING, EROSION CONTROL & STORMWATER QUALITY PLAN**

DESIGNED BY: MGP	DRAWN BY: MGP
SCALE: N/A	DATE: 8/9/10
JOB NUMBER: 90910	SHEET: 1 OF 4





RADII LEGEND:  
 A = 1/2"  
 C = 1-1/2"  
 D = 1-1/2" TO 2"



REV.	DESCRIPTION	DATE
1	ADDRESS COMMENTS FROM S.E.R.T.	04/29/10

**811** Know what's below.  
 Call 72 hours before you dig.  
 For more details visit:  
[www.call811.com](http://www.call811.com)

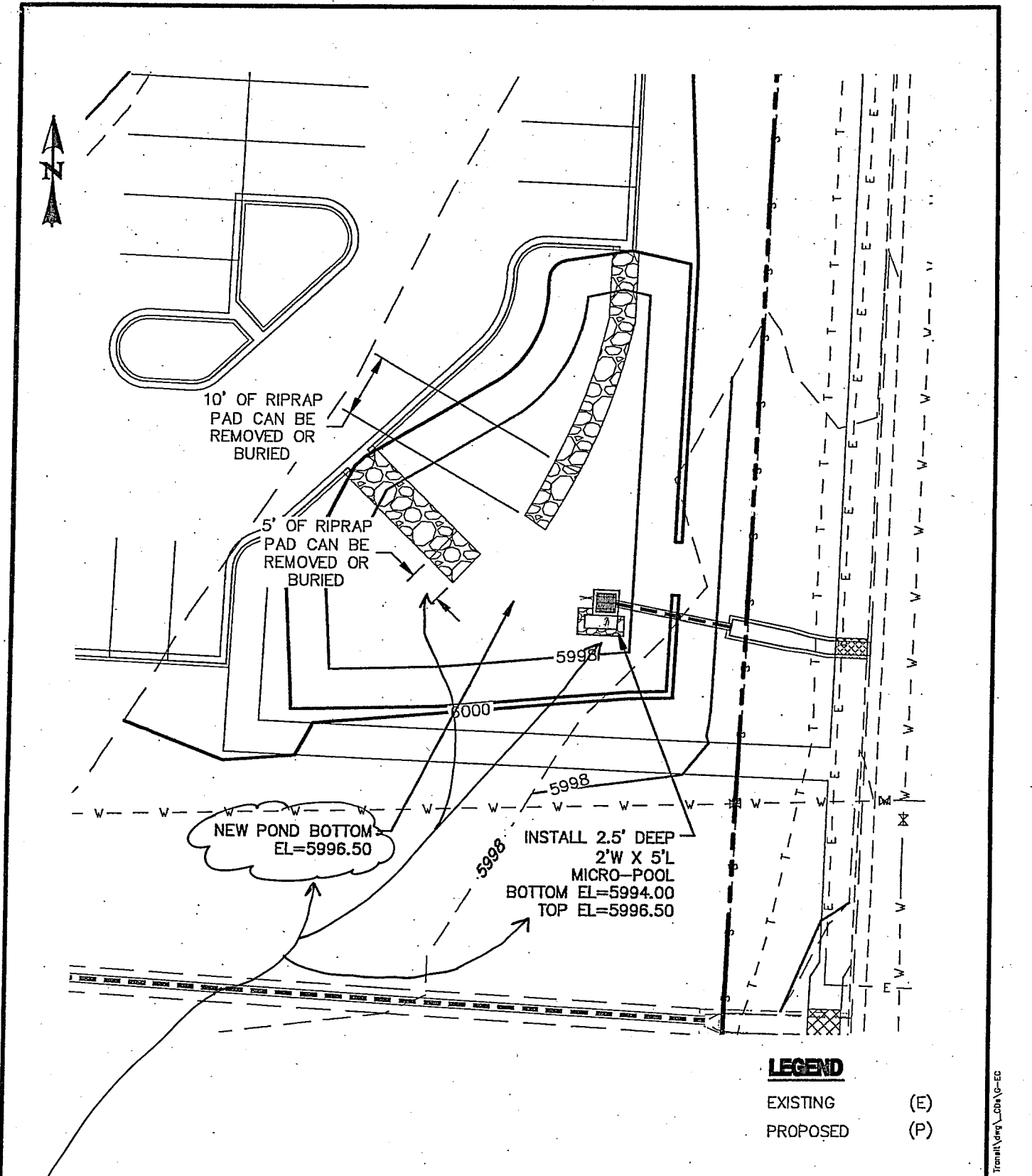
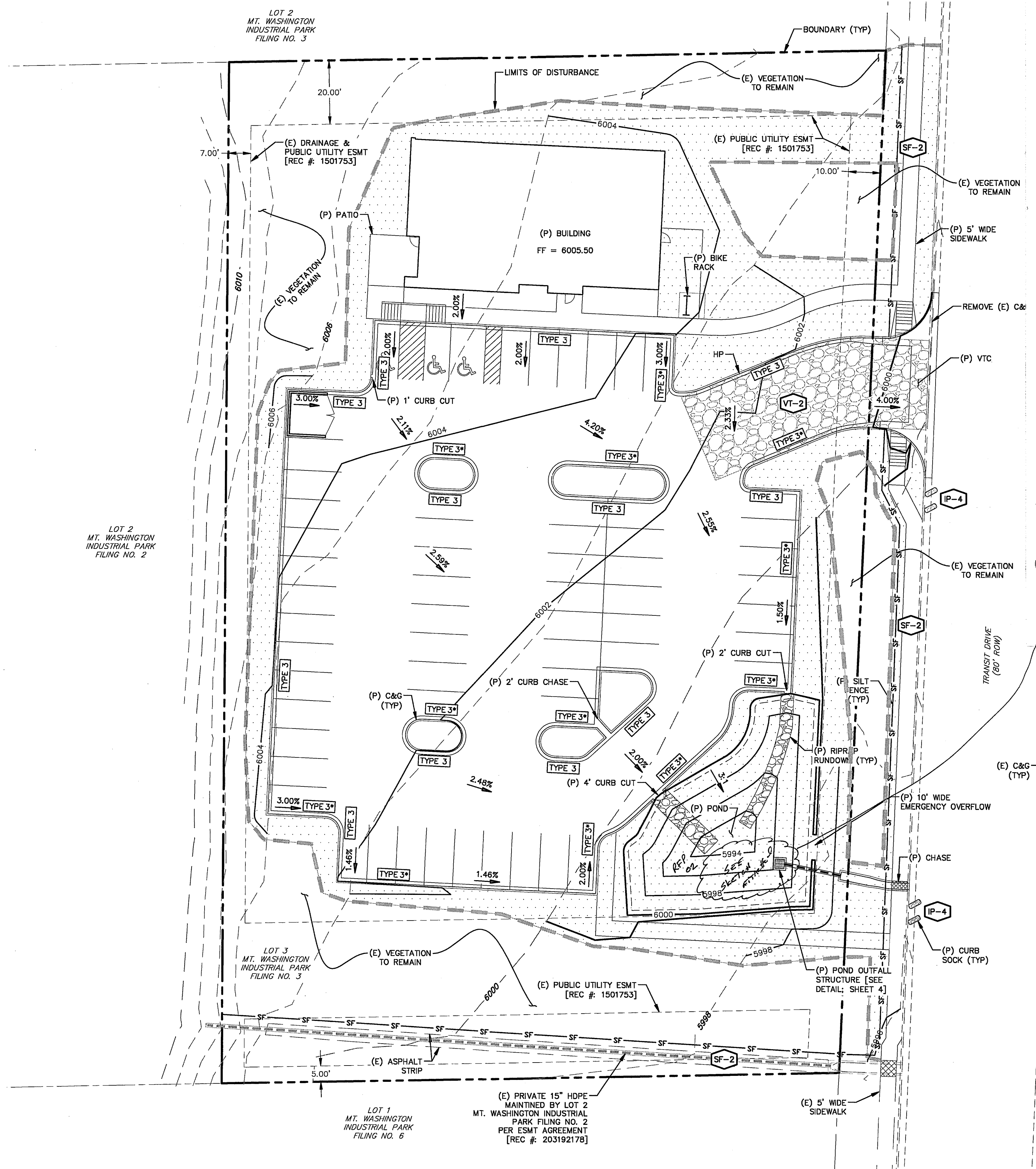
PREPARED FOR:  
**CITY OF COLORADO SPRINGS  
 TRANSIT DIVISION**  
 1015 TRANSIT DRIVE  
 COLORADO SPRINGS, CO 80903

PREPARED UNDER MY DIRECT SUPERVISION FOR AND BEHALF OF  
**WESTWORKS ENGINEERING.**



**MOUNTAIN METRO TRANSIT  
 1070 TRANSIT DRIVE**  
**GRADING & EROSION  
 CONTROL PLAN**

DESIGNED BY: MGP	DRAWN BY: MGP
SCALE: 1"=20'	DATE: 8/9/10
JOB NUMBER: 90910	SHEET: 2 OF 4



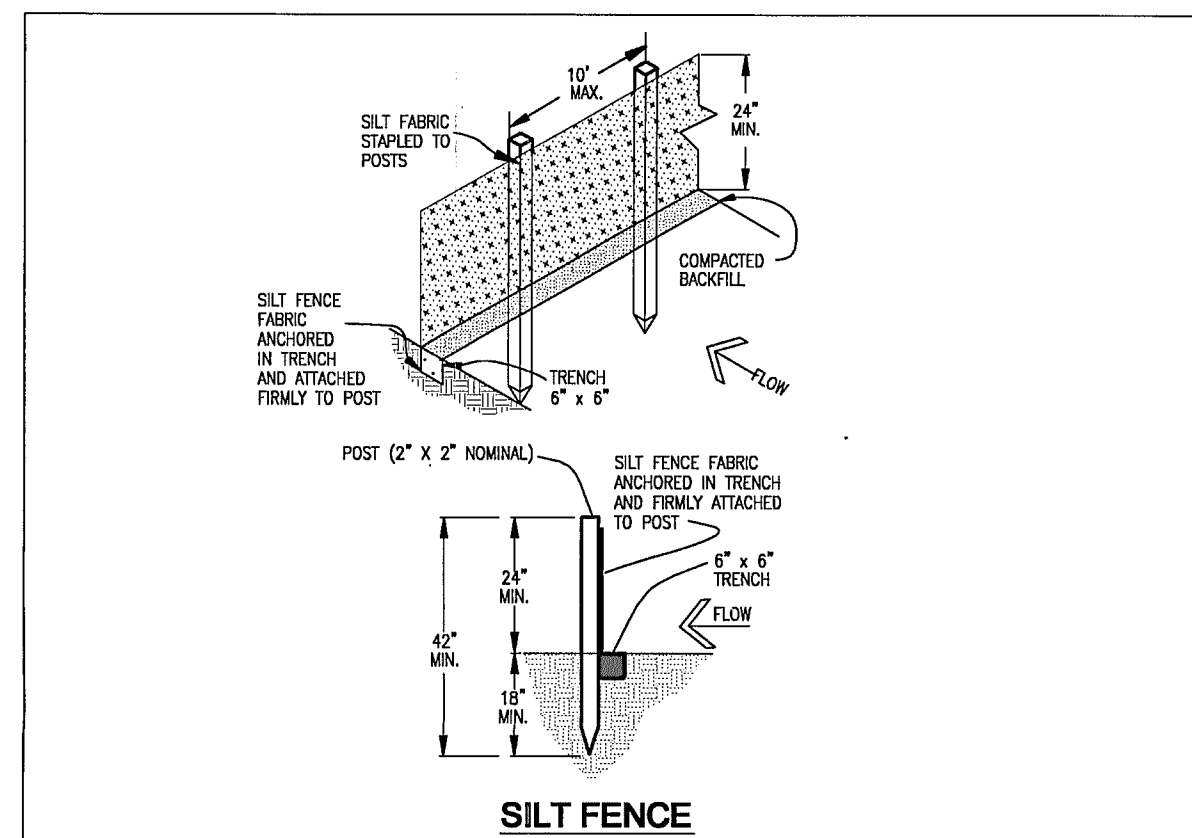
<b>1070 TRANSIT DRIVE</b>	SCALE: 1"=20'	DATE: 11/5/10
<b>POND OUTFALL MODIFICATION EXHIBIT</b>	JOB NO.: 90910	SHEET NO.: 1 OF 1

EARTHWORK VOLUMES (UNADJUSTED)		
CUT	FILL	NET
259 CY	636 CY	377 CY (FILL)

VOLUMES ARE UNADJUSTED AND ARE FOR REFERENCE ONLY. DO NOT USE FOR BIDDING PURPOSES. WESTWORKS CANNOT AND WILL NOT GUARANTEE THAT ACTUAL VOLUMES WILL NOT VARY FROM THESE CALCULATIONS.

LEGEND	
SILT FENCE	SF-2
ROCK SOCKS	IP-4
VEHICLE TRACKING CONTROL	VT-2
(P) SEEDING AREA	[Pattern]

- NOTES:**
- STOCKPILE LOCATION WITHIN THE SITE SHALL BE DETERMINED BY THE CONTRACTOR.
  - STAGING AREA TO BE WITHIN THE LIMITS OF DISTURBANCE AND SHALL BE DETERMINED BY THE CONTRACTOR.
  - CONCRETE WASHOUT LOCATION TO BE WITHIN THE LIMITS OF DISTURBANCE AND SHALL BE DETERMINED BY THE CONTRACTOR.
  - EXISTING VEGETATION OUTSIDE THE LIMITS OF DISTURBANCE TO REMAIN.



**SILT FENCE NOTES**

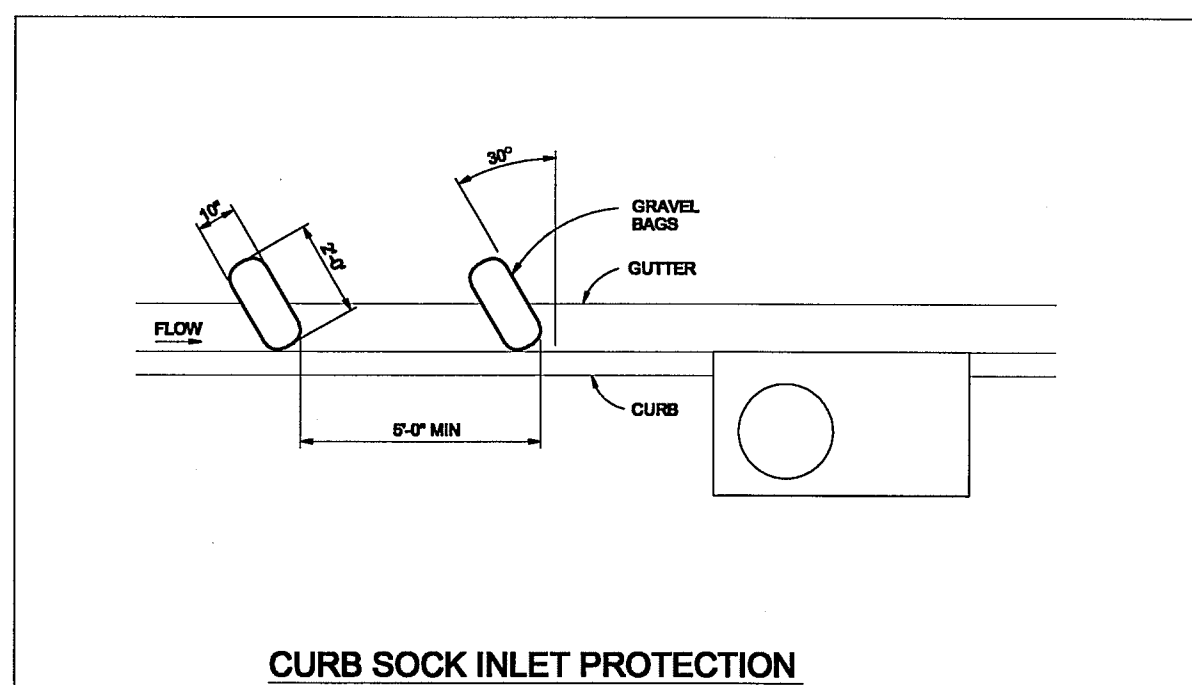
**INSTALLATION REQUIREMENTS**

- SILT FENCES SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.
- WHEN JOINTS ARE NECESSARY, SILT FENCE GEOTEXTILE SHALL BE SPUN TOGETHER ONLY AT SUPPORT POST AND SECURELY SEALED.
- METAL POSTS SHALL BE "STUDDO" TOP OR "U" TYPE WITH MINIMUM WEIGHT OF 1.30 POUNDS PER LINEAR FOOT. WOOD POSTS SHALL HAVE A MINIMUM DIAMETER OR CROSS SECTION DIMENSION OF 2 INCHES.
- THE FILTER MATERIAL SHALL BE FASTENED SECURELY TO METAL OR WOOD POSTS USING WIRE TIES, OR TO WOOD POSTS WITH 3/4" LONG HEAVY DUTY STAPLES. THE SILT FENCE GEOTEXTILE SHALL NOT BE STAPLED TO EXISTING TREES.
- WHILE NOT REQUIRED, WIRE MESH FENCE MAY BE USED TO SUPPORT THE GEOTEXTILE. WIRE FENCE SHALL BE FASTENED SECURELY TO THE UPSLOPE SIDE OF THE POSTS USING HEAVY DUTY WIRE STAPLES AT LEAST 3/4" LONG. THE WIRE OR HOOD HOOKS, THE WIRE SHALL EXTEND INTO THE TRENCH A MINIMUM OF 6" AND SHALL NOT EXTEND MORE THAN 2" ABOVE THE ORIGINAL GROUND SURFACE.
- ALONG THE TOP OF FILLS, INSTALL THE SILT FENCE ALONG A LEVEL CONTOUR AND PROVIDE AN AREA BEHIND THE FENCE FOR RUNOFF TO POND AND SEEDING TO SETTLE. A MINIMUM DISTANCE OF 6 FEET FROM THE TOE OF THE FILL IS RECOMMENDED.
- THE HEIGHT OF THE SILT FENCE FROM THE GROUND SURFACE SHALL BE MINIMUM OF 24 INCHES AND SHALL NOT EXCEED 30 INCHES. HIGHER FENCES MAY INCREASE VOLUMES OF WATER SUFFICIENT TO CAUSE FAILURE OF THE STRUCTURE.

**MAINTENANCE REQUIREMENTS**

- CONTRACTOR SHALL INSPECT SILT FENCES IMMEDIATELY AFTER EACH RAINFALL, AT LEAST DAILY DURING PROLONGED RAINFALL AND WEEKLY DURING PERIODS OF NO RAINFALL. DAMAGED, COLLAPSED, UNINTENDED OR INEFFECTIVE SILT FENCES SHALL BE PROMPTLY REPAIRED OR REPLACED.
- SEDIMENT SHALL BE REMOVED FROM BEHIND SILT FENCE WHEN IT ACCUMULATED TO HALF THE EXPOSED GEOTEXTILE HEIGHT.
- SILT FENCES SHALL BE REMOVED WHEN ADEQUATE VEGETATIVE COVER IS ATTAINED AS APPROVED BY THE CITY.

City of Colorado Springs Stormwater Quality  
Figure SF-2 Silt Fence Construction Detail and Maintenance Requirements



**CURB SOCK INLET PROTECTION NOTES**

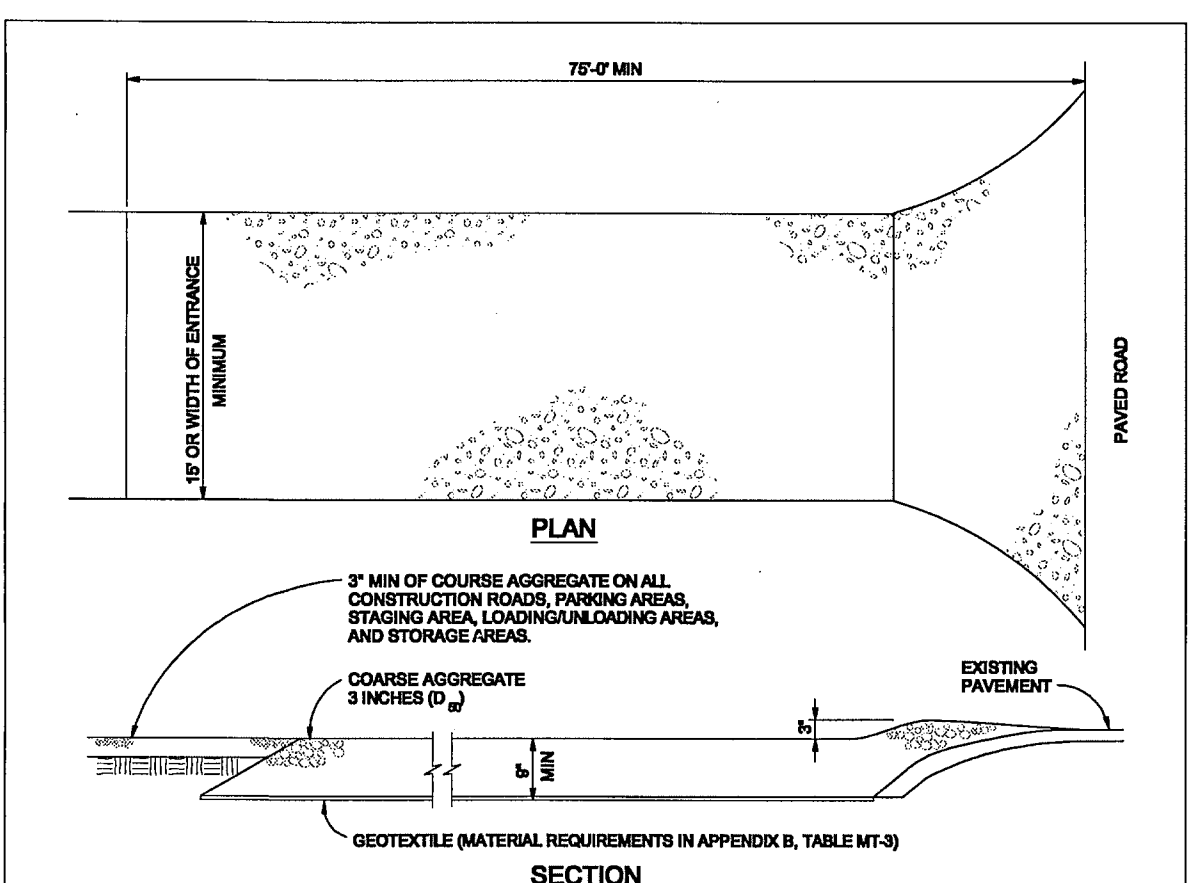
**INSTALLATION REQUIREMENTS**

- INLET PROTECTION SHALL BE INSTALLED IMMEDIATELY AFTER CONSTRUCTION OF INLET.
- SOCK IS TO BE MADE OF 1/4 INCH WIRE MESH (USED WITH GRAVEL, ONLY) OR GEOTEXTILE.
- WASHED SAND OR GRAVEL, 3/4 INCH TO 4 INCHES IN DIAMETER IS PLACED INSIDE THE SOCK.
- PLACEMENT OF THE SOCK IS TO BE 90 DEGREES FROM PERPENDICULAR IN THE OPPOSITE DIRECTION OF FLOW.
- SOCKS ARE TO BE FLUSH WITH THE CURB AND SPACED AT A MINIMUM 1 FEET APART.
- AT LEAST 2 CURB SOCKS IN SERIES IS REQUIRED.

**MAINTENANCE REQUIREMENTS**

- CONTRACTOR SHALL INSPECT INLET PROTECTION IMMEDIATELY AFTER EACH RAINFALL, AT LEAST DAILY DURING PROLONGED RAINFALL AND WEEKLY DURING PERIODS OF NO RAINFALL. DAMAGED OR INEFFECTIVE INLET PROTECTION SHALL PROMPTLY BE REPAIRED OR REPLACED.
- SEDIMENT SHALL BE REMOVED FROM BEHIND THE SOCK WHEN GUTTER WIDTH IS FILLED.
- INLET PROTECTION SHALL BE REMOVED WHEN ADEQUATE VEGETATIVE COVER IS ATTAINED WITHIN THE DRAINAGE AREA AS APPROVED BY THE CITY.

City of Colorado Springs Stormwater Quality  
Figure IP-4 Curb Sock Inlet Protection Construction Detail and Maintenance Requirements



**VEHICLE TRACKING NOTES**

**INSTALLATION REQUIREMENTS**

- ALL ENTRANCES TO THE CONSTRUCTION SITE ARE TO BE STABILIZED PRIOR TO CONSTRUCTION BEGINNING.
- CONSTRUCTION ENTRANCES ARE TO BE BUILT WITH AN AGRON TO ALLOW FOR TURNING TRAFFIC, BUT SHOULD NOT BE BUILT OVER EXISTING PAVEMENT EXCEPT FOR A SLIGHT OVERLAP.
- AREAS TO BE STABILIZED ARE TO BE PROPERLY GRADED AND COMPACTED PRIOR TO LAYING DOWN GEOTEXTILE AND STONE.
- CONSTRUCTION ROADS, PARKING AREAS, LOADING/UNLOADING ZONES, STORAGE AREAS, AND STAGING AREAS ARE TO BE STABILIZED.
- CONSTRUCTION ROADS ARE TO BE BUILT TO CONFORM TO SITE GRADES, BUT SHOULD NOT HAVE SIDE SLOPES OR ROAD GRADERS THAT ARE EXCESSIVELY STEEP.

**MAINTENANCE REQUIREMENTS**

- REGULAR INSPECTIONS ARE TO BE MADE OF ALL STABILIZED AREAS, ESPECIALLY AFTER STORM EVENTS.
- STONES ARE TO BE REAPPLIED PERIODICALLY AND WHEN REPAIR IS NECESSARY.
- SEDIMENT TRACKED ONTO PAVED ROADS IS TO BE REMOVED ONLY BY SHOVELING OR BLOWING. SEDIMENT IS NOT TO BE WASHED DOWN STORM SEWER DRAINS.
- STORM SEWER INLET PROTECTION IS TO BE IN PLACE, INSPECTED, AND CLEANED IF NECESSARY.
- OTHER ASSOCIATED SEDIMENT CONTROL MEASURES ARE TO BE INSPECTED TO ENSURE GOOD WORKING CONDITION.

City of Colorado Springs Stormwater Quality  
Figure VT-2 Vehicle Tracking Application Examples

**SEEDING GUIDELINES**

- SEEDBED PREPARATION**  
THE SEEDBED SHOULD BE WELL-SETTLED AND FIRM, BUT FRAGILE ENOUGH THAT THE SEED CAN BE PLACED AT THE SPECIFIED DEPTHS. COMPETITIVE STANDS OF WEEDS THAT ARE PRESENT BEFORE SEEDING MUST BE CONTROLLED BY SHALLOW TILLAGE OR BY APPLICATION OF HERBICIDES. SOILS THAT HAVE BEEN OVER-COMPACTED BY TRAFFIC OR EQUIPMENT, ESPECIALLY WHEN WET, SHOULD BE TILLED TO BREAK UP ROOTING-RESTRICTIVE LAYERS, THEN HARROWED, ROLLED, OR PACKED TO PREPARE THE REQUIRED FIRM SEEDBED.
- FERTILIZER**  
FERTILIZER SHOULD BE APPLIED AT A RATE OF 50 POUNDS OF AVAILABLE PHOSPHATE PER ACRE. THE TIME OF APPLICATION SHOULD BE IMMEDIATELY PRIOR TO SEEDING, AT THE TIME OF SEEDING, OR IMMEDIATELY FOLLOWING SEEDING, DEPENDING ON THE KIND OF FERTILIZER AND TYPE OF EQUIPMENT USED.
- SEEDING**  
SEED SHOULD BE PLANTED WITH A GRASS DRILL ON ALL SLOPES OF 3:38 (3:1) OR FLATTER. SEED MAY BE BROADCAST BY HAND, BY MECHANICAL SPREADER, OR BY HYDRAULIC EQUIPMENT ON AREAS THAT ARE SMALL, TOO STEEP, OR NOT ACCESSIBLE FOR SEED DRILL OPERATIONS. SEED PLANTED WITH A DRILL SHOULD BE COVERED WITH SOIL TO A DEPTH OF 1/4 TO 3/4 INCH. SEED PLANTED BY THE BROADCAST METHOD SHALL BE INCORPORATED INTO THE SOIL SURFACE, NOT TO EXCEED A DEPTH OF 3/4 INCH, BY RAKING, HARROWING, OR OTHER PROVEN METHOD.  
THE TIME OF SEEDING IS FROM OCTOBER 15TH - MAY 31ST. SEED PLANTED IN THE LATE FALL WILL REMAIN DORMANT UNTIL SPRING, WHEN IT WILL GERMINATE.
- MULCHING**  
SEEDED AREAS SHOULD BE MULCHED TO CONSERVE MOISTURE; PREVENT SURFACE COMPACTION OR CRUSTING; REDUCE RUNOFF AND EROSION; CONTROL INSECTS; AND HELP ESTABLISH PLANT COVER.  
NATIVE HAY OR STRAW SHOULD BE APPLIED AT A RATE OF 4,000 POUNDS PER ACRE AND CRIMPED INTO THE GROUND. ON SLOPES GREATER THAN 3:1, AN AGRONOMY BLANKET SHOULD BE USED.
- SUPPLEMENTAL WATER**  
IN LOW RAINFALL AREAS, WHERE WATER IS AVAILABLE AND WHERE RAPID ESTABLISHMENT IS NEEDED, IRRIGATION OF NEW SEEDING SHOULD BE PERFORMED DURING THE FIRST GROWING SEASON. WATER SHOULD BE APPLIED AT APPROXIMATELY ONE WEEK INTERVALS, AT A RATE OF 3/4 TO 1 INCH PER APPLICATION, WHEN RAINFALL IS DEFICIENT FOR PLANT DEVELOPMENT.

**EROSION PROTECTION & REVEGETATION REQUIREMENTS PER U.S.D.A. SOIL CONSERVATION SERVICE GUIDELINES**

1 PRACTICE NO. & NAME: 342 - CRITICAL AREA TREATMENT  
RANGE SITE: SANDY FOOTHILLS

2 PLANNED:  
A METHOD: XX  
B DATES: OCT. 15 - MAY 31  
C CLEAN TILLED: XX  
FIRM SEEDBED: XX  
STUBBLE COVER: XX  
INTERSEED: XX  
OTHER: XX

SEEDING OPERATION:  
A METHOD: XX  
DRILL: XX  
INTERSEED: XX  
BROADCAST: XX  
DRILL SPACING: 6-12"  
TYPE: GRASS W/AGRIATOR  
C DATE: OCT. 15 - MAY 31  
D PLANTING DEPTH: 1/4-1/2"

FERTILIZER:  
POUNDS ACTUAL PER ACRE N2: 40  
(AVAILABLE): 40  
P205: 40  
K: N/A

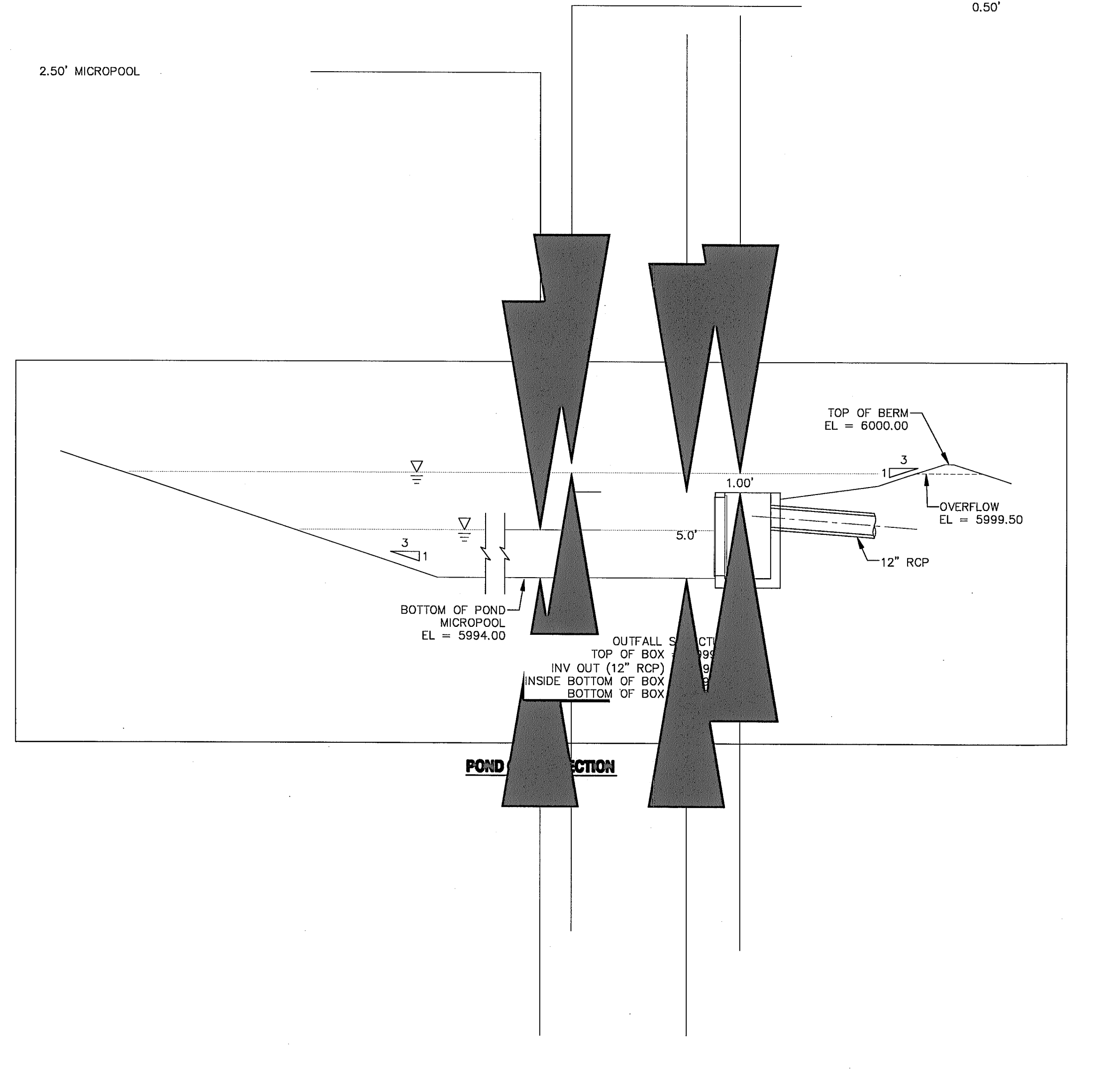
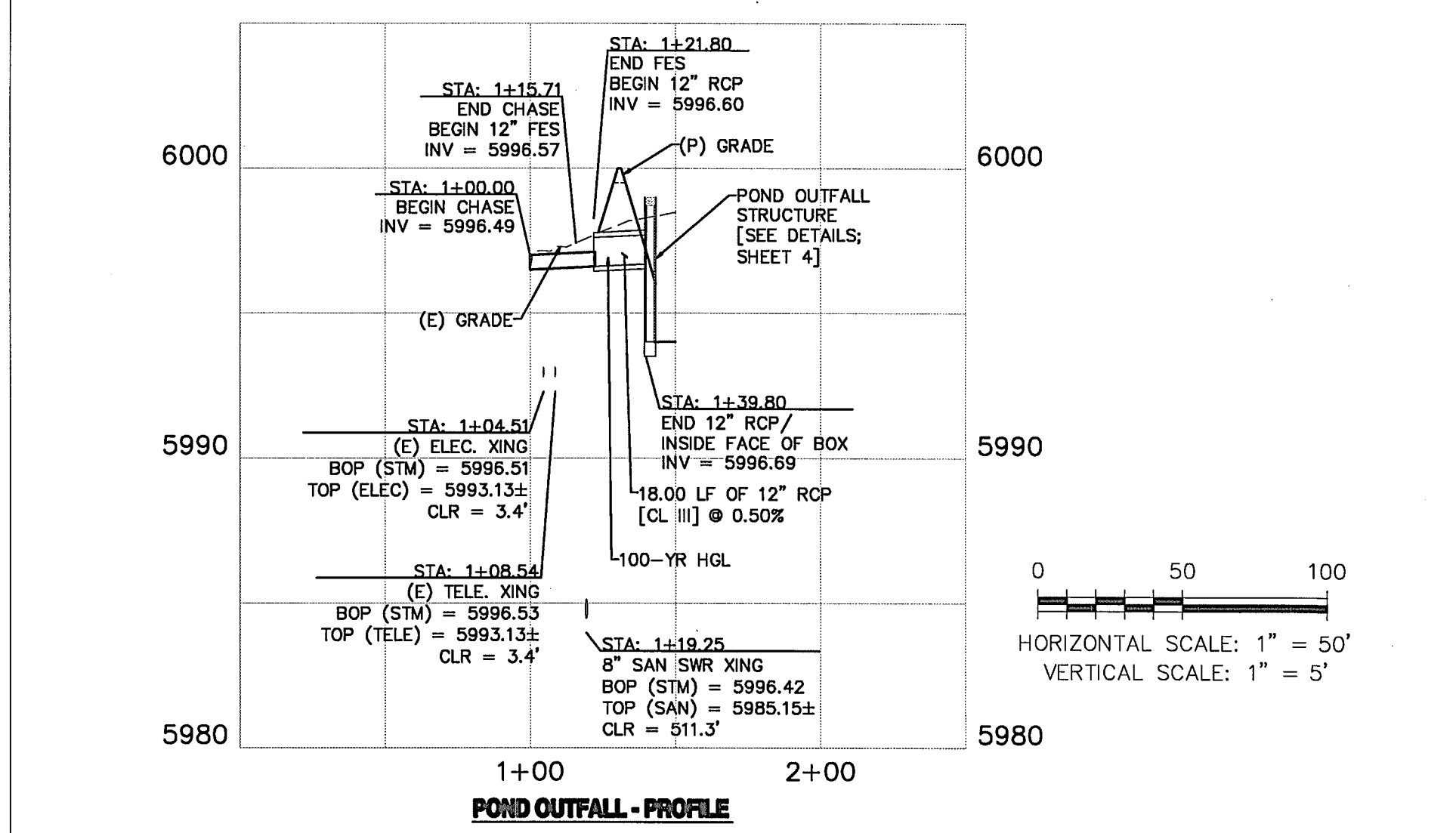
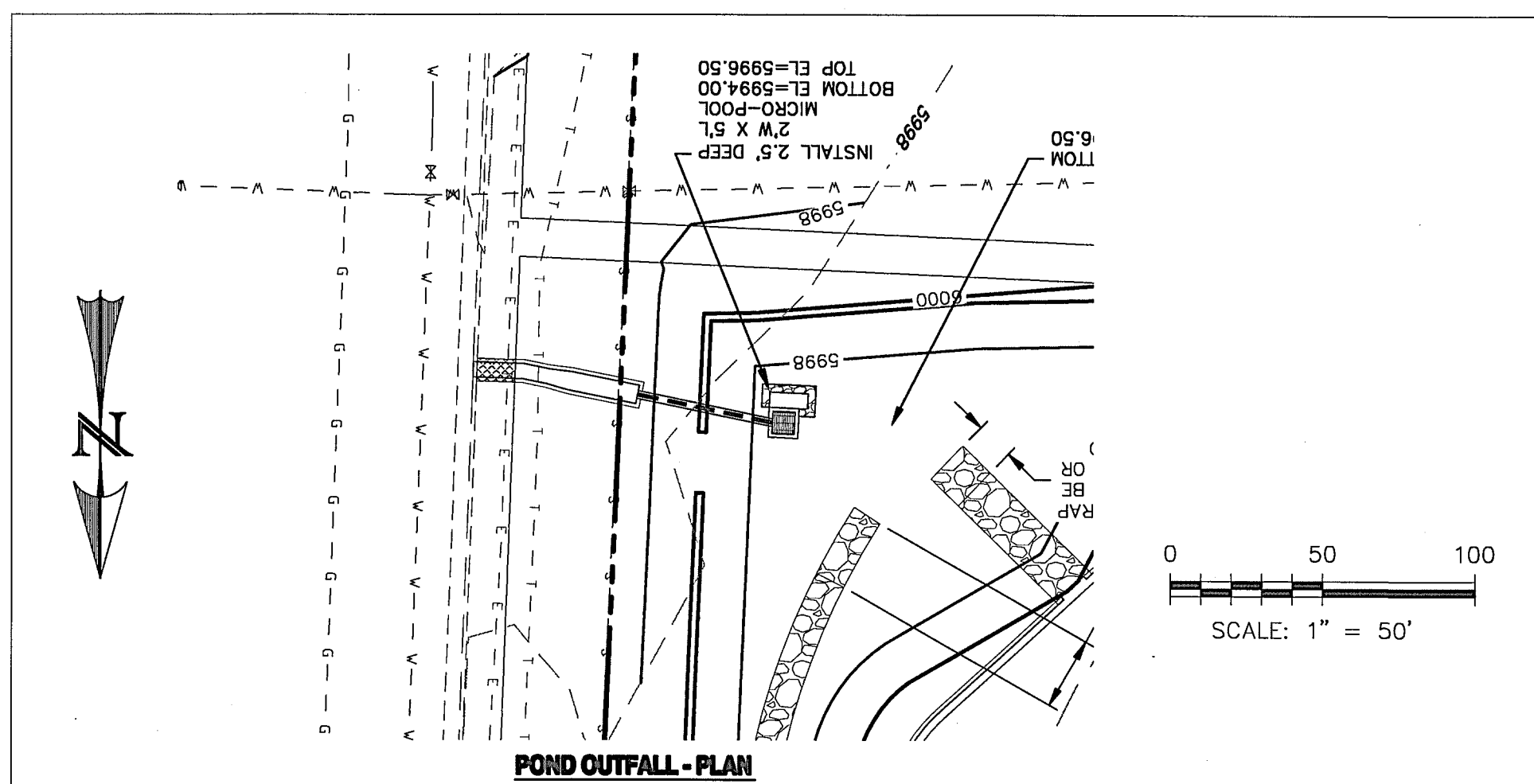
MULCH:  
KIND: LONG - STEM NATIVE HAY  
AMOUNT: 4,000 POUNDS/ACRE  
HOW APPLIED: N/A  
HOW ANCHORED: CRIMPED  
ANCHORAGE DEPTH: 4"

MOWING:  
CHEMICAL: XX  
DATES: SEE S.C.S. FOR SPECIFIC RECOMMENDATIONS AT HERBICIDE APPLICATION TIME

WEED CONTROL: N/A

VARIETY	SPECIES	(1) REQUIRED PLS RATES PER ACRES (100%)	(2) PLS SEEDING RATE PER SPECIES/ACRE (1) x (2)	(3) PLS SEEDING RATE PLANNED PER SPECIES/ACRE (1) x (2)	(4) PLANNED PER ACRE	(5) TOTAL PLS LBS./SPECIES PLANNED (3) x (4)
GOSHEN	PRAIRIE SANDREED	6.5	0.98	0.70	0.68	
VAUGHN	SIDE-OATS GRAMMA	9.0	2.25	0.70	1.58	
LOVINGTON	BLUE GRAMMA	3.0	0.45	0.70	0.32	
BLACKWELL	SWITCH GRASS	4.5	0.90	0.70	0.63	
PASTURA	LITTLE BLUESTEM	7.0	1.75	0.70	1.23	

Figure TS-1 TEMPORARY SEEDING Construction Detail and Maintenance Requirements

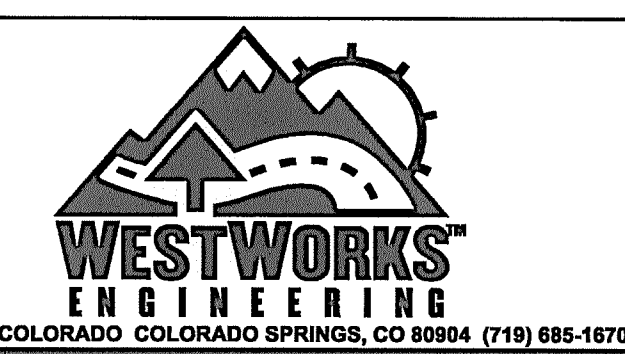


REV.	DESCRIPTION	DATE
1	ADDRESS COMMENTS FROM S.E.R.T.	04/29/10



PREPARED FOR:  
CITY OF COLORADO SPRINGS  
TRANSIT DIVISION  
1015 TRANSIT DRIVE  
COLORADO SPRINGS, CO 80903

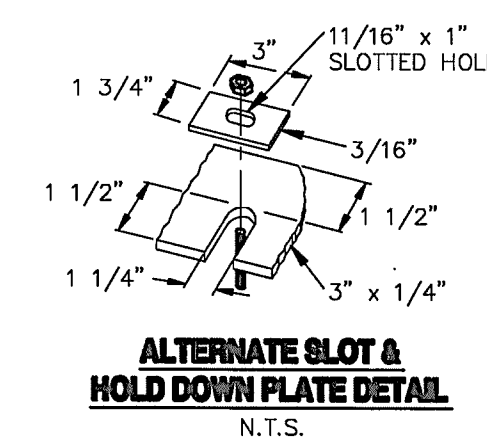
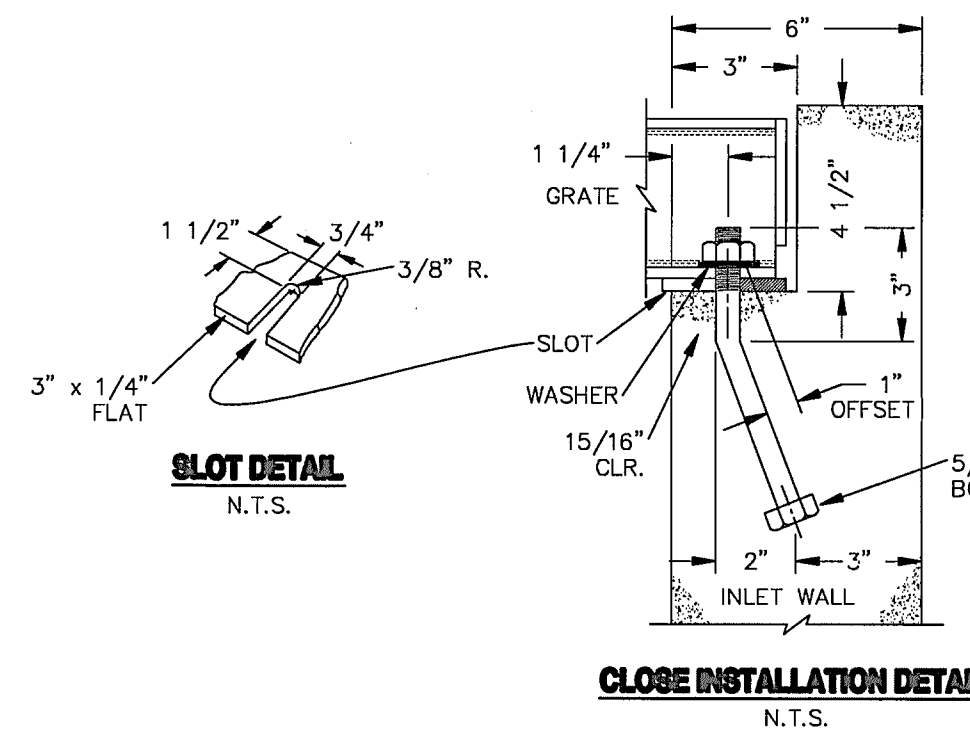
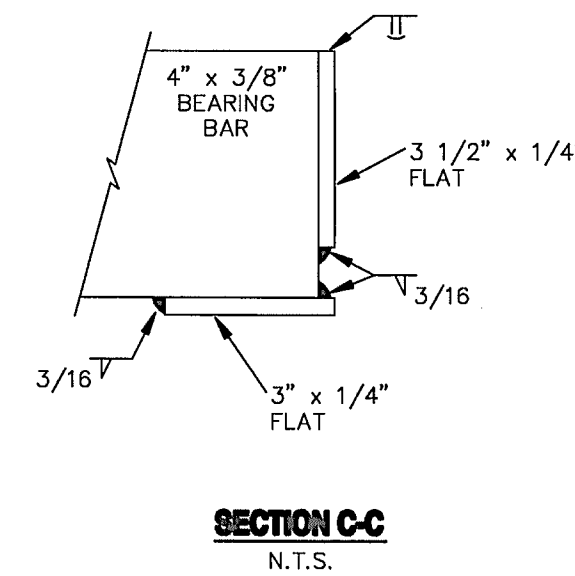
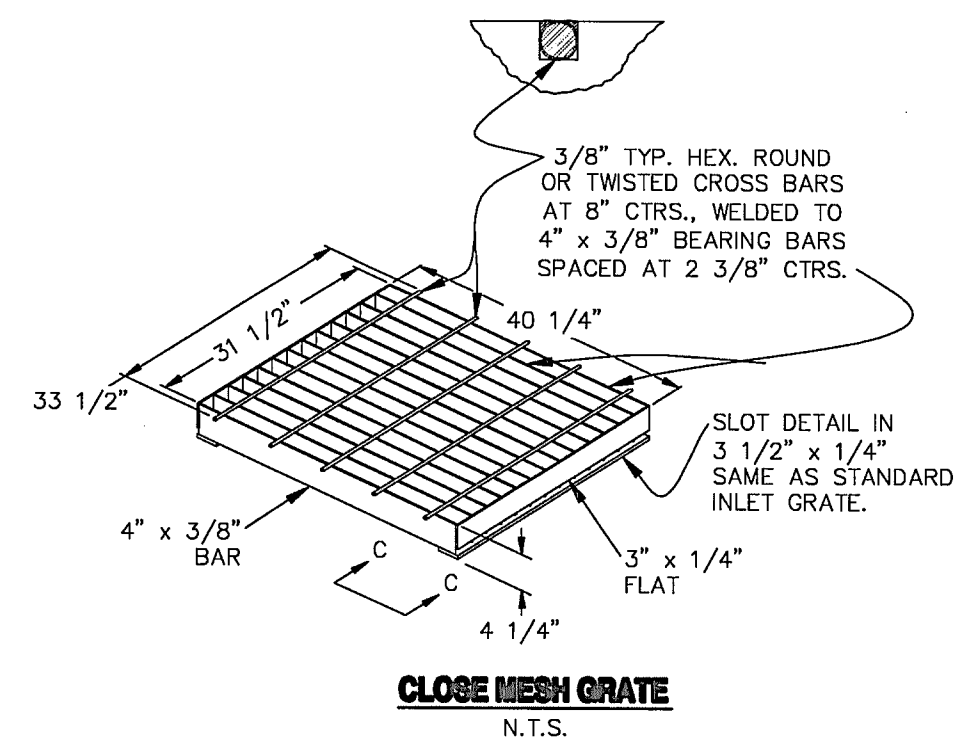
PREPARED UNDER MY DIRECT SUPERVISION FOR AND BEHALF OF  
WESTWORKS ENGINEERING.



**MOUNTAIN METRO TRANSIT**  
1070 TRANSIT DRIVE  
**DETAIL SHEET**

DESIGNED BY: MGP	DRAWN BY: MGP
SCALE: VARIES	DATE: 8/9/10
JOB NUMBER: 90910	SHEET: 3 OF 4

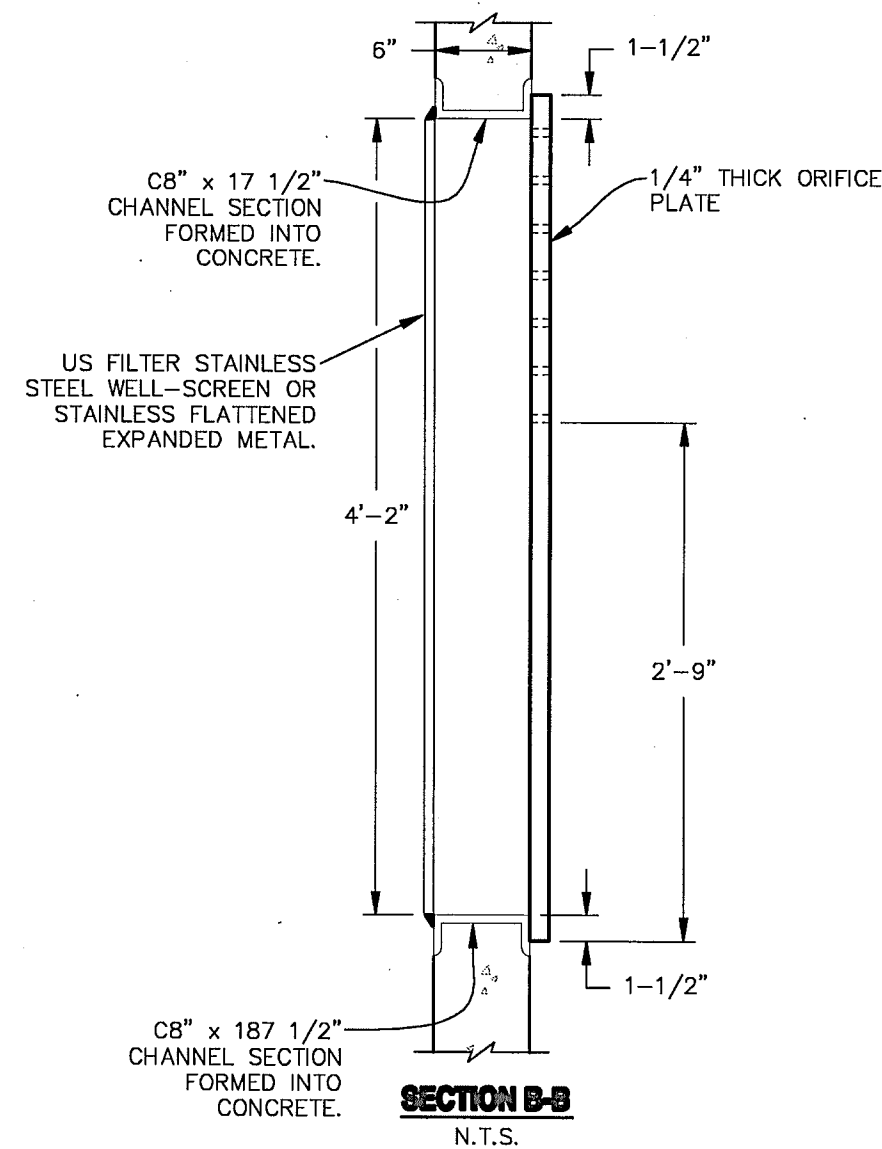
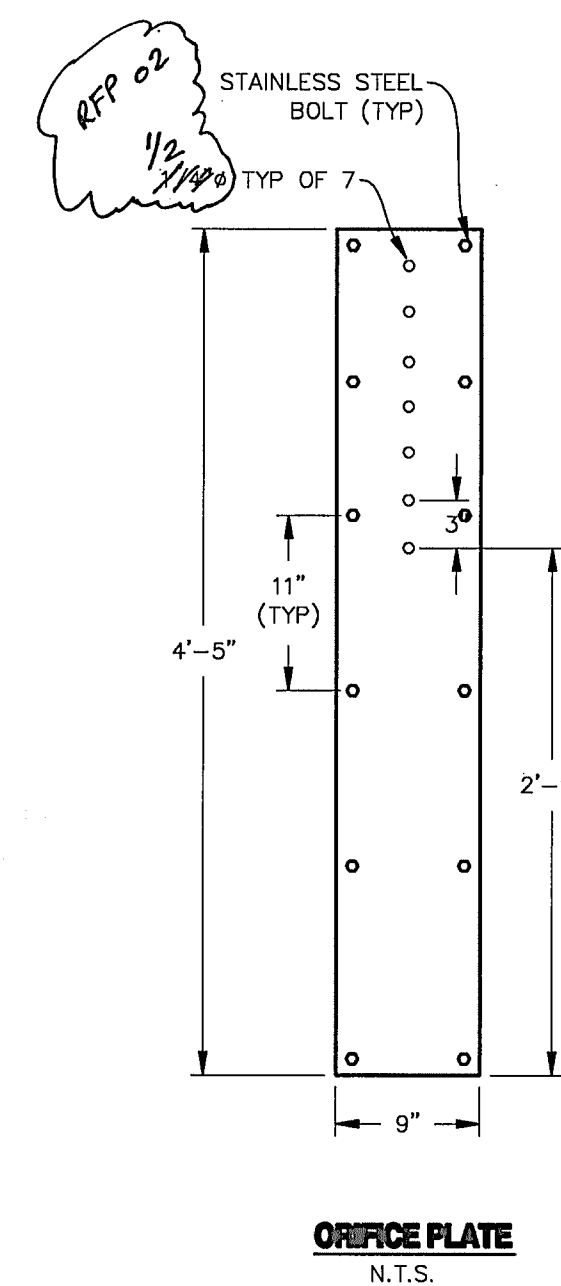
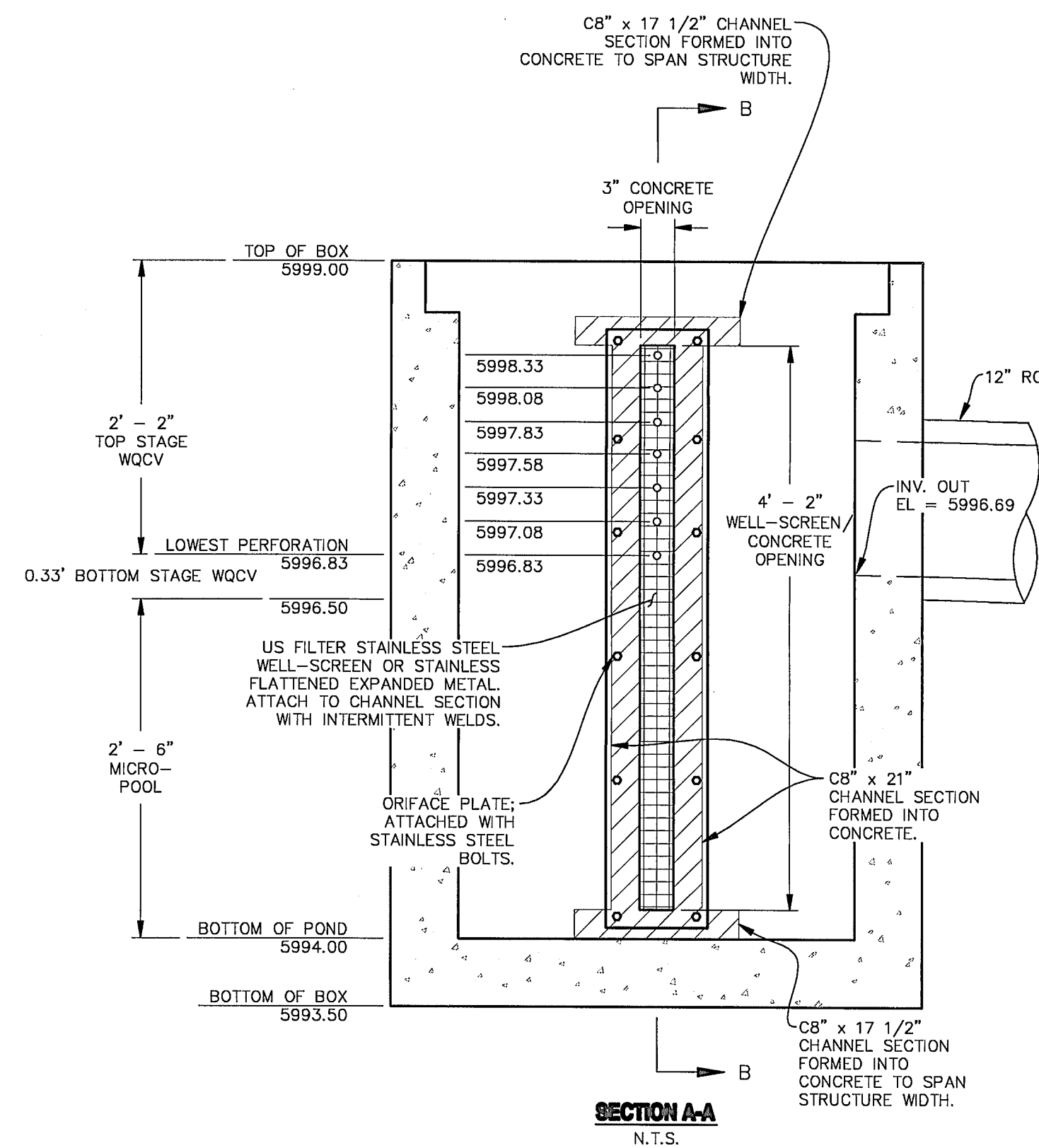
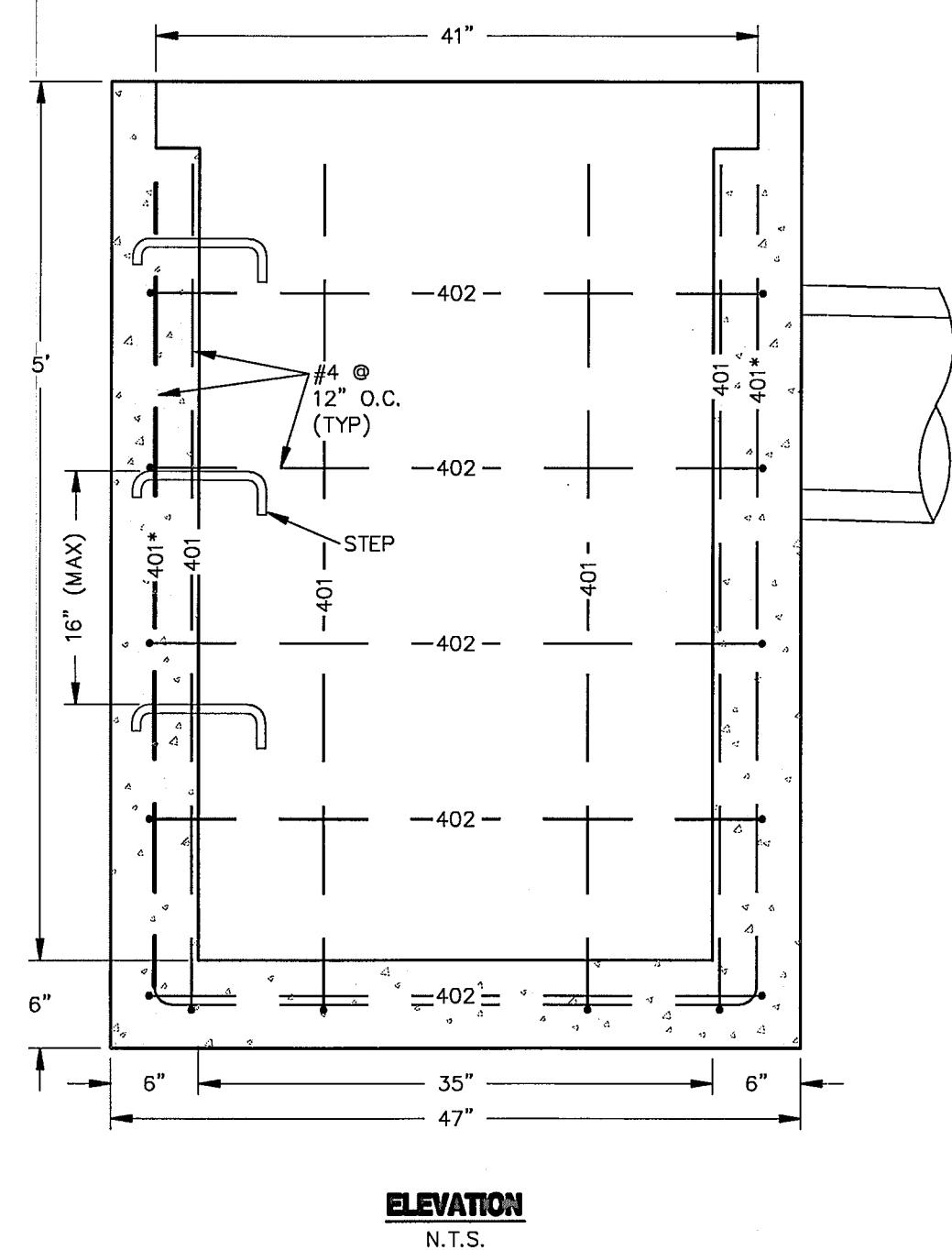
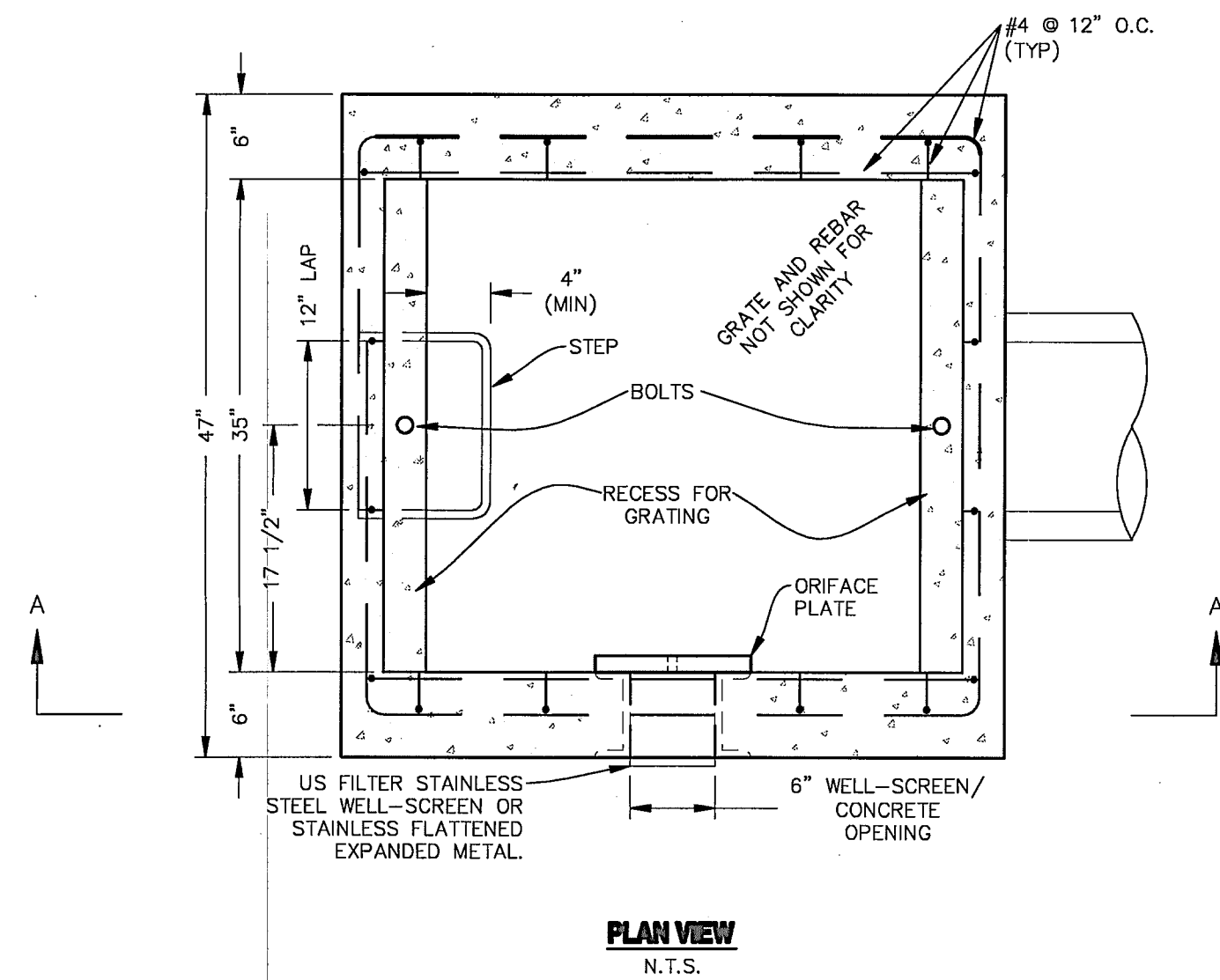




BAR LIST & BENDING DIAGRAM			
MARK	NUMBER REQUIRED	HEIGHT	LENGTH
401*	2	4' - 3"	11' - 11"
401	6	4' - 7"	12' - 7"
402	5	N/A	15' - 0"

1. ALL BARS TO BE 1/2" DIA.  
 2. CUT OR BEND AROUND PIPES AS REQUIRED.  
 3. 402 BARS WILL BE EQUALLY SPACED FROM EACH OTHER.



**GENERAL NOTES:**

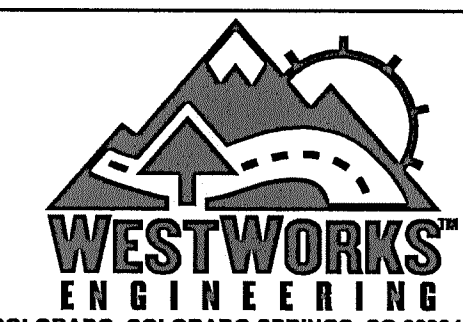
1. CONCRETE SHALL BE CLASS B. INLET MAY BE CAST-IN-PLACE OR PRECAST.
2. REINFORCING BARS SHALL HAVE A MINIMUM 2 IN. CLEARANCE.
3. CONCRETE SLOPE AND DITCH PAVING SHALL CONFORM TO SECTION 507. REINFORCEMENT FOR CONCRETE SLOPE PAVING SHALL BE 6 X 6 - W1.4 X W1.4 OR 6 X 6 - W2.1 X W2.1.
4. STRUCTURAL STEEL FOR GRATES AND GRATE INSTALLATION HARDWARE SHALL BE GALVANIZED AND SHALL BE IN ACCORDANCE WITH 712.06.
5. THE STANDARD INLET GRATES SHALL BE USED ON ALL TYPE C INLETS UNLESS CLOSE MESH GRATES ARE SPECIFIED ON THE PLANS.
6. STEPS SHALL BE PROVIDED WHEN INLET DIMENSION "H" EXCEEDS 3 FT.-6 IN. AND SHALL BE IN ACCORDANCE WITH AASHTO M 199.
7. SEE SHEET M-604-11, INLET, TYPE D, FOR REINFORCEMENT AROUND THE PIPE OPENING.
8. CONCRETE SLOPE AND DITCH PAVING WILL BE REQUIRED WHEN SHOWN ON PLANS.

REV.	DESCRIPTION	DATE
1	ADDRESS COMMENTS FROM S.E.R.T.	04/29/10



PREPARED FOR:  
**CITY OF COLORADO SPRINGS  
 TRANSIT DIVISION**  
 1015 TRANSIT DRIVE  
 COLORADO SPRINGS, CO 80903

PREPARED UNDER MY DIRECT SUPERVISION FOR AND BEHALF OF  
 WESTWORKS ENGINEERING.



**MOUNTAIN METRO TRANSIT  
 1070 TRANSIT DRIVE**

**POND OUTFALL  
 DETAIL SHEET**

DESIGNED BY: MGP	DRAWN BY: MGP
SCALE: VARIES	DATE: 03/22/10
JOB NUMBER: 90910	SHEET: 4 OF 4

CHAD D. KUZBEK, COLORADO PE #35751 DATE



**GENERAL NOTES FOR SANITARY SERVICE LINES:**

(TO BE ADDED TO SERVICE PLANS, REF: WASTEWATER DETAIL DRAWINGS C 5-1, 2, 3, & 4)

THE CONTRACTOR SHALL NOTIFY THE COLORADO SPRINGS UTILITIES, DISPATCH (668-3524) 48 HOURS PRIOR TO THE START OF CONSTRUCTION TO OUTLINE METHODS OF CONSTRUCTION, MATERIALS TO BE USED, AND CONSTRUCTION STAKING.

1. WASTEWATER SERVICES TO BE LOCATED IN THE CENTER OF THE LOT, OR THE CENTER OF THE DRIVEWAY FOR A FLAG LOT. (PER WASTEWATER DETAIL DRAWING C 5-1).  
NOTE: ALTERNATE SERVICE LOCATION, IS ONLY WITH THE APPROVAL OF COLORADO SPRINGS UTILITIES SHOWN ON WASTEWATER DETAIL DRAWING C 5-1.
2. SANITARY SEWER SERVICES TO BE INSTALLED A MINIMUM OF 7 FEET INTO THE PROPERTY UNLESS OTHERWISE SHOWN. WATER SERVICE LINES SHALL BE INSTALLED TO THE PROPERTY LINE, I.E. CURB STOP BOX.
3. PROPERTY END OF ALL SEWER SERVICES TO BE MARKED WITH A 2"x4"x12' WOOD POST EXTENDING VERTICALLY FROM FLOW-LINE.
4. FINAL LOCATION OF ALL SEWER, WATER AND GAS SERVICES TO BE APPROVED IN THE FIELD BY THE COLORADO SPRINGS UTILITY INSPECTOR.
5. UTILITY LOCATIONS, WHETHER OR NOT SHOWN ON THIS PLAN, IN NO WAY RELIEVES THE CONTRACTOR FROM THE RESPONSIBILITY OF CALLING FOR AND OBTAINING UTILITY LOCATIONS FROM THE APPROPRIATE AUTHORITIES PRIOR TO BEGINNING EXCAVATION.
6. SANITARY SEWER SERVICE CONNECTIONS TO BE A MINIMUM OF 5 FEET FROM ANY MANHOLE ON THE MAIN LINE AND TWO (2) FEET BETWEEN TAPS CENTER TO CENTER.
7. ALL CLEAN-OUTS SHALL BE THE SAME SIZE AS THE HOST PIPE (I.E. 6" SERVICE LINE REQUIRES A 6" CLEAN-OUT, TO BE INSTALLED PER COLORADO SPRINGS UTILITIES STANDARD DETAIL C 5-4).

**WATER SERVICE INSTALLATION GENERAL NOTES:**

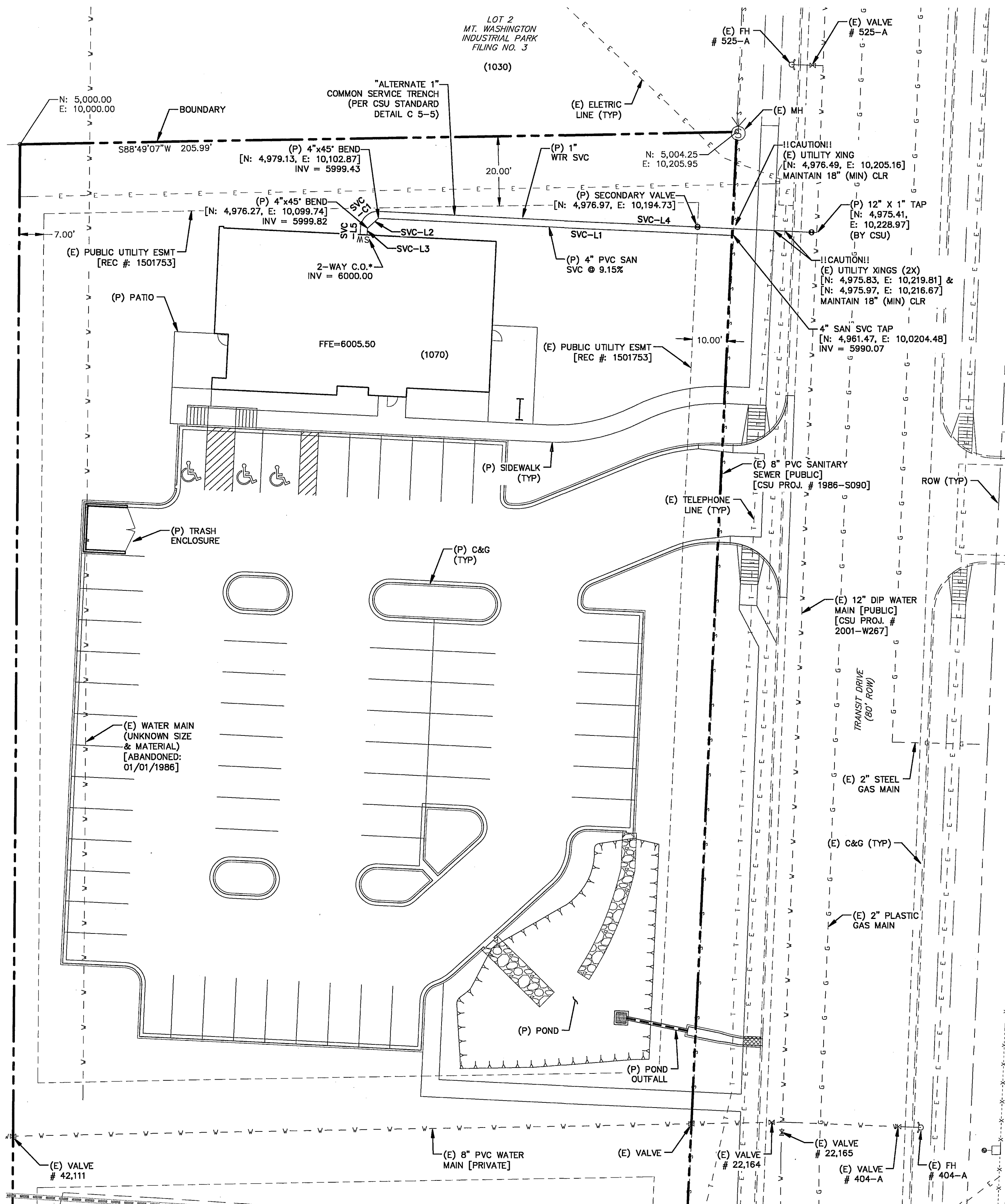
1. ALL WORK ON FABRICATION AND INSTALLATION OF METER BOXES SHALL CONFORM TO THE FOLLOWING CODES, LATEST EDITION:  
PIKES PEAK REGIONAL BUILDING CODE  
CURRENT ADOPTED VERSION OF THE INTERNATIONAL PLUMBING CODE  
BUILDING CODE FOR REINFORCED CONCRETE (ACI)  
AMERICAN WELDING SOCIETY SPECIFICATIONS  
UNIFORM MECHANICAL CODE
2. ALL MATERIAL, COMPONENTS CONSIDERED DEFECTIVE BY COLORADO SPRINGS UTILITIES SHALL BE REJECTED AND IMMEDIATELY REMOVED FROM THE SITE AT NO EXPENSE TO COLORADO SPRINGS UTILITIES.
3. THE CONTRACTOR SHALL VERIFY AND COORDINATE THE DIMENSIONS OF ALL OPENINGS, METERS, INSERTS, ETC., WITH COLORADO SPRINGS UTILITIES AND THE MANUFACTURER.
4. CONCRETE WORK SHALL CONFORM TO THE CONCRETE SPECIFICATIONS DESCRIBED WITHIN THIS DOCUMENT AND ALSO CONFORM TO THE WATER LINE EXTENSION AND SERVICE STANDARDS.
5. GROUTING OF CONCRETE WALLS AROUND PIPES AND FOOTINGS AS SHOWN ON DRAWINGS SHALL BE DONE WITH NON-SHRINK GROUT.
6. IN THE EVENT THAT GROUNDWATER OR OTHER UNSTABLE AND UNUSUAL CONDITIONS ARE ENCOUNTERED, THE CONTRACTOR SHALL NOTIFY COLORADO SPRINGS UTILITIES IMMEDIATELY FOR INSPECTION AND RECOMMENDATIONS FOR DRAINS, GRAVEL FILL, ADDITIONAL REINFORCING, ETC. APPROVED RUBBER WATER STOPS SHALL BE USED IN ALL CONCRETE JOINTS FOR CONDITIONS WHERE SUBSURFACE WATER IS ENCOUNTERED.
7. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL OBTAIN METER SIZE AND DIMENSIONS FROM APPLICATIONS AND PERMITS. ALL SIZES AND DIMENSIONS SHALL CONFORM TO COLORADO SPRINGS UTILITIES STANDARDS AND SPECIFICATIONS. REGULATORS MAY BE LOCATED IN A METER PIT OR IN THE BUILDING. REGARDLESS OF LOCATION, THE REGULATOR MUST BE ON THE INLET SIDE OF THE METER.
8. ONLY ONE (1) WATER METER SHALL BE INSTALLED IN A PIT, REGARDLESS OF SIZE (IF A SECOND METER IS TO BE INSTALLED, THIS IS WITH APPROVAL OF COLORADO SPRINGS UTILITIES FIELD SERVICES).
9. THE "CURB STOP" AND "SECONDARY VALVE" SHALL BE DEFINED AS THE CONTROL AT PROPERTY LINE OR THE FIRST VALVE AFTER CONNECTION OF THE CORPORATION STOP OR TAP VALVE TO A WATER DISTRIBUTION MAIN, NOT TO INCLUDE ANY STOPS OR VALVES ON PRIVATE MAINS OR SERVICES WHICH WILL BE THE RESPONSIBILITY OF THE PROPERTY OWNER.
10. ALL IRRIGATION, FIRE AND COMMERCIAL POTABLE WATER SERVICE CONNECTIONS SHALL INCLUDE BACK-FLOW PREVENTION ASSEMBLIES, WHICH MEET THE STANDARDS SPECIFIED BY THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT (CDPHE). NO WATER SERVICE LINE WILL BE APPROVED BY COLORADO SPRINGS UTILITIES FOR METER INSTALLATION UNTIL THE REQUIRED BACK-FLOW PREVENTION MEASURES HAVE BEEN MET. A REDUCED PRESSURE BACKFLOW DEVICE SHALL BE REQUIRED WHERE A HIGH HAZARD CONDITION EXISTS SUCH AS, BUT NOT LIMITED TO, CHEMICALS RUST INHIBITORS OR BODILY FLUIDS THAT COULD POTENTIALLY BE BACK SIPHONED INTO THE DOMESTIC WATER SUPPLY.
11. ON 1-1/2" THROUGH 12" METER INSTALLATIONS A 1/4" OR 3/8" TEE MAY BE INSTALLED TO ALLOW FOR A GAUGE BEFORE THE PRESSURE REDUCING VALVE FOR PURPOSES OF MONITORING INCOMING (MAIN LINE) PRESSURE WITH APPROVAL OF COLORADO SPRINGS UTILITIES.

**NOTES:**

1. NO LANDSCAPING (LARGE TREES, ETC) OR STRUCTURE SHALL BE CONSTRUCTED WITHIN FIFTEEN FEET (15' EACH SIDE OF CENTERLINE) OF A SANITARY SEWER PIPELINE.
2. MAINTAIN 18" MIN. CLEARANCE AT ALL UTILITY CROSSINGS.
3. \* CLEAN-OUTS PER CSU STANDARD DETAIL C 5-4

**LEGEND**

EXISTING	(E)
PROPOSED	(P)
ADDRESS	(1070)
BOUNDARY	---
ROW	---
LOT LINE	---
EASEMENT	---
(E) SANITARY, MH	---
(E) WATER MAIN, VALVE, FH	---
(E) GAS MAIN	---
(E) TELEPHONE	---
(E) ELECTRIC	---
(P) 4" PVC SAN. SEWER SERVICE	---
(P) 3/4" WATER SERVICE	---
TYPE "K" COPPER	---

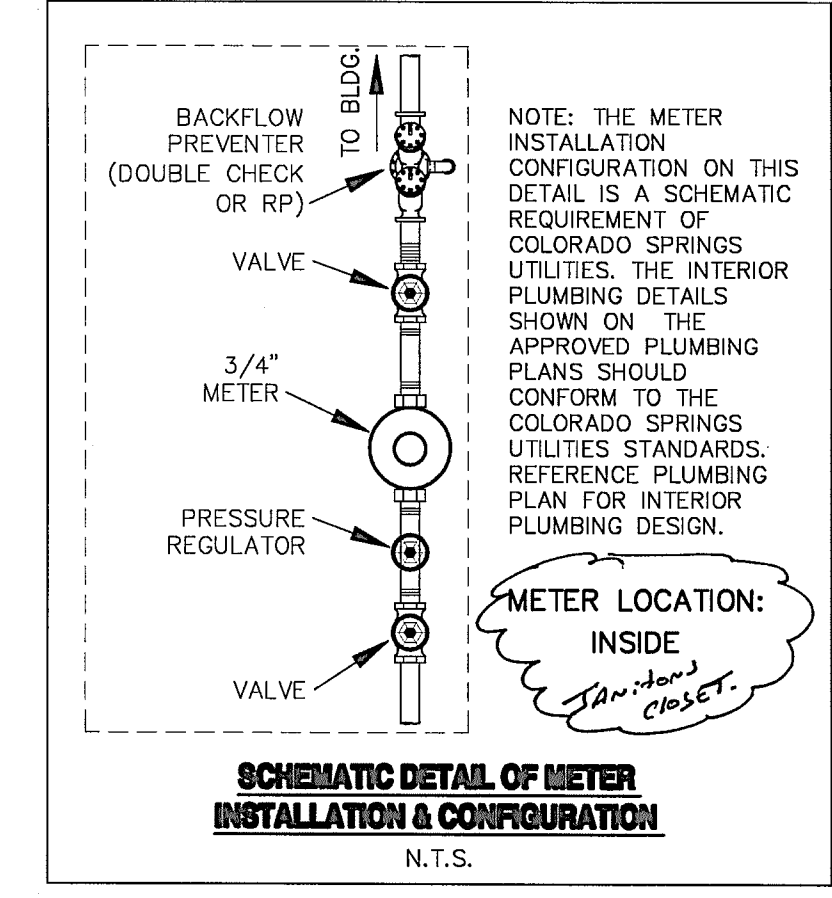
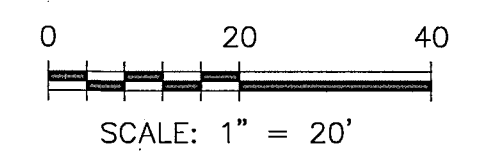


**LINE TABLE - SERVICES**

LINE	BEARING	DISTANCE
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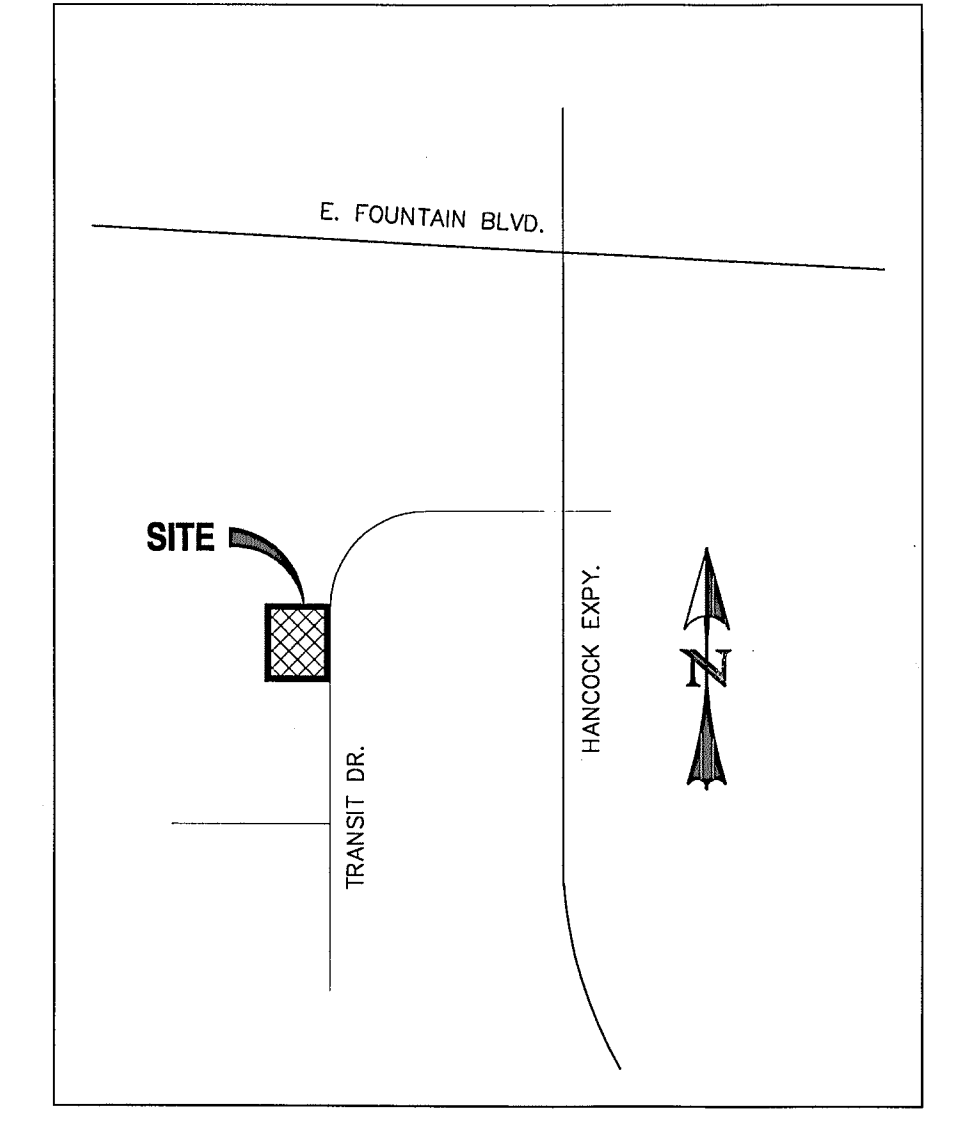
**CURVE TABLE - SERVICE**

CURVE	DELTA	RADIUS	LENGTH
SVC-C1	90°00'00\"/>		



**BUILDING INFO: 1070 Transit Drive**

BUILDING SIZE:	3,520 SF
CONSTRUCTION TYPE:	V-B
FIRE FLOW REQUIRED:	1,500 GPM
HYDRANTS REQUIRED:	1
HYDRANTS PROVIDED:	2 (EXISTING)
BUILDING SPRINKLED:	NO
FIRE WALLS:	NO
DISTANCE BETWEEN HYDRANTS:	500
HOSE LAY:	250



**UTILITY SERVICE PLAN**

OWNER/DEVELOPER STATEMENT

THE UNDERSIGNED OWNER/DEVELOPER AGREES THAT THE INSTALLATION OF THESE PROPOSED UTILITY SERVICES WILL BE MADE IN ACCORDANCE WITH COLORADO SPRINGS UTILITIES STANDARDS. THE APPROVAL DATE ON THE PLAN(S) EXPIRES IN ONE (1) YEAR AND SHALL REQUIRE RE-SUBMITTAL FOR SIGNATURE IF CONSTRUCTION DOES NOT BEGIN DURING THIS PERIOD.

SIGNED: \_\_\_\_\_ DATE: \_\_\_\_\_

OWNER/DEVELOPER:

PRINTED NAME: \_\_\_\_\_

DBA: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

PHONE: \_\_\_\_\_

**FIRE PREVENTION DIVISION APPROVAL:**

ACCORDING TO CALCULATIONS REVIEWED BY THE COLORADO SPRINGS UTILITIES THE THEORETICAL AVAILABLE FIRE FLOW AT NODE "404-A" IS 3200 GPM AND NODE "525-A" IS 3600 GPM UNDER MAXIMUM DAY DEMAND WITH A 20 PSI RESIDUAL. ACTUAL FIRE FLOW MAY VARY DUE TO VARIOUS PARAMETERS.

ALL FIRE HYDRANTS SHALL BE INSTALLED ACCORDING TO COLORADO SPRINGS UTILITIES SPECIFICATIONS. THE NUMBER OF FIRE HYDRANTS AND HYDRANT LOCATIONS AS SHOWN ON THIS WATER INSTALLATION PLAN ARE CORRECT AND ADEQUATE TO SATISFY THE FIRE PROTECTION REQUIREMENTS AS SPECIFIED BY THE CITY OF COLORADO SPRINGS FIRE DEPARTMENT.

C.S.F.D. FIRE PREVENTION DIVISION, C.S.F.D.  
C.S.F.D. PLAN REVIEW NUMBER: 20090870-FH-1 \_\_\_\_\_ DATE \_\_\_\_\_

**COLORADO SPRINGS UTILITIES WATER SERVICE APPROVAL**

SIGNED: \_\_\_\_\_ DATE: \_\_\_\_\_

PROJECT NUMBER: 2010-C016 RMS NO: 1979184

APPROVAL EXPIRES ONE (1) YEAR FROM DESIGN APPROVAL DATE.

**COLORADO SPRINGS UTILITIES WASTEWATER SERVICE APPROVAL**

SIGNED: \_\_\_\_\_ DATE: \_\_\_\_\_

PROJECT NUMBER: 2010-C016 RMS NO: 1979184

APPROVAL EXPIRES ONE (1) YEAR FROM DESIGN APPROVAL DATE.

REV.	DESCRIPTION	DATE
1	ADDRESS COMMENTS	04/05/10

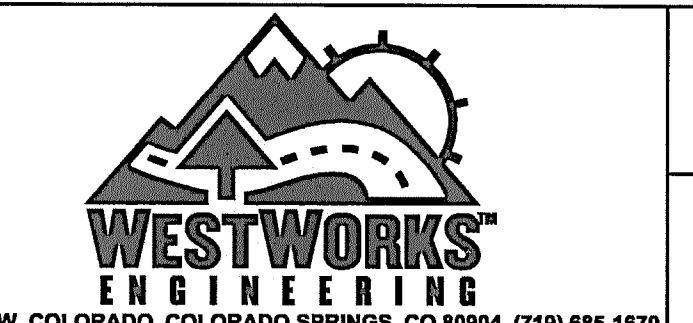


FIMS MAP NO.: I-36  
PRESSURE ZONE: LOWLINE  
PLAT RECEPTION NUMBER: 1501753  
UDCF NUMBER: CF2010017  
SCHEDULE NUMBER: 64202-17-011

PREPARED FOR:  
**CITY OF COLORADO SPRINGS TRANSIT DIVISION**  
1015 TRANSIT DRIVE  
COLORADO SPRINGS, CO 80903

PREPARED UNDER MY DIRECT SUPERVISION FOR AND BEHALF OF  
WESTWORKS ENGINEERING.

CHAD D. KUZBEK, COLORADO PE #35751 DATE: \_\_\_\_\_

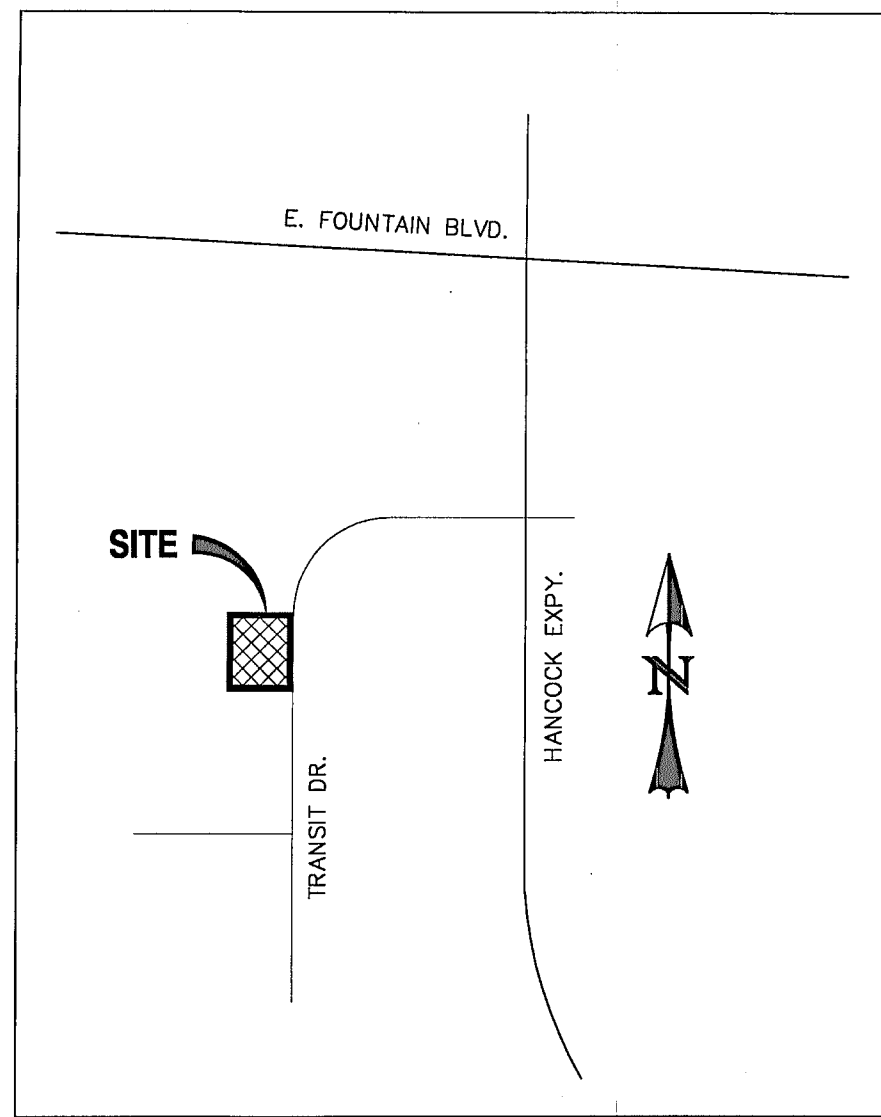


**MOUNTAIN METRO TRANSIT**  
**1070 TRANSIT DRIVE**  
**UTILITY SERVICE PLAN**

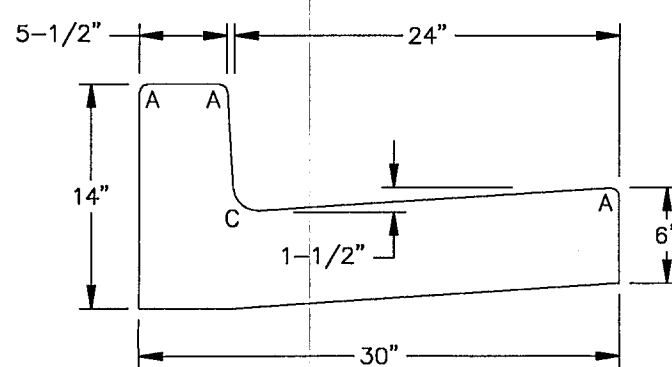
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SCALE:	N/A	DATE:	8/9/10
JOB NUMBER:	90910	SHEET:	1 OF 1

DP #: AR-UP 09-082  
APPROVED: 03/10/10

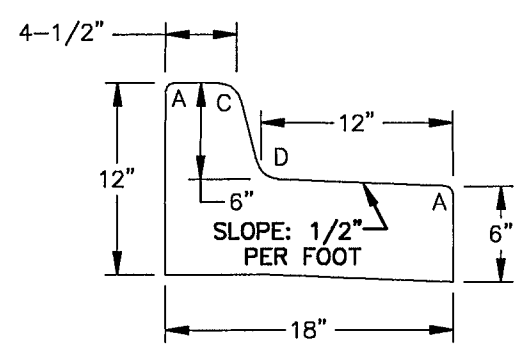




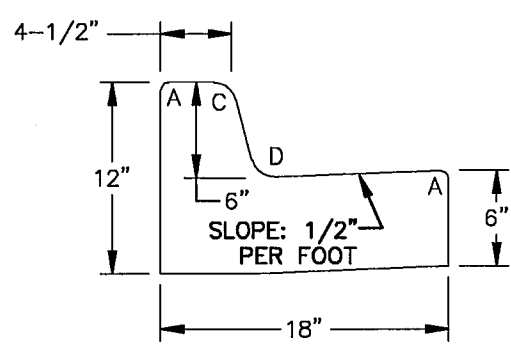
VICINITY MAP  
SCALE: N.T.S.



TYPE 1  
VERTICAL CURB & GUTTER  
SCALE: N.T.S.



TYPE 3  
MEDIAN CURB & GUTTER  
SCALE: N.T.S.



TYPE 3-CARRY  
MODIFIED MEDIAN CURB & GUTTER  
SCALE: N.T.S.

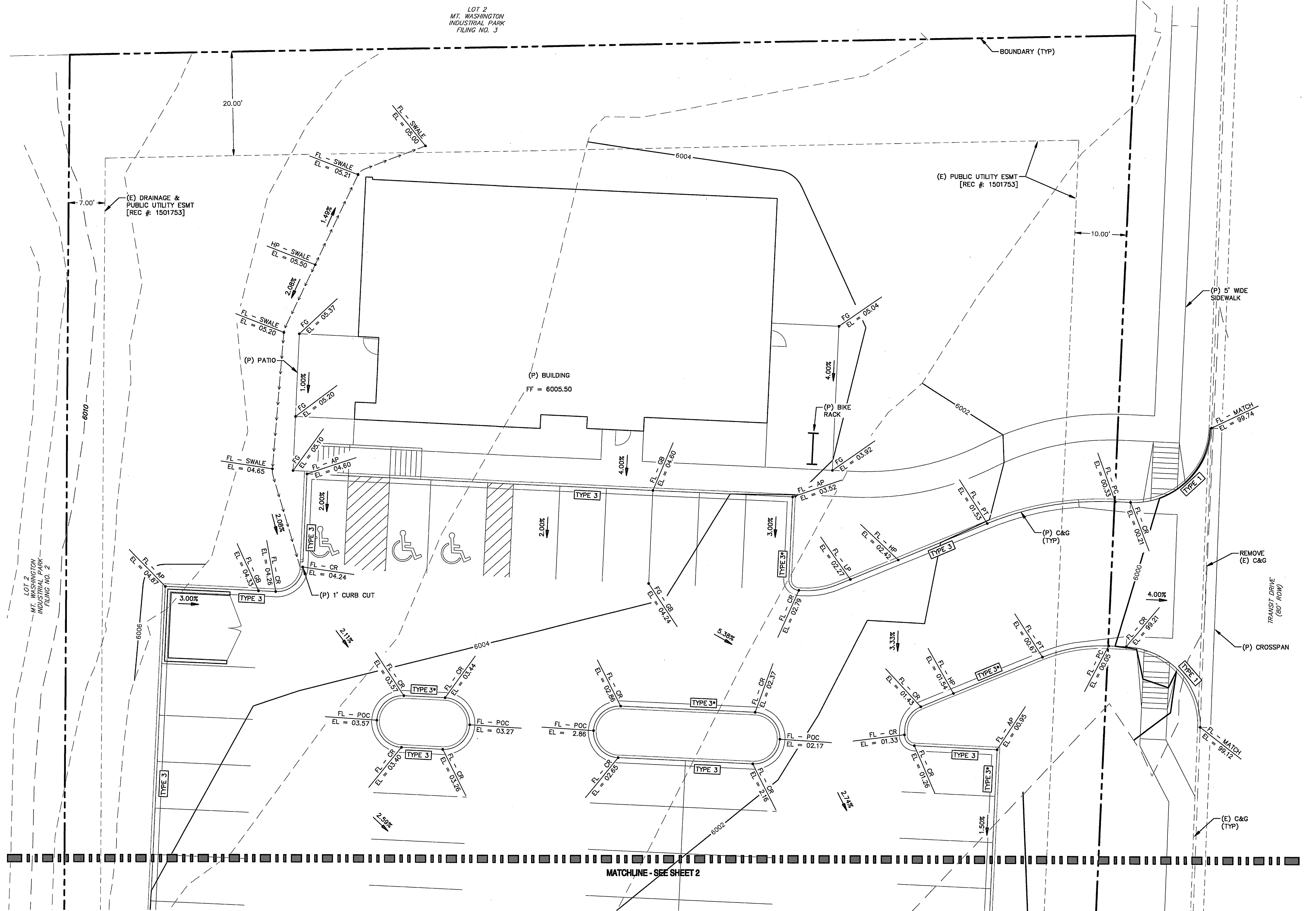
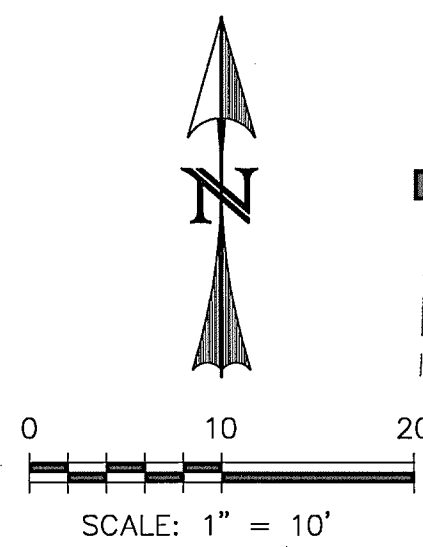
RADI LEGEND:

- A = 1/2"
- C = 1-1/2"
- D = 1-1/2" TO 2"

LEGEND

- EXISTING
- PROPOSED
- CURB AND GUTTER
- EASEMENT
- FLOWLINE
- ANGLE POINT
- CURB RETURN
- TYPICAL
- GRADE BREAK
- HIGH POINT
- LOW POINT
- BOUNDARY
- EASEMENT
- (E) CONTOUR, INDEX
- (E) CONTOUR
- (P) CONTOUR, INDEX
- (P) CONTOUR
- CURB TYPE CALL-OUT

- (E)
- (P)
- C&G
- ESMT
- FL
- AP
- CR
- TYP
- GB
- HP
- LP



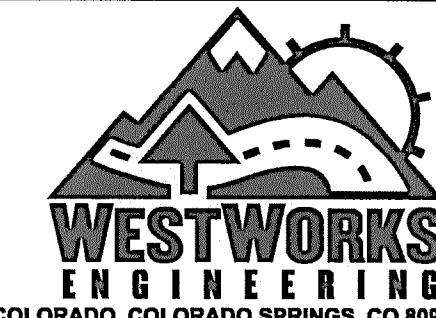
REV.	DESCRIPTION	DATE



PREPARED FOR:  
CITY OF COLORADO SPRINGS  
TRANSIT DIVISION  
1015 TRANSIT DRIVE  
COLORADO SPRINGS, CO 80903

PREPARED UNDER MY DIRECT SUPERVISION FOR AND BEHALF OF  
WESTWORKS ENGINEERING.

CHAD D. KUZBEK, COLORADO PE #35751 DATE

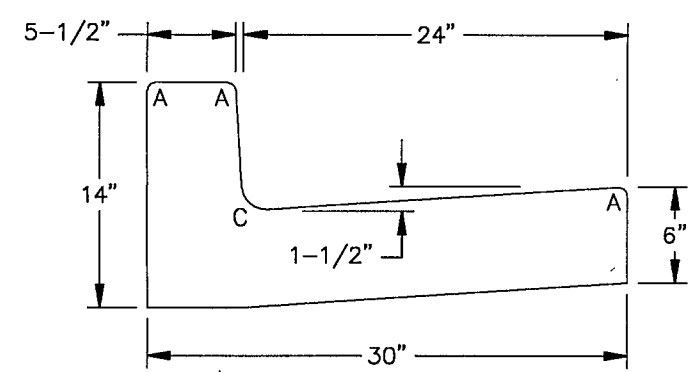


MOUNTAIN METRO TRANSIT  
1070 TRANSIT DRIVE

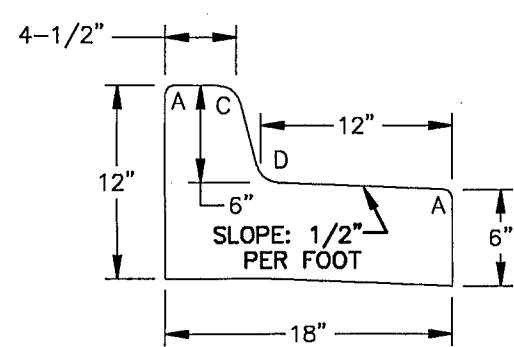
DETAILED GRADING PLAN

DESIGNED BY: MGP	DRAWN BY: MGP
SCALE: 1"=10'	DATE: 8/9/10
JOB NUMBER: 90910	SHEET: 1 OF 2

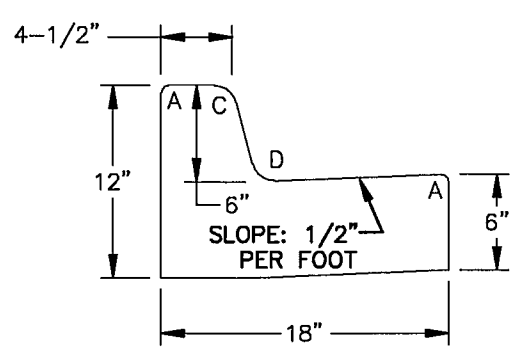




**TYPE 1**  
VERTICAL CURB & GUTTER  
SCALE: N.T.S.

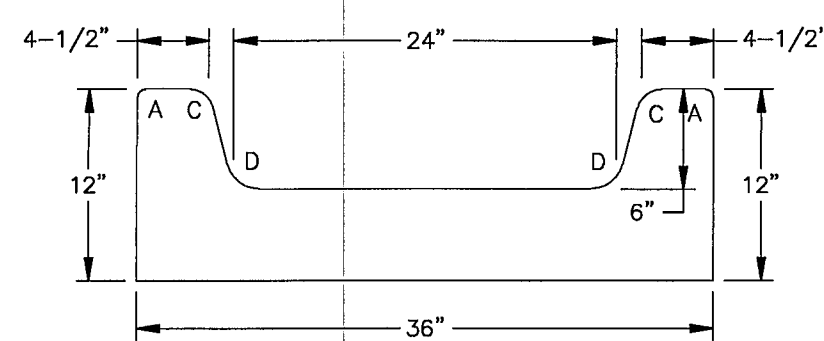


**TYPE 3**  
MEDIAN CURB & GUTTER  
SCALE: N.T.S.

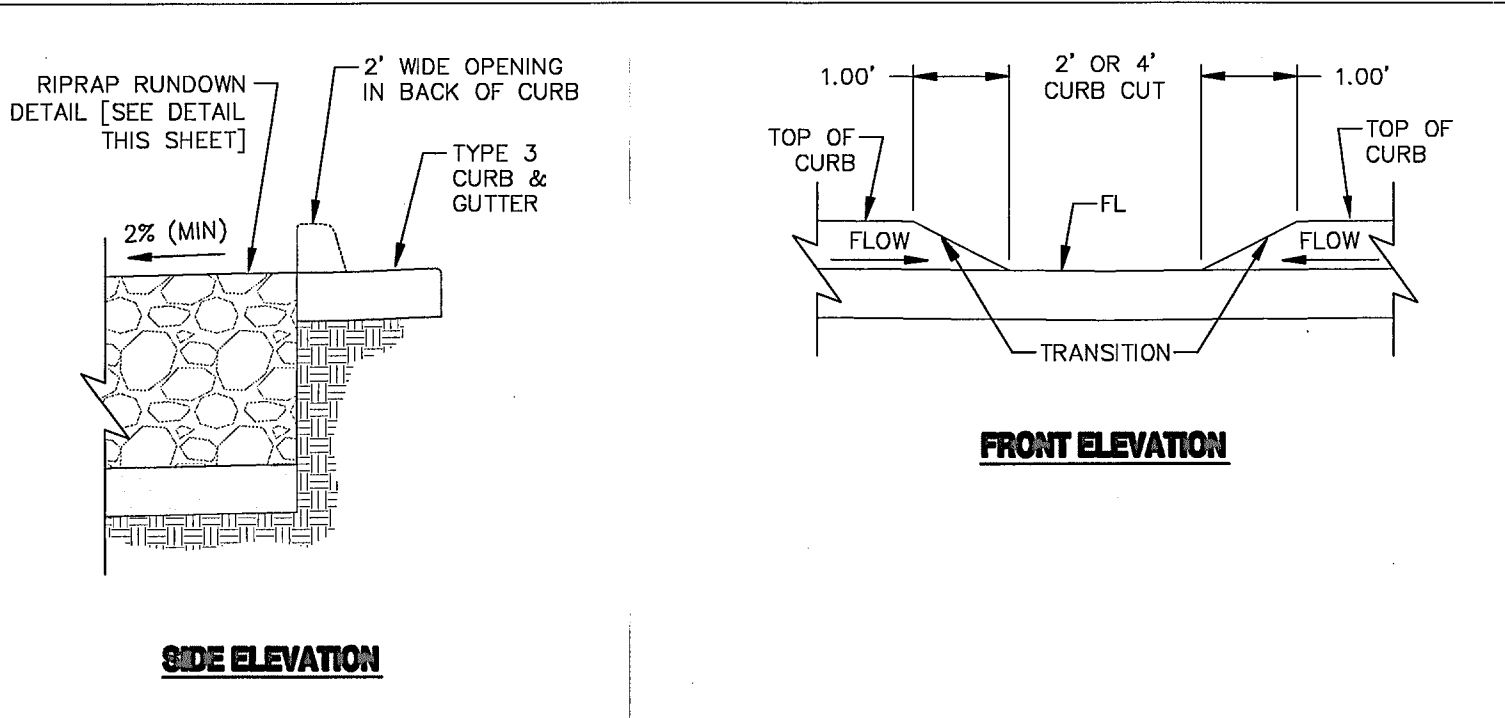


**TYPE 3-CARRY**  
MODIFIED MEDIAN CURB & GUTTER  
SCALE: N.T.S.

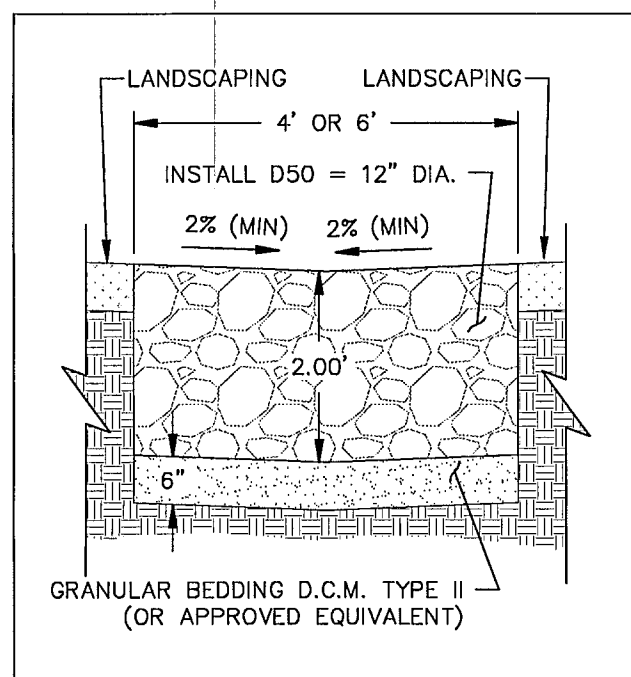
**RADII LEGEND:**  
A = 1/2"  
C = 1-1/2"  
D = 1-1/2" TO 2"



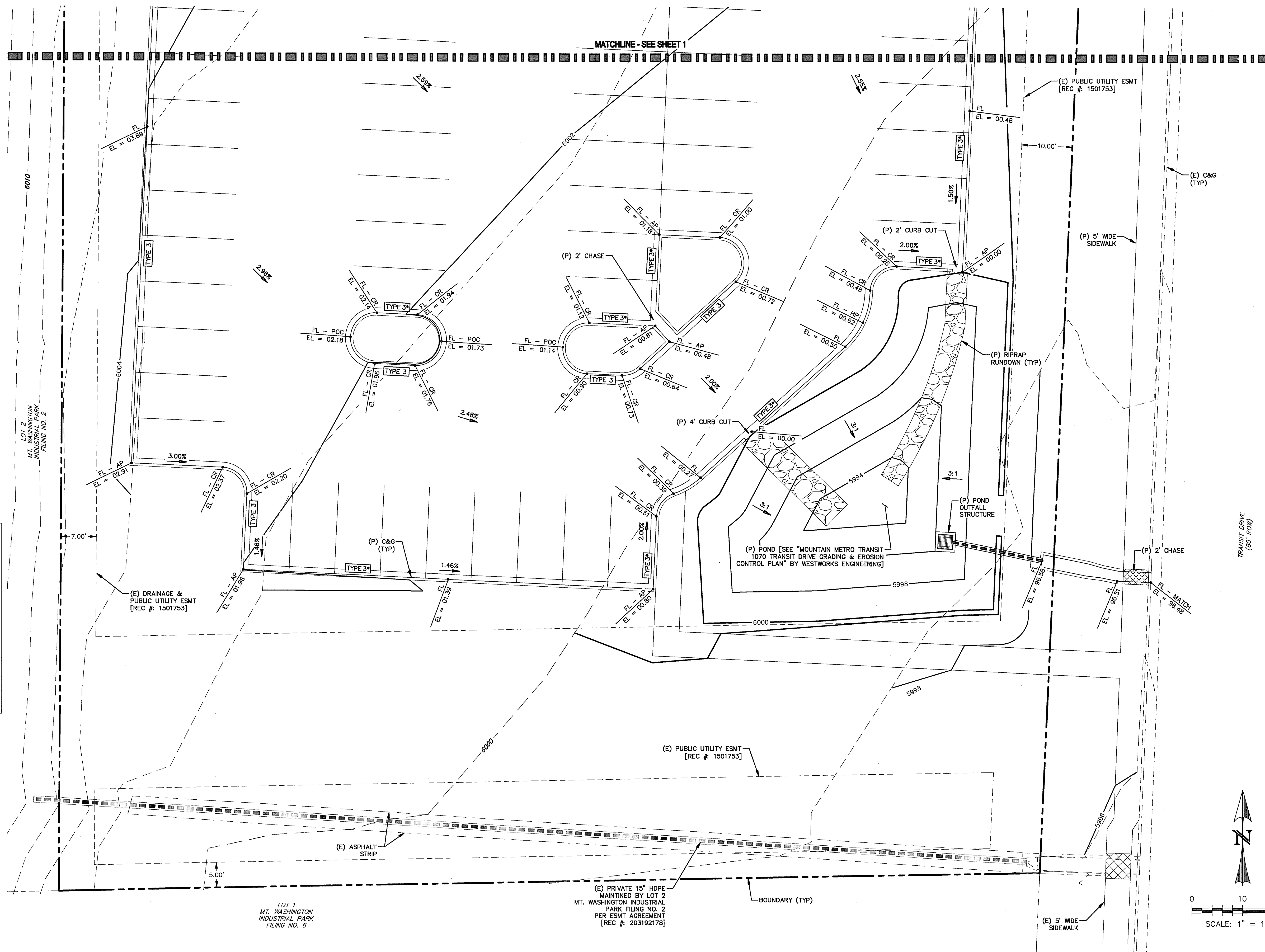
**CURB CHASE**  
SCALE: N.T.S.



**CURB CUT DETAIL**  
SCALE: 1" = 2"



**RIPRAP RUNDOWN DETAIL**  
SCALE: 1" = 2"

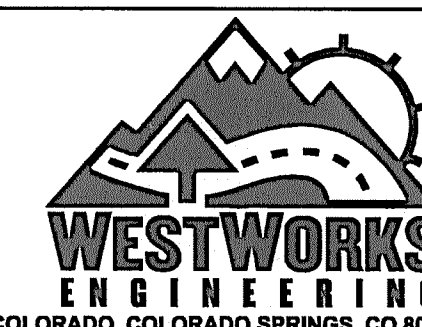


REV.	DESCRIPTION	DATE

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Call 72 hours before you dig.  
For more details visit:  
www.call811.com

PREPARED FOR:  
**CITY OF COLORADO SPRINGS**  
TRANSIT DIVISION  
1015 TRANSIT DRIVE  
COLORADO SPRINGS, CO 80903

PREPARED UNDER MY DIRECT SUPERVISION FOR AND BEHALF OF  
WESTWORKS ENGINEERING.



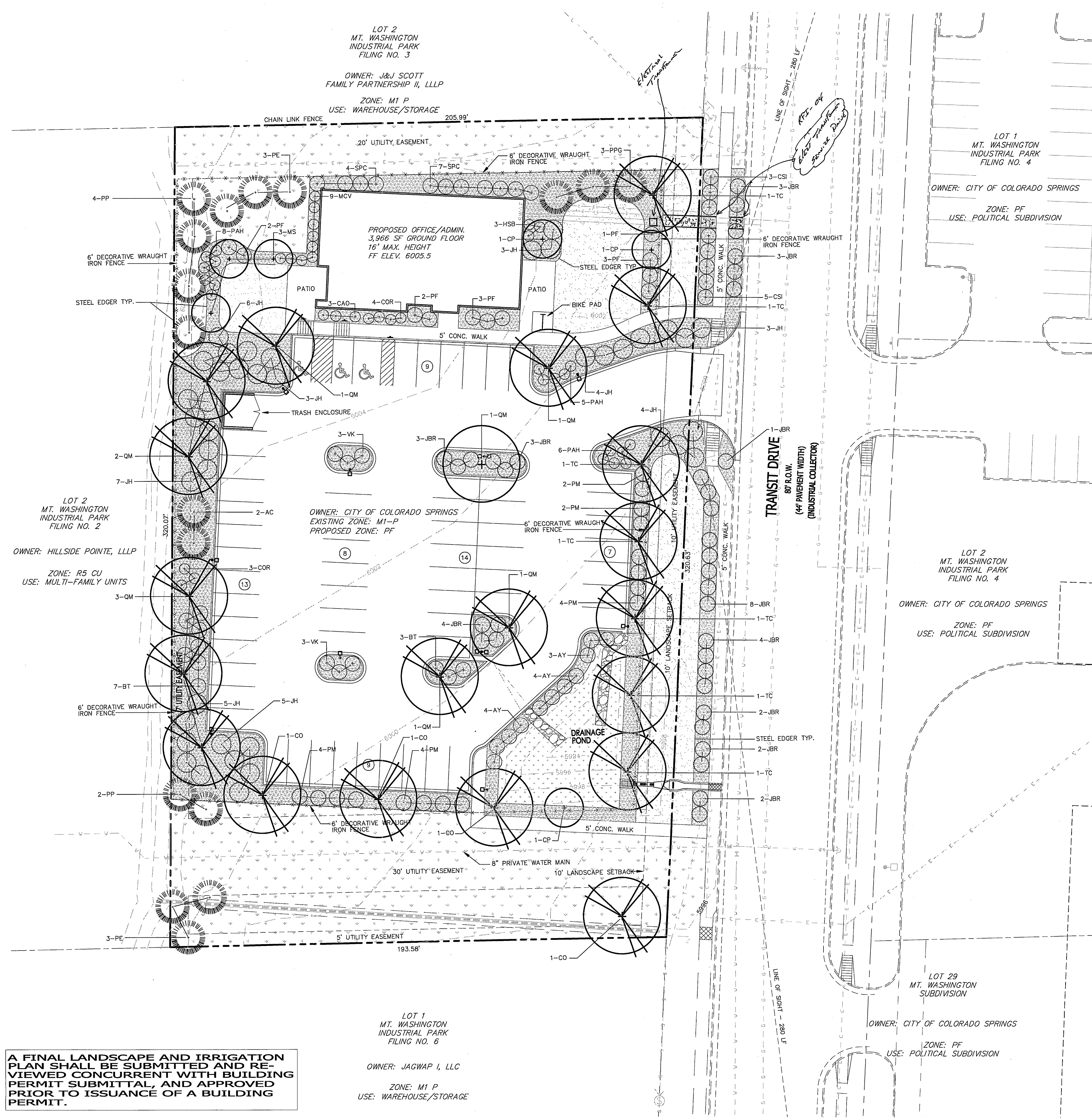
**MOUNTAIN METRO TRANSIT**  
**1070 TRANSIT DRIVE**

**DETAILED GRADING PLAN**

DESIGNED BY: MGP	DRAWN BY: MGP
SCALE: 1"=10'	DATE: 8/9/10
JOB NUMBER: 90910	SHEET: 2 OF 2

CHAD D. KUZBEK, COLORADO PE #35751 DATE





**PLANT SCHEDULE:**

(Required by Policy 312)

Symbol	Abbr.*	Qty.	Botanical Name	Common Name	Key from Appendix B	Mature Width	Planting Size	Notes
<b>TREES:</b>								
AC	2	2	Abies concolor	White Fir	45678SA	15-25'	8HT	B&B
CO	4	4	Celtis occidentalis	Hackberry	3467DA	40-50'	2' cal.	B&B
CP	3	3	Crataegus phaeopyrum	Washington Hawthorne	45AS	20-30'	2' cal.	B&B
MS	3	3	Malus 'Spring Snow'	Spring Snow Crabapple	467S	12-15'	2' cal.	B&B
PE	6	6	Pinus edulis	Pinon Pine	1256D	12-15'	6HT	B&B
PPG	3	3	Picea pungens	Colorado Spruce	67BS	15-18'	6HT	B&B
PP	6	6	Pinus ponderosa	Ponderosa Pine	2678D	20-30'	6HT	B&B
QM	10	10	Quercus macrocarpa	Bur oak	4DA	50-60'	2' cal.	B&B
TC	7	7	Tilia cordata	Littleleaf Linden	4S	50-60'	2' cal.	B&B
Percent Signature Trees**:					Signature Trees:	44		
(60% minimum - Policy 311.3k)					Total No. of Trees:	44	= 100.0% Signature Trees	
<b>SHRUBS:</b>								
AY	11	11	Aronia arbutifolia 'Brilliantissima'	Red Chokecherry	47S	4-5'	5 GAL.	CONT.
BT	10	10	Berberis thunbergii var atropurpurea	Redleaf Barbary	45A	4-5'	5 GAL.	CONT.
CSI	6	6	Cornus sericea 'Isaniri'	Isanri Dogwood	1256D	4-5'	5 GAL.	CONT.
JBR	35	35	Juniperus sabinia 'Broadmoor'	Broadmoor Juniper	568A	6-8'	5 GAL.	CONT.
JH	40	40	Juniperus horizontalis 'Hughes'	Hughes Juniper	2568A	6-8'	5 GAL.	CONT.
VK	6	6	Viburnum carlesii	Korean Spice Viburnum	458A	4-6'	5 GAL.	CONT.
PF	11	11	Potentilla fruticosa 'Goldfinger'	Goldfinger Potentilla	4567S	4-5'	5 GAL.	CONT.
PM	16	16	Pinus mugo 'Compacta'	Dwarf Mugo Pine	1256D	4-5'	5 GAL.	CONT.
SPC	11	11	Syringa x prestoniae 'Miss Canada'	Canadian lilac	568A	6-8'	5 GAL.	CONT.
Percent Signature Shrubs**:					Signature Shrubs:	148		
(60% minimum - Policy 311.3k)					Total No. of Shrubs:	148	= 100.0% Signature Shrubs	
<b>ORNAMENTAL GRASSES:</b>								
CAO	3	3	Calamagrostis acutiflora 'Overdam'	Variiegated Feather Reed Grass	A	1-3'	1 GAL.	CONT.
COR	7	7	Coraxelia seloana	Pampus Grass	-	4'	1 GAL.	CONT.
HSB	3	3	Helictotrichon sempervirens	Blue Oat Grass	1235D	3-4'	1 GAL.	CONT.
MCV	9	9	Molinia caerulea variegata	Variiegated Moor Grass	3A	2-3'	1 GAL.	CONT.
PAH	19	19	Pennisetum setaceum 'Hamelin'	Dwarf Fountain Grass	A	12-18"	1 GAL.	CONT.
Percent Signature Grasses**:					Signature Grasses:	41		
(if substituted for shrub @ 2 for 1)					Total No. of Grasses:	41	= 100.0% Signature Grasses	

**LEGEND:**

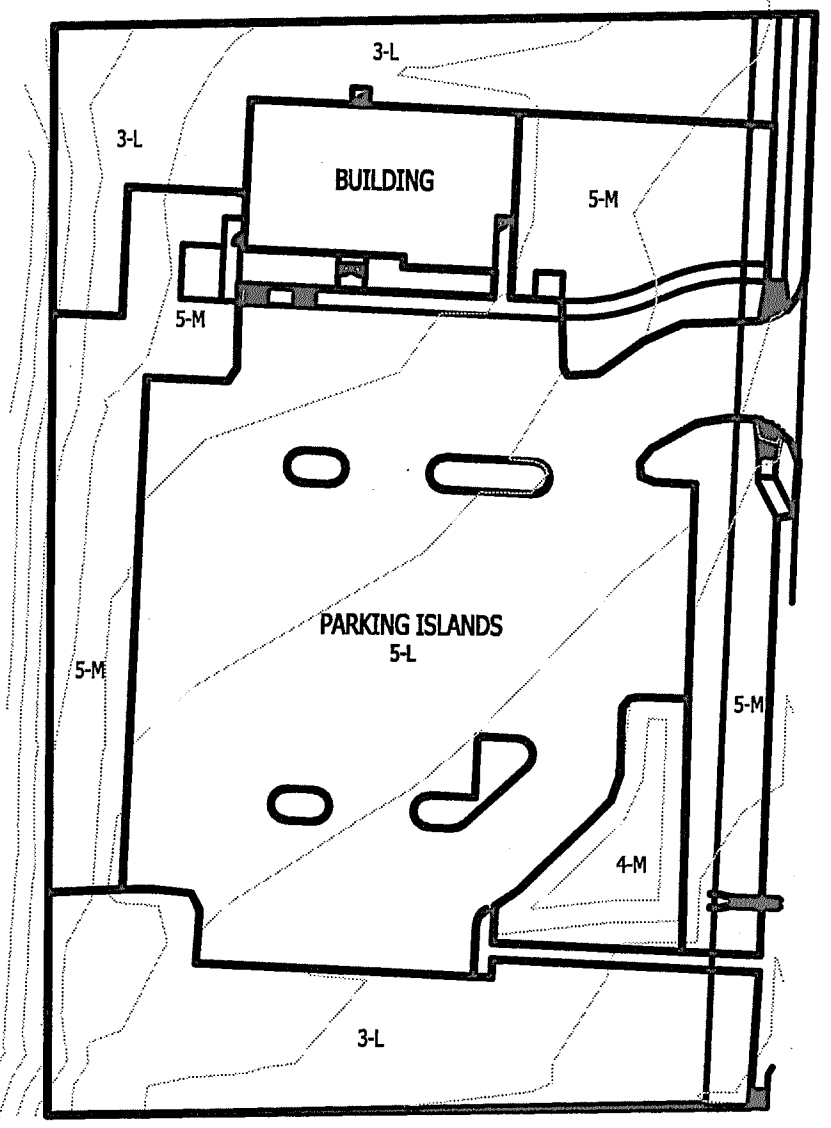
- ORGANIC CEDAR MULCH  
UNIFORMLY PLACED TO A 4" DEPTH
- BLUEGRASS TURF
- PROPOSED NATIVE SEED
- EXISTING NATIVE GRASS  
(TO REMAIN UNDISTURBED)
- PARKING LOT LIGHT

**SITE CATEGORY ABBREVIATIONS**

- (S) SETBACKS/STREETSCAPES
- (I) INTERNAL
- (P) PARKING
- (B) BUFFER

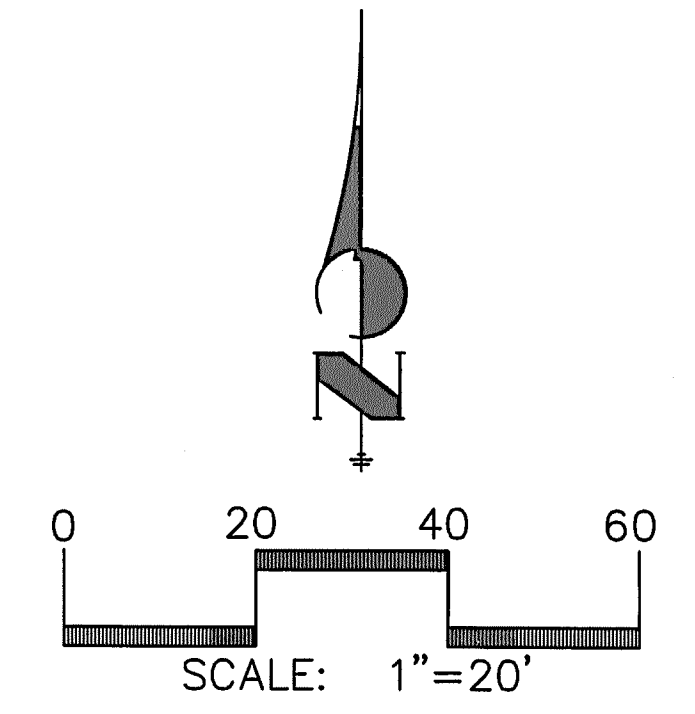
**SEED MIXES AND APPLICATION RATES:**

LDW GROW MIX  
 EPHRAIM CRESTED WHEATGRASS - 30%  
 PERENNIAL RYEGRASS - 25%  
 BLUE FESCUE - 20%  
 CANADA BLUEGRASS - 15%  
 CHEWINGS FESCUE - 10%  
 RATE: 35 BULK POUNDS/ACRE



**HYDROZONE MAP**

FOOTHILLS [FOOTHILLS/PLAINS] PLAINS  
 L - LOW (7-15 INCHES PER YEAR)  
 M - MODERATE (15-25 INCHES PER YEAR)



A FINAL LANDSCAPE AND IRRIGATION PLAN SHALL BE SUBMITTED AND REVIEWED CONCURRENT WITH BUILDING PERMIT SUBMITTAL, AND APPROVED PRIOR TO ISSUANCE OF A BUILDING PERMIT.

LOT 1  
 MT. WASHINGTON INDUSTRIAL PARK  
 FILING NO. 6  
 OWNER: JAGWAP I, LLC  
 ZONE: M1 P  
 USE: WAREHOUSE/STORAGE

LOT 29  
 MT. WASHINGTON SUBDIVISION  
 OWNER: CITY OF COLORADO SPRINGS  
 ZONE: PF  
 USE: POLITICAL SUBDIVISION

LOT 2  
 MT. WASHINGTON INDUSTRIAL PARK  
 FILING NO. 4  
 OWNER: CITY OF COLORADO SPRINGS  
 ZONE: PF  
 USE: POLITICAL SUBDIVISION

LOT 1  
 MT. WASHINGTON INDUSTRIAL PARK  
 FILING NO. 4  
 OWNER: CITY OF COLORADO SPRINGS  
 ZONE: PF  
 USE: POLITICAL SUBDIVISION

LOT 2  
 MT. WASHINGTON INDUSTRIAL PARK  
 FILING NO. 3  
 OWNER: J&J SCOTT FAMILY PARTNERSHIP II, LLLP  
 ZONE: M1 P  
 USE: WAREHOUSE/STORAGE

LOT 2  
 MT. WASHINGTON INDUSTRIAL PARK  
 FILING NO. 2  
 OWNER: HILLSIDE POINTE, LLLP  
 ZONE: R5 CU  
 USE: MULTI-FAMILY UNITS

DESIGNED BY:  
 DRAWN BY: MIKE SHAFER  
 DATE: SEPTEMBER 2009  
 SCALE: 1"=20'  
 REVISIONS: 1/2010, 2/2010, 3/2010



TITLE:  
**CONTRACTOR BUILDING 1  
 1070 TRANSIT DRIVE  
 FINAL LANDSCAPE PLAN**

**LP-01**

FILE NUMBER:  
 CPC DP 09-082  
 CPC ZC 09-081



**SITE CATEGORY CALCULATIONS:**

ZONING EXISTING M-1P PROPOSED PF  
 LOT AREA 64,033 SF  
 IMPERVIOUS AREA  
 BUILDING 3,966 SF 6%  
 PAVEMENT (ASPHALT/CONCRETE) 26,088 SF 41%  
 PERVIOUS AREA  
 ORGANIC MULCH 10,900 SF 17%  
 BLUEGRASS TURF 5,776 SF 9%  
 NATIVE TURF 17,303 SF 27%  
 TOTAL IMPERVIOUS 30,054 SF 47%  
 TOTAL PERVIOUS 33,979 SF 53%

**LANDSCAPE SETBACKS/STREETSCAPES**

STREET NAME TRANSIT DRIVE  
 STREET CLASSIFICATION INDUSTRIAL COLLECTOR  
 WIDTH REQUIRED 10'  
 WIDTH PROVIDED (INCL. R.O.W. & EASEMENTS) 30'  
 LINEAR FOOTAGE 320'  
 TREE/FEET REQUIRED 30  
 NUMBER OF TREES REQUIRED/PROVIDED 10.6/8  
 SHRUB SUBSTITUTES REQUIRED/PROVIDED 30/40  
 ORNAMENTAL GRASS SUBSTITUTES REQUIRED/PROVIDED 0/0

**INTERNAL LANDSCAPING**

NET SITE AREA (LESS PUBLIC R.O.W.) 64,033 SF.  
 PERCENT MINIMUM INTERNAL AREA 5%  
 INTERNAL AREA (SF) REQUIRED/PROVIDED 3,202/33,978 (LESS ASPHALT, HARDSCAPE AND BUILDING).  
 INTERNAL TREES (1/500 SF) REQUIRED/PROVIDED 6.4/12  
 SHRUB SUBSTITUTES REQUIRED/PROVIDED 0/35  
 ORNAMENTAL GRASS SUBSTITUTES REQUIRED/PROVIDED 0/27

**PARKING (MOTOR VEHICLE LOTS)**

NUMBER OF VEHICLE SPACES PROVIDED 60  
 SHADE TREES REQUIRED/PROVIDED (1/15 SPACES) 4.0/8  
 VEHICLE LOT FRONTAGE TRANSIT DRIVE  
 LENGTH OF FRONTAGE (EXCLUDING DRIVEWAY) 150'  
 2/3 LENGTH OF FRONTAGE 100'  
 MIN. 3' SCREENING PLANTS (AT 4' O.C.) REQUIRED/PROVIDED 25/44  
 EVERGREEN PLANTS REQUIRED (50%)/PROVIDED 13/13  
 LENGTH OF SCREENING WALL OR BERM PROVIDED N/A

**LANDSCAPE BUFFER**

LENGTH OF FRONTAGE 320'  
 TREE/FEET REQUIRED 1/20  
 NUMBER OF TREES REQUIRED/PROVIDED 16/16  
 PERCENT OF EVERGREEN REQUIRED (50%)/PROVIDED 8/11  
 NUMBER OF SHRUBS REQUIRED/PROVIDED 0/43

**GENERAL LANDSCAPE NOTES:**

ALL PLANTS SHALL MEET OR EXCEED STANDARDS SET BY THE COLORADO NURSERY ASSOCIATION, AND THE AMERICAN STANDARD OF NURSERY STOCK. ALL PLANTS SHALL BE TYPICAL OF THEIR SPECIES, HEALTHY, FREE OF DISEASE, INSECT PESTS, MECHANICAL INJURIES, AND HAVE ADEQUATE ROOT SYSTEMS. TREES SHALL BE FULLY BRANCHED IN PROPORTION TO WIDTH AND HEIGHT AND HAVE A RELATIVELY STRAIGHT TRUNK WITH A CENTRAL LEADER. THE CONTRACTOR SHALL PRUNE LOWER BRANCHES OF DECIDUOUS TREES TO 6 FEET ABOVE FINISH GRADE. ALL TREES, SHRUBS, AND GROUND COVERS SHALL BE INSTALLED PER PLANTING DETAILS. ALL PLANT MATERIAL SHALL BE INSPECTED BY THE LANDSCAPE ARCHITECT OR OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION.

PER SOILS ANALYSIS, ALL PLANTING AREAS SHALL BE AMENDED TO 1 CUBIC YARD PER 1000 SF OF WELL COMPOSTED AGED MANURE OR PREMIUM COMPOST. ALL AMENDED AREAS SHALL BE TILLED TO A DEPTH OF 6-8" PRIOR TO PLANTING. PLANT PIT BACKFILL PER DETAIL.

ALL SEEDED OR HYDROMULCHED AREAS SHALL DEMONSTRATE 95% GERMINATION PRIOR TO FINAL ACCEPTANCE.

ALL TREES, SHRUBS, AND GROUND COVERS SHALL BE IRRIGATED BY AN AUTOMATIC DRIP IRRIGATION SYSTEM EQUIPPED WITH A RAIN SENSOR SHUT-OFF DEVICE. ALL NEW TURF AREAS TO BE IRRIGATED BY UNDERGROUND, AUTOMATIC IRRIGATION SYSTEM ALSO EQUIPPED WITH A RAIN SENSOR SHUT-OFF DEVICE.

ALL PLANTING AREAS FOR TREES, SHRUBS, AND ORNAMENTAL GRASSES SHALL BE MULCHED TO A 4" DEPTH. MULCH SHALL BE FIBROUS IN NATURE, NOT CHIPPED OR IN CHUNKS, AND WATERED IN AFTER INSTALLATION.

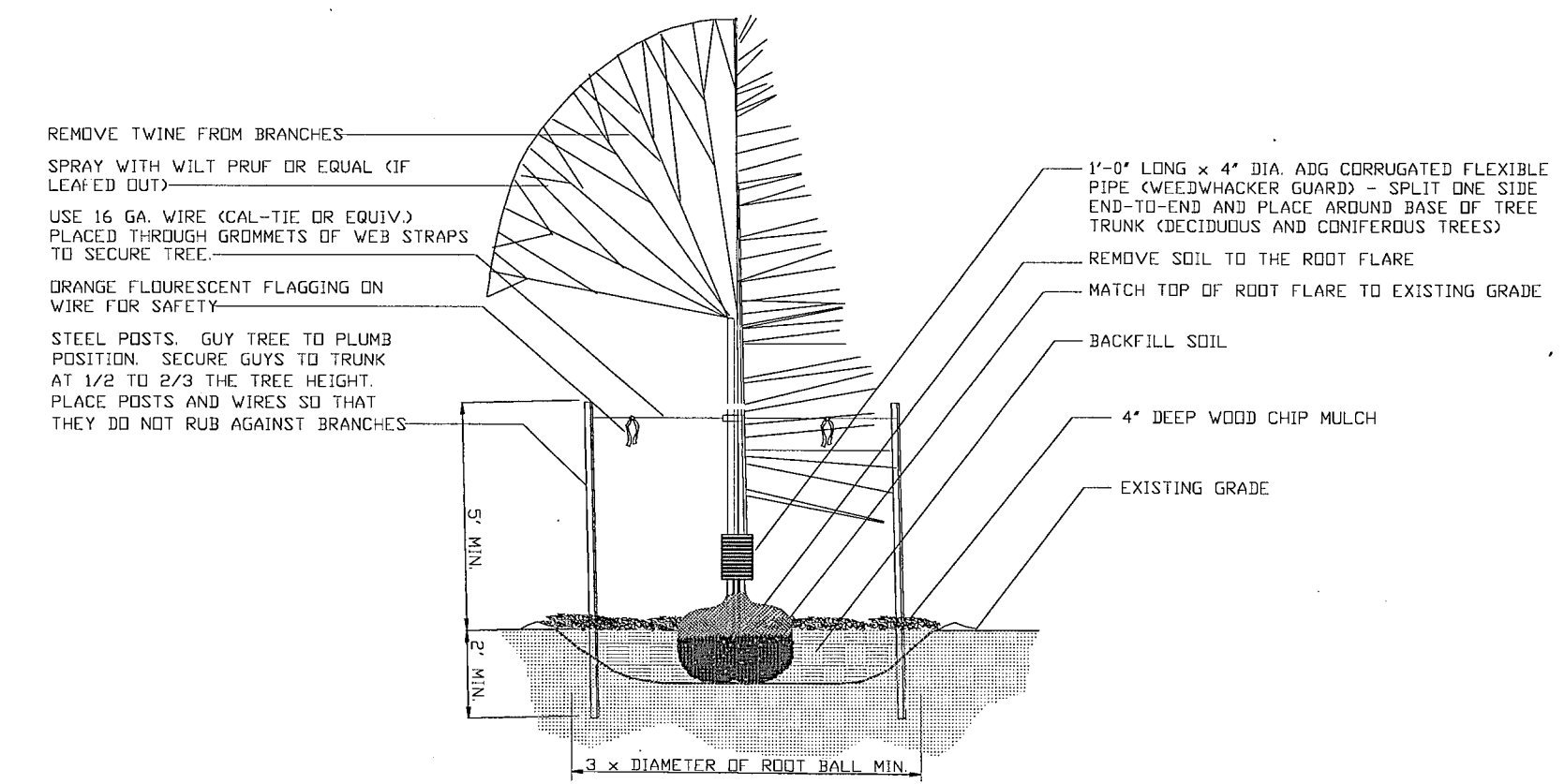
ALL EDGER SHALL BE 3/16" x 4" RYERSON OR PRO STEEL EDGER WITH 16" STAKES AT 30' O.C.. COLOR SHALL BE GREEN.

NOTIFICATION FOR IRRIGATION INSPECTION AFFIDAVIT SHALL BE GIVEN DURING CONSTRUCTION WHILE TRENCH IS OPEN AND AFTER COMPLETION OF SYSTEM INSTALLATION PRIOR TO SEEDING OR SODDING. THE LANDSCAPE ARCHITECT OR OWNER'S REPRESENTATIVE SHALL BE NOTIFIED AT LEAST 48 HOURS PRIOR TO SEEKING CERTIFICATE OF OCCUPANCY FOR FINAL LANDSCAPE INSPECTION AFFIDAVIT.

ANY FIELD CHANGES OR DEVIATIONS TO THESE PLANS WITHOUT PRIOR CITY APPROVAL OF AN AMENDED DEVELOPMENT PLAN MAY RESULT IN A DELAY OF FINAL APPROVAL AND THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY.

SOIL TYPE: ACCORDING TO THE USDA, THE SOIL TYPE FOR THIS PROJECT SITE IS CHASEVILLE GRAVELLY SANDY LOAM, 1 TO 8 PERCENT SLOPES, 100% OF THE SITE.

MAINTENANCE OF ALL LANDSCAPE AREAS SHOWN ON THIS PLAN SHALL BE THE RESPONSIBILITY OF THE OWNER.



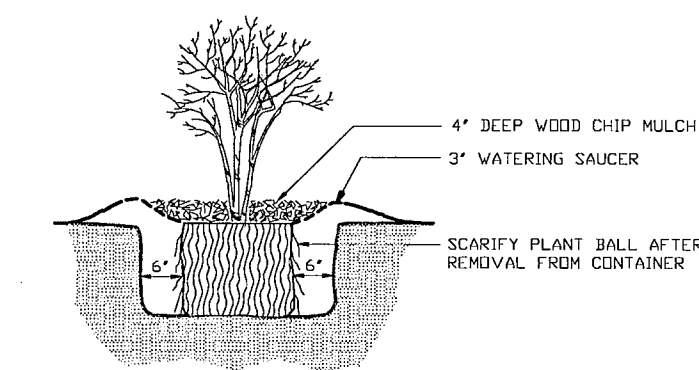
**NOTES (PERTAINING TO BOTH, DECIDUOUS AND CONIFEROUS TREES):**

1. DIG PIT SO THAT THAT TOP OF THE ROOT FLARE IS LEVEL WITH SURROUNDING GRADE. THE ROOT FLARE SHOULD DETERMINE THE DEPTH OF THE PIT, NOT THE TOP OF THE ROOT BALL.
2. THE BALL OF TREE SHOULD SIT ON UNDISTURBED SOIL.
3. CUT BOTTOM OF BASKET. REMOVE ALL SOIL FROM ROOT BALL TO TOP OF ROOT FLARE. SET TREE AND REMOVE ENTIRE BASKET AFTER CORRECT PLACEMENT. REMOVE BURLAP FROM THE SIDES OF THE ROOT BALL. REMOVE ALL TWINE FROM AROUND THE TRUNK, AND BACKFILL.
4. PREPARE BACKFILL 1/3 COMPOST-TYPE MIX WITH 2/3 TOPSOIL. REMOVE ANY DEBRIS FROM TOPSOIL BACKFILL AND SOAK BACKFILL IMMEDIATELY AFTER PLANTING.
5. USE HYDRATED SYNTHETIC POLYMER UNDER AND AROUND PLANTS IN NATIVE AREAS ONLY.

**DECIDUOUS/CONIFEROUS TREE PLANTING DETAIL**

SCALE: NO SCALE

TREEDTL.DWG



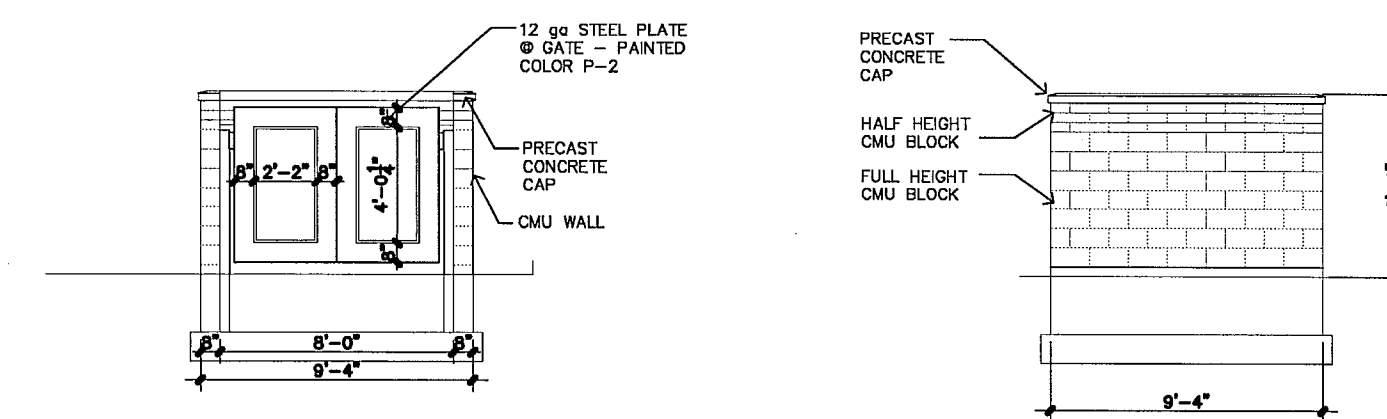
**NOTES:**

1. USE HYDRATED BROADLEAF P-4 SYNTHETIC POLYMER UNDER AND AROUND PLANTS.
2. BACKFILL IMMEDIATELY AFTER PLANTING.

**ORNAMENTAL GRASS/SHRUB PLANTING DETAIL**

SCALE: NO SCALE

SHRUBDTL.DWG



**DUMPSTER ENCLOSURE DETAIL**

SCALE: NO SCALE

DESIGNED BY:  
 DRAWN BY: MIKE SHAEER  
 DATE: SEPTEMBER 2009  
 SCALE: AS SHOWN  
 REVISIONS: JANUARY 2010



TITLE:  
**CONTRACTOR BUILDING 1**  
**1070 TRANSIT DRIVE**  
**LANDSCAPE NOTES & DETAILS**

LP-02

FILE NUMBER:  
 CPC DP 09-082  
 CPC ZC 09-081



Know what's below.  
Call before you dig.  
811  
48 HOURS BEFORE YOU DIG, CALL UTILITY LOCATORS FOR LOCATING AND MARKING GAS, ELECTRIC, WATER, AND WASTEWATER.  
Determina lo que esta bajo tierra.  
Llama antes de excavar.

LOT 2  
MT. WASHINGTON  
INDUSTRIAL PARK  
FILING NO. 2  
OWNER: HILLSIDE POINTE, LLLP  
ZONE: R5 CU  
USE: MULTI-FAMILY UNITS

LOT 2  
MT. WASHINGTON  
INDUSTRIAL PARK  
FILING NO. 3  
OWNER: J&J SCOTT  
FAMILY PARTNERSHIP II, LLLP  
ZONE: M1 P  
USE: WAREHOUSE/STORAGE

LOT 1  
MT. WASHINGTON  
INDUSTRIAL PARK  
FILING NO. 4  
OWNER: CITY OF COLORADO SPRINGS  
ZONE: PF  
USE: POLITICAL SUBDIVISION

LOT 2  
MT. WASHINGTON  
INDUSTRIAL PARK  
FILING NO. 4  
OWNER: CITY OF COLORADO SPRINGS  
ZONE: PF  
USE: POLITICAL SUBDIVISION

LOT 29  
MT. WASHINGTON  
SUBDIVISION  
OWNER: CITY OF COLORADO SPRINGS  
ZONE: PF  
USE: POLITICAL SUBDIVISION

LOT 1  
MT. WASHINGTON  
INDUSTRIAL PARK  
FILING NO. 6  
OWNER: JACWAP I, LLC  
ZONE: M1 P  
USE: WAREHOUSE/STORAGE

IRRIGATION DESIGN BY:  
**hackworth consulting, inc**  
James Hackworth  
C.I.D. #000062  
hcljm@comcast.net  
3544 Cape Roman Drive  
(719) 599-3998 Ph  
(719) 260-7725 Fax  
Colorado Springs, CO 80920

EQUIPMENT SCHEDULE

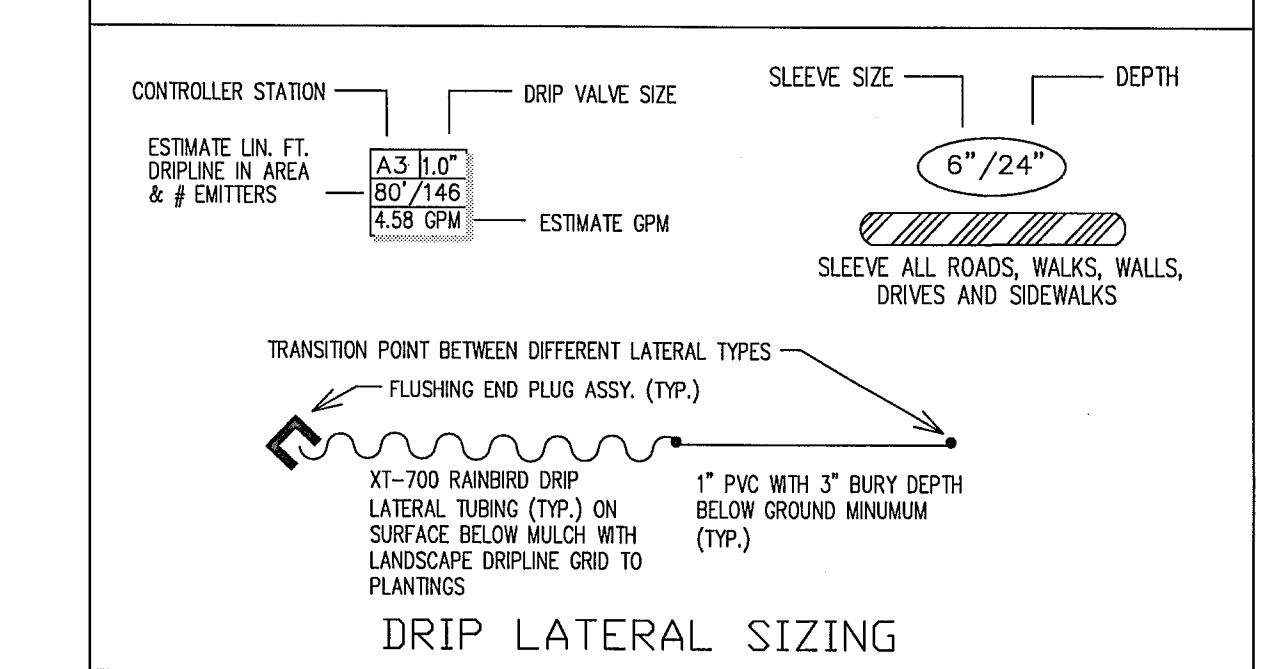
SYMBOL	MANUFACTURER	MODEL	NOZZLE	PSI	GPM	COVERAGE
	RAINBIRD	LD-09-24	LANDSCAPE DRIP LINE	30	1 GPH /PRT	5' DIA. TREE RING
	HUNTER	MPR40-04-CV	MP100090	40	0.37	14' RADIUS
	HUNTER	MPR40-04-CV	MPSS530	40	0.44	5'X30' STRIP
	HUNTER	MPR40-04-CV	MP2000360	40	1.47	38" DIA.
	HUNTER	MPR40-04-CV	MP200090	40	0.74	19' RADIUS
	HUNTER	MPR40-04-CV	MP3000360	40	3.64	60" DIA.
	HUNTER	MPR40-04-CV	MP300090	40	1.82	30' RADIUS

SYMBOL	MANUFACTURER	MODEL	SIZE	DESCRIPTION/REMARKS
	HUNTER	ICC-1600PL	16 STATIONS	AUTOMATIC CONTROLLER 'WALL MOUNT' CABINET
	HUNTER	WRC	CONTROLLER MOUNT	WIRELESS MINI CLIK
	FEBCO	B25YA-1' (BY OTHERS)	1'	REDUCED PRESSURE BACKFLOW PREVENTOR
	HUNTER	ICV-150G	15'	CONTROL VALVE ASSEMBLY
	HUNTER	ICZ-101	1' Flows 0.3-15 GPM	DRIP CONTROL VALVE ASSEMBLY
	HUNTER	IHQ44	1'	QUICK COUPLING VALVE
	MATCO	#100-1	LINE SIZE	ISOLATION GATE VALVE

NOTES

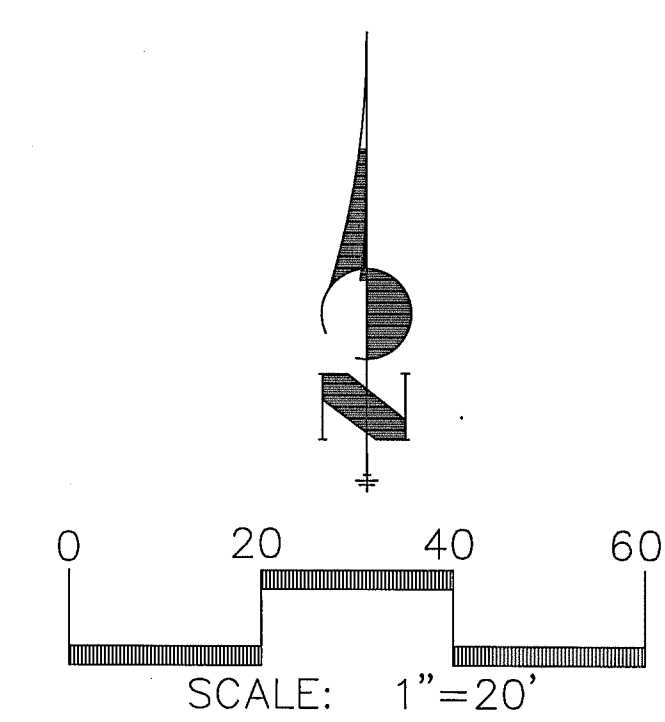
- USE ALL CLASS 200 BELLED ONE END SOLVENT WELD (BOW) PVC PIPE (1.5" SIZE UNLESS OTHERWISE NOTED) FOR MAINLINES.
- USE CLASS 200 BOW SOLVENT WELD PVC PIPE (1" SIZE UNLESS OTHERWISE NOTED) FOR LATERALS. UNIZED SECTIONS OF LATERALS BETWEEN TWO IDENTICALLY SIZED PIPE SIZING NOTATIONS SHALL BE CONSIDERED TO BE OF THE SAME NOMINAL SIZE AND NOT CONSIDERED WITH THE DEFAULT PIPE SIZE NOTED ABOVE. USE ONLY STANDARD TEES, REDUCERS, COUPLINGS AND ELBOWS AS APPLICABLE. USE OF CROSS TEE FITTINGS IS NOT PERMITTED. MAINTAIN A MINIMUM OF 6" SEPARATION AND CLEARANCE BETWEEN ALL UNCONNECTED PIPING AS REQUIRED. NO PIPING SHALL BE LAID INTO SAME TRENCH OR PIPE/WIRE SLEEVE.
- SLEEVE ALL WALKS, DRIVEWAYS AND/OR ROADWAYS WITH CLASS 200 PVC SIZED TWICE THE SIZE OF THE PIPE DIAMETER CARRIED. ALL WIRE CROSSING SHALL BE IN SEPARATE 2" PVC SLEEVE INSTALLED PARALLEL TO MAINLINE SLEEVE. COORDINATE INSTALLATION OF SLEEVING WITH OTHER TRADES TO INSURE PROPER NUMBER, PLACEMENT AND PROTECTION FROM DAMAGE PRIOR TO USE. ANY IRRIGATION PIPING AND/OR WIRING WHICH PASSES THROUGH EXISTING HARDSCAPE WHERE SLEEVING WAS NOT INSTALLED REQUIRES HORIZONTAL BORING AND CONDUITING. SLEEVE INSTALLER SHALL INDULIBLY STAMP OR ETCH AN "S" AT EACH END OF HARDSCAPE CROSSING FOR EACH SLEEVE.
- ALL LOW VOLTAGE 140V TWO-WIRE PATH SHALL BE DONE PER MANUFACTURERS SPECS. KING BROTHERS WIRE CONNECTORS SHALL BE USED FOR ALL UNDERGROUND WIRE CONNECTIONS. IT IS ESSENTIAL THAT INSTALLER INSURE ALL CONNECTIONS BE ABSOLUTELY WATER TIGHT WITH NO LEAKAGE TO GROUND NOR SHORTING BETWEEN CONDUCTORS.
- INSTALL TWO (2) SPARE CONTINUOUS LENGTH YELLOW #14F UNDERGROUND BURIAL TRACER WIRES ALONG ENTIRE LENGTH OF IRRIGATION MAINLINE INCLUDING MINIMUM OF 3' COILED LENGTH STUBBED UP INTO EACH VALVE BOX OR SEPARATE VALVE BOX AT DEAD END MAINLINES WHERE NO SOLENOID VALVES EXIST.
- REFER TO SHEET #R-2 & R-3 FOR FURTHER 'GENERAL NOTES', SCHEDULES & DETAILS.
- INSTALL 75K-3/4" MATCO MANUAL DRAIN VALVE AT ALL LOW POINTS ALONG MAINLINE (NOTE LOCATIONS ON AS-BUILT), MINIMUM OF ONE PER 300' MAINLINE.
- USE RAINBIRD PC-05 EMITTERS TO ALL PLANTINGS USING 2/SHRUB (SEE DETAIL). USE RAINBIRD 700-CF-21 (SEE DETAIL) FOR END CLOSURES CAP AT THE ENDS OF ALL DRIP TUBING LATERAL (NOTE LOCATIONS ON AS-BUILT). INSTALL 'TREE RINGS' FOR ALL TREES IN MULCHED AREAS PER DETAIL WHERE NOTED ON DRAWINGS.
- THIS DESIGN IS BASED ON OWNER PROVIDING EXTENDING EXISTING SYSTEM AND MAINLINE FROM APPROXIMATE P.O.C. LOCATION NOTED. ASSUMES MINIMUM OF 85 PSI STATIC AND A MAXIMUM FLOW THROUGH ANY AND ALL ZONE VALVES TO BE OPERATED INDEPENDENTLY OF 16 GPM WHICH WILL RESULT IN A MAXIMUM WATERING WINDOW OF 6.9 HOURS/NIGHT SIX DAYS PER WEEK.
- QUICK COUPLERS ARE INTENDED FOR SUPPLEMENTAL HAND WATERING ONLY.

TYPICALS



Note: LOCATION OF ALL SLEEVING AND MAINLINE IS DIAGRAMMATIC ONLY. ROUTE ALL EQUIPMENT THROUGH LANDSCAPED AREAS AND SLEEVE UNDER ALL HARDSCAPE AS REQUIRED TO CONNECT LANDSCAPED AREAS.

DISCLAIMER:  
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DESIGNED BY: JIM HACKWORTH  
DRAWN BY: JIM HACKWORTH  
DATE: MARCH 2010  
SCALE: 1"=20'  
REVISIONS:



TITLE:  
**CONTRACTOR BUILDING 1  
1070 TRANSIT DRIVE  
FINAL IRRIGATION PLAN**

SHEET  
**IR-1**

FILE NUMBER:  
CPC\_DP\_09-082  
CPC\_ZC\_09-081



**GENERAL NOTES:**

- A. PLANS ARE DIAGRAMMATIC: PRECISE PLACEMENT OF EQUIPMENT MAY NOT BE POSSIBLE AS INDICATED. CONSULT PROJECT MANAGER PRIOR TO MAKING RANDOM FIELD CHANGES WHICH ALTER THE INTENT OF THE DESIGN.
- B. SCOPE OF WORK TO BE PROVIDED AND INSTALLED BY IRRIGATION SYSTEM CONTRACTOR TO INCLUDE BUT MAY NOT BE LIMITED TO:
  1. PROVISION AND INSTALLATION OF ALL EQUIPMENT REQUIRED PER THE DRAWINGS, EQUIPMENT SCHEDULE AND SPECIFICATIONS, INCLUDING ALL MISCELLANEOUS INCIDENTAL EQUIPMENT, WHETHER INDICATED OR NOT, BUT WHICH MAY BE REQUIRED TO RESULT IN A COMPLETE AND OPERABLE IRRIGATION SYSTEM (FROM P.O.C.)
  2. COORDINATION AND INSTALLATION OF ALL SURFACE SLEEVES AS INDICATED ON THE DRAWINGS
  3. FLAGGING OF ALL SPRINKLER HEAD AND CONTROL ZONE VALVE LOCATIONS, AND MARKING OF ALL MAINLINE AND LATERAL PIPELINE LOCATIONS FOR INSPECTION AND APPROVAL BY THE PROJECT MANAGER PRIOR TO TRENCHING AND EXCAVATING.
  4. TESTING FOR STATIC WATER PRESSURE AT POINT OF CONNECTION AND DETERMINING ADEQUACY FOR USE PRIOR TO COMMENCING WORK DOWNSTREAM OF POINT OF CONNECTION. INADEQUATE PRESSURE OF FLOW SHALL BE BROUGHT TO THE ATTENTION OF THE PROJECT MANAGER AND DEFICIENCIES SHALL BE CORRECTED PRIOR TO COMMENCEMENT OF WORK DOWNSTREAM OF THE POINT OF CONNECTION. FAILURE TO TEST AND VERIFY ADEQUACY OF THE STATIC PRESSURE OR FLOW AND DETERMINING FEASIBILITY OF OPERATION AS INTENDED BY DESIGN PRIOR TO COMMENCEMENT OF WORK DOWNSTREAM OF THE POINT OF CONNECTION SHALL NOT PRECLUDE IRRIGATION CONTRACTOR'S RESPONSIBILITY TO PROVIDE OPTIMUM COVERAGE OF ALL IRRIGATED AREAS AS INTENDED BY DESIGN AT THE CONTRACTOR'S EXPENSE.
  5. PROVISION AND INSTALLATION OF ALL CONTROLLERS, CABINETS, PEDESTAL MOUNTINGS, CONCRETE PADS, WIRE CHASSES/SWEEPS, POWER SUPPLY (IF SPECIFIED), WATER TAP (IF DOWNSTREAM OF P.O.C.) AND ANY OTHER CONTROLLER RELATED EQUIPMENT AS MAY BE REQUIRED BY THE DRAWINGS AND SPECIFICATIONS. INSTALLER IS RESPONSIBLE FOR MAKING ALL LOW VOLTAGE WIRING CONNECTIONS FROM THE REMOTE CONTROL VALVES TO ALL CONTROLLERS AND FOR CORRECT SEQUENCING OF ALL VALVE OPERATION INDICATED IN THE CONTROL ZONE VALVE SCHEDULE.
  6. ACTIVATION OF ALL IRRIGATION SYSTEMS AND ADJUSTMENT OF ALL FLOW CONTROLS AND NOZZLES FOR OPTIMUM PERFORMANCE AND COVERAGE AS INTENDED BY DESIGN WITH MINIMAL OVERLAP ROTATOR ONTO PAVEMENTS AND/OR STRUCTURES. INSTALLER IS RESPONSIBLE FOR ALL ADJUSTMENTS TO NOZZLES, RISERS, FLOW CONTROLS, ETC., PRIOR TO REQUEST FOR INSPECTION BY THE PROJECT MANAGER. ALL ZONES SHALL HAVE BEEN PROGRAMMED AND PERMITTED TO OPERATE AUTOMATICALLY VIA CONTROLLERS THROUGH AT LEAST TWO (2) COMPLETE CYCLES FOR A PERIOD OF NOT LESS THAN 24 HOURS PRIOR TO INSPECTION BY PROJECT MANAGER.
  7. DEMONSTRATION OF OPERATION OF SYSTEM IN AN AUTOMATIC MODE IN THE PRESENCE OF THE OWNER'S REPRESENTATIVE, THE PROJECT MANAGER, AND THE INSTALLER SHALL BE GIVEN WITH NOT LESS THAN 24 HOURS NOTICE THAT AN INSPECTION FOR OPERATION IS REQUESTED. REQUESTS FOR INSPECTIONS SHALL BE ON A "PER TAP/CONTROLLER" BASIS. ACCEPTANCE FOR WORK AND COMMENCEMENT OF WARRANTIES SHALL BE GIVEN UPON COMPLETION, INSPECTION AND ACCEPTANCE OF ALL WORK REQUIRED PER THE DRAWINGS, SPECIFICATIONS AND CONTRACT DOCUMENTS.
  8. JOBSITE SHALL BE CLEANED DAILY OF ANY TRASH OR DEBRIS. COMPLETE CLEANUP OF ALL DIRT, UNUSED MATERIALS, AND OTHER DEBRIS SHALL BE PERFORMED BY INSTALLER PRIOR TO OWNER'S INSPECTION FOR FINAL ACCEPTANCE. PAVEMENTS AND WALKS WITHIN WORK AREAS SHALL BE SWEEPED AND POWER WASHED WITH WATER AS MAY BE NECESSARY TO REMOVE DIRT AND DEBRIS. ALL IRRIGATION DITCHES SHALL BE COMPLETE, FLAGS REMOVED, AND FINE TUNING ADJUSTMENTS MADE PRIOR TO INSPECTION FOR FINAL ACCEPTANCE.
  9. AS-BUILT REPRODUCIBLE RECORD DRAWINGS, WRITTEN WARRANTIES, SEASONAL MAINTENANCE INSTRUCTIONS, OPERATIONAL GUIDELINES AND SPARE EQUIPMENT SHALL BE PROVIDED BY THE INSTALLER AT INSPECTION FOR FINAL ACCEPTANCE. SUBMITTALS SHALL BE IN ACCORDANCE WITH THE DRAWINGS AND SPECIFICATIONS. FAILURE TO MAKE ALL PROJECT CLOSEOUT SUBMITTALS AT THE REQUIRED TIME IN THE REQUIRED FORMAT MAY RESULT IN DELAY OF FINAL ACCEPTANCE AND RELEASE OF APPLICABLE RETAINAGES BY THE OWNER.
- C. IRRIGATION INSTALLER SHALL BE RESPONSIBLE FOR PROVIDING A 30 DAY ON-SITE MAINTENANCE PROGRAM, TO INCLUDE BUT NOT LIMITED TO FINE TUNING OF NOZZLES, FLOW CONTROLS, AND OTHER EQUIPMENT INSTALLED UNDER THE CONTRACT TO MAINTAIN OPTIMUM OPERATION OF ALL SYSTEMS AT ALL TIMES. CONTROLLER PROGRAMMING SHALL BE COORDINATED WITH THE OWNER TO ESTABLISH AND PROMOTE GROWTH OF PLANTINGS MADE UNDER THE CONTRACT, AND TO SUSTAIN OPTIMUM PLANT APPEARANCE AT ALL TIMES AS SEASONALLY APPROPRIATE.
- D. IRRIGATION INSTALLER SHALL BE RESPONSIBLE FOR PERFORMANCE OF SEASONAL MAINTENANCE TO INCLUDE BUT NOT NECESSARILY LIMITED TO DEACTIVATION AND ACTIVATION OF ALL IRRIGATION SYSTEMS TO PREVENT FREEZE DAMAGE TO ALL EQUIPMENT. INSTALLER SHALL BE RESPONSIBLE FOR COORDINATION AND PERFORMANCE OF ALL SEASONAL MAINTENANCE PROCEDURES REQUIRED TO DEACTIVATE SYSTEMS ON OR BEFORE OCTOBER 15TH OF THE FIRST YEAR FOLLOWING DATE OF ACCEPTANCE, AND ACTIVATION OF IRRIGATION SYSTEMS SHALL BE PERFORMED ON OR BY APRIL 1ST OF THE YEAR FOLLOWING DEACTIVATION. IN THE EVENT THE INSPECTION FOR FINAL ACCEPTANCE OCCURS AFTER OCTOBER 15TH, REQUIRED SEASONAL MAINTENANCE SCHEDULE SHALL BE EXTENDED TO OCCUR THE YEAR FOLLOWING FINAL ACCEPTANCE OF WORK.
- E. A 2 YEAR CONDITIONAL WARRANTY SHALL BE EXTENDED BY THE INSTALLER TO COVER ALL MATERIAL AND WORKMANSHIP PROVIDED UNDER THE CONTRACT. DURING THE 2 YEAR WARRANTY PERIOD, ANY INSTALLATION WHICH BECOMES IN OPERABLE, OR WHICH DOES NOT OPERATE AS ORIGINALLY INTENDED (IE CONDITION AS OBSERVED AND ACCEPTED AT INSPECTION FOR FINAL ACCEPTANCE) THE INSTALLER SHALL REPAIR AND/OR REPLACE ANY WORK WHICH CAN BE ATTRIBUTED TO DEFECTS REGARDING MATERIAL AND/OR WORKMANSHIP AT NO COST TO THE OWNER. DEFICIENCIES MAY INCLUDE BUT ARE NOT LIMITED TO LEAKS, SETTLEMENT OF TRENCHES OR VALVE BOXES GREATER THAN ONE INCH, FREEZE DAMAGE, AND EQUIPMENT DEFECTS. VANDALISM, IMPROPER USE AND/OR MAINTENANCE OF SYSTEMS BY OWNER RESULTING IN DEFICIENCIES SHALL NOT BE THE RESPONSIBILITY OF THE INSTALLER, AND REPAIR/REPLACEMENT MAY BE MADE AT EXTRA COST TO THE OWNER AS AGREED.
- F. ALL INSTALLATIONS SHALL BE MADE IN STRICT ACCORDANCE WITH THE DRAWINGS, SPECIFICATIONS, CONTRACT DOCUMENTS, AND STATE & LOCAL CODES AND ORDINANCES HAVING JURISDICTION OVER THE WORK. IN THE EVENT OF CONFLICT BETWEEN REQUIREMENTS, THE MOST STRINGENT REQUIREMENT WILL PREVAIL IN ANY CASE.
- G. QUANTITIES WHICH MAY BE STATED OR IMPLIED IN SCHEDULES, GENERAL NOTES, ETC., ARE PROVIDED FOR REFERENCE ONLY. IN THE EVENT OF CONFLICT, THAT QUANTITY WHICH IS REPRESENTED GRAPHICALLY PER THE DRAWINGS SHALL PREVAIL IN ANY CASE.
- H. ALL IRRIGATION WORK SHALL BE COORDINATED WITH GENERAL, OTHER SUBCONTRACTORS, OTHER SITEWORK, AND LANDSCAPING WORK TOWARDS PROMOTING A TEAM EFFORT. INSTALLER SHALL NOT WILLFULLY MAKE ANY DESIGN CHANGES TO FACILITATE OTHERS WORK YET INTERFERE WITH IRRIGATION SYSTEM OPERATION AND COVERAGE AS INTENDED BY DESIGNER. NOTIFY THE PROJECT MANAGER OF SUCH CONFLICTS AND RESOLVE CONFLICTS PRIOR TO PROCEEDING WITH WORK.
- I. ALTERNATE EQUIPMENT FROM THAT INDICATED ON THE DRAWINGS AND SPECIFICATIONS, WHICH WHEN INSTALLED WILL RESULT IN EQUAL OR IMPROVED PERFORMANCE, AND/OR CONSIDERABLE COST SAVINGS TO THE OWNER WITH EQUAL AND/OR IMPROVED PERFORMANCE TO THAT INDICATED MAY BE CONSIDERED BY THE OWNER. ALL PROPOSED ALTERNATE EQUIPMENT MUST BE PROPOSED TO AND APPROVED BY THE OWNER PRIOR TO SUBMITTAL OF BID PROPOSAL. ONLY THOSE ALTERNATE EQUIPMENT MANUFACTURERS AND EQUIPMENT LISTED IN THE SPECIFICATIONS WILL BE CONSIDERED. PROVISION/INSTALLATION OF ALTERNATE EQUIPMENT WITHOUT PRIOR APPROVAL BY THE OWNER MAY RESULT IN DELAY AND/OR REJECTION OF FINAL ACCEPTANCE OF WORK.
- J. UPON ENTERING INTO AN AGREEMENT TO PROVIDE LABOR AND MATERIALS TO COMPLETE ALL THE WORK REQUIRED UNDER THIS SECTION, THE INSTALLER HEREBY GUARANTEES TO THE OWNER THAT THE WORK WILL BE EXECUTED TO THE BEST OF THE INSTALLER'S ABILITY AND TO AT LEAST THE MINIMUM INDUSTRY STANDARDS AND/OR MANUFACTURER'S RECOMMENDATIONS. TIME IS OF THE ESSENCE AND PROGRESS TOWARDS FINAL ACCEPTANCE SHALL BE STEADY AND WITHOUT DELAY OR INTERRUPTION EXCEPT FOR UNREASONABLE WEATHER CONDITIONS. THE INSTALLER WILL NOT QUALIFY ANY TERM, CONDITION, OR REQUIREMENT STATED HEREIN AT ANY TIME DURING OR AFTER COMPLETION OF AGREEMENT TO PROVIDE WORK UNDER THIS SECTION. THE INSTALLER MAY HAVE CERTAIN RIGHTS PERTAINING TO THIS GUARANTEE AS MAY BE DESCRIBED IN THE GENERAL CONDITIONS OF THE AGREEMENT BETWEEN OWNER AND INSTALLER.
- K. IRRESPECTIVE OF ANY OTHER TERM IN THIS DOCUMENT, DESIGNER SHALL NOT CONTROL OR BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SCHEDULES, SEQUENCES OR PROCEDURES; OR FOR THE CONSTRUCTION SAFETY OR ANY OTHER RELATED PROGRAMS; OR FOR ANOTHER PARTIES' ERRORS OR OMISSIONS OR FOR ANY ANOTHER PARTIES' FAILURE TO COMPLETE THEIR WORK OR SERVICES IN ACCORDANCE WITH DESIGNER'S DOCUMENTS. DUE TO VARYING CLIMATIC CONDITIONS AND/OR REASONS STATED ABOVE, THE DESIGNER SHALL NOT BE HELD RESPONSIBLE FOR QUALITY, QUANTITY, VITALITY, OR SURVIVAL OF ANY AND ALL LANDSCAPE PLANTINGS. SCHEDULING ON DOCUMENTS ARE RECOMMENDED GUIDELINES ONLY.

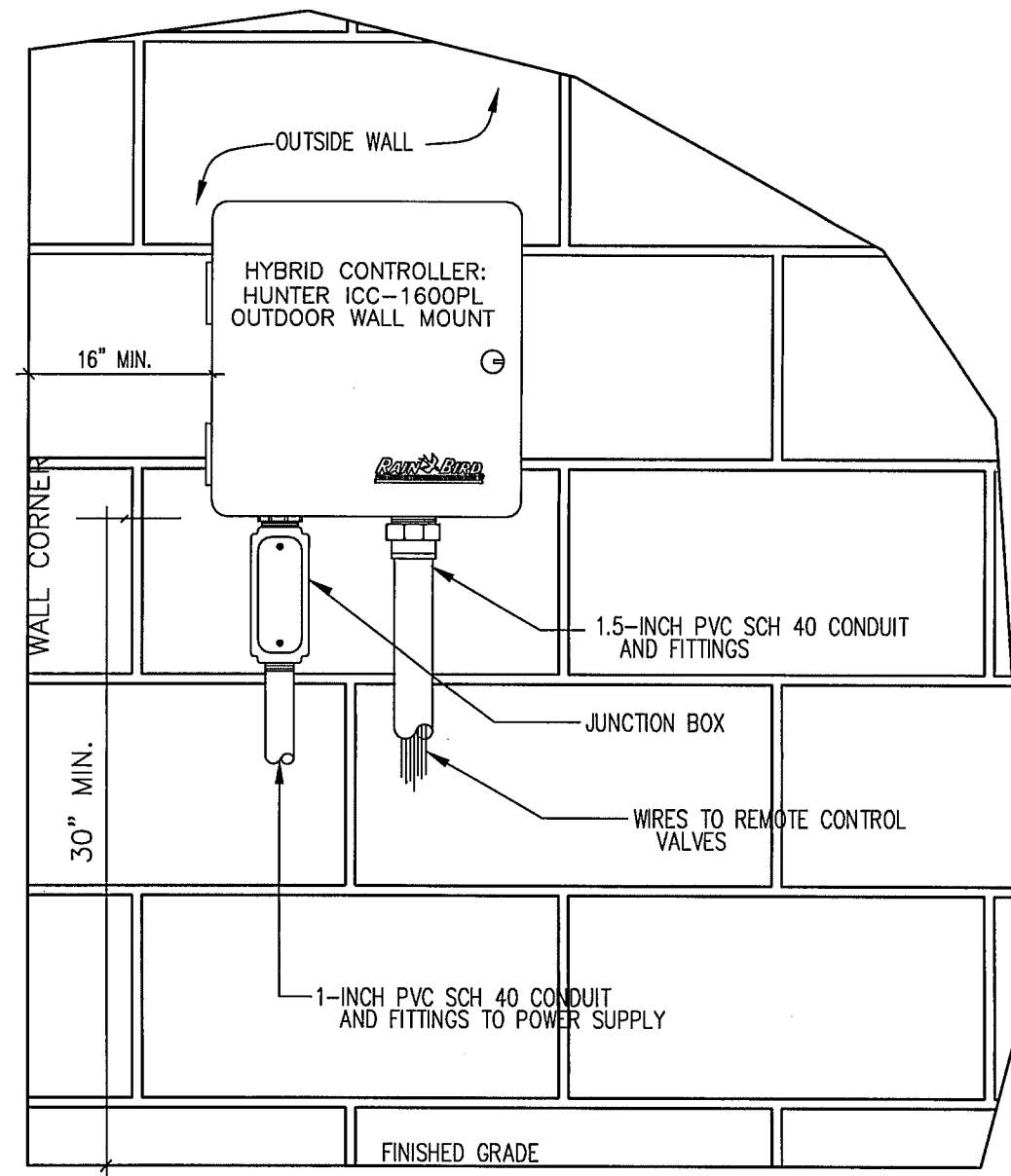
SHOULD COLORADO SPRINGS UTILITIES DESIGNATE A WATER SHORTAGE, THE IRRIGATION SCHEDULE SHALL BE ADJUSTED TO REFLECT THE DESIGNATED REQUIREMENTS. A TURF ESTABLISHMENT PERMIT MAY ALSO BE REQUIRED. IRRIGATIONS CONTRACTORS AND BUILDING OWNERS ARE ADVISED TO CONTACT CSU CUSTOMER SERVICE AT 448-4800.

NOTE: SHOULD COLORADO SPRINGS UTILITIES DESIGNATE A WATER SHORTAGE, TURF ESTABLISHMENT AND THE IRRIGATION SCHEDULE SHALL REFLECT THE DESIGNATED REQUIREMENTS.

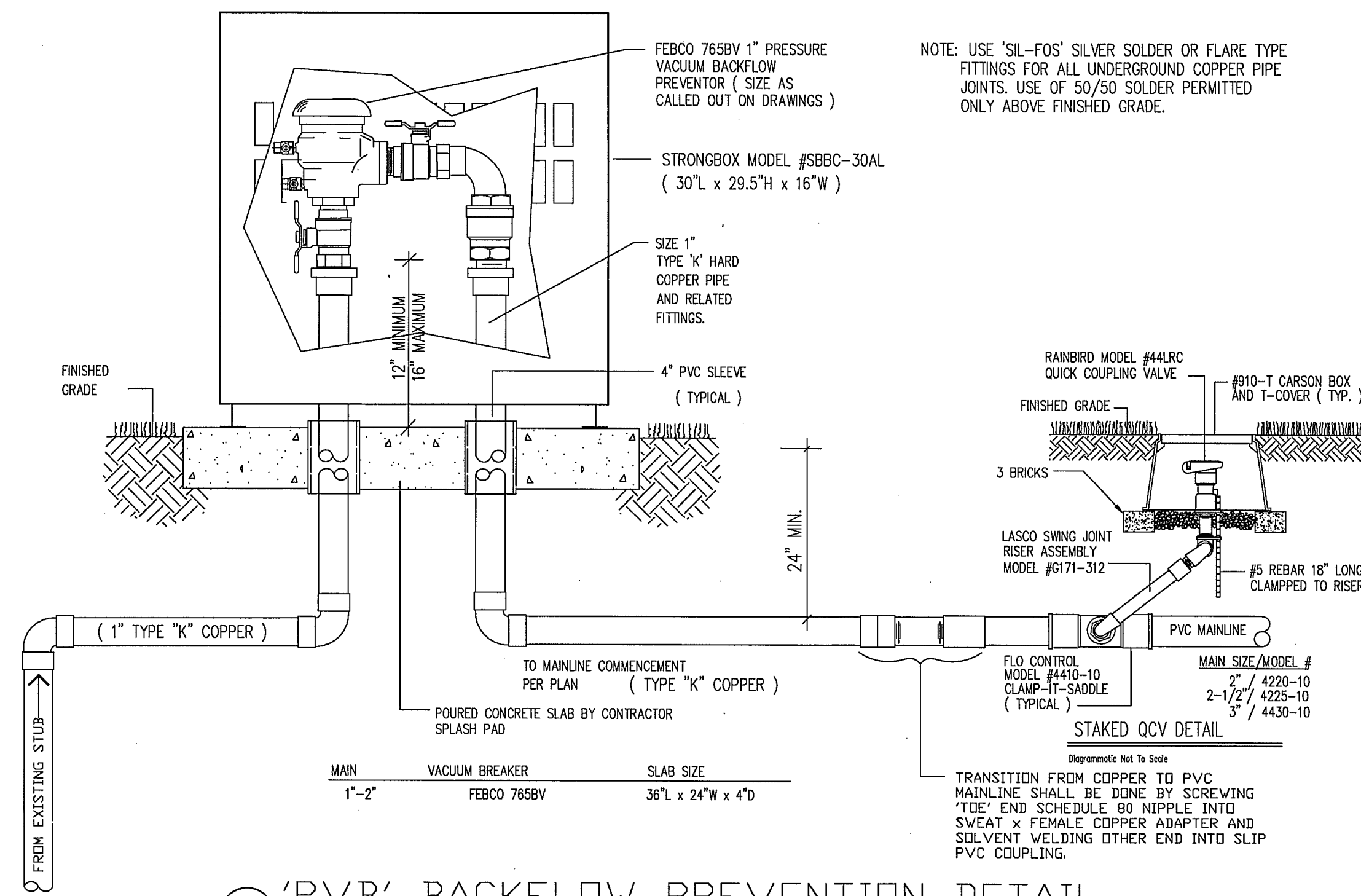
**WATER MANAGEMENT GUIDELINES**  
 ALL CYCLES NOTED IN VALVE SCHEDULE TABLES ARE BASED ON 0.20"/APPLICATION.  
 WATER BUDGET SETTINGS SHOULD BE ADJUSTED TO SETTINGS BELOW FOR OPTIMUM WATER CONSERVATION:  
 EARLY SPRING (MARCH & APRIL) 80%  
 SPRING (MAY & JUNE) 90%  
 SUMMER (JULY & AUGUST) 100%  
 FALL (SEPTEMBER TILL NOVEMBER) 70%  
 SCHEDULE SUPPLEMENTAL APPLICATIONS AS REQUIRED BY UNUSUAL CLIMATIC CONDITIONS.

**SOD ESTABLISHMENT SETTINGS**  
 ALL CYCLES NOTED IN VALVE SCHEDULE TABLES ARE BASED ON 0.20"/APPLICATION.  
 ALL CYCLE TIMES SHOULD BE CUT BACK BY ONE-THIRD WITH TYPICAL CYCLE APPLYING 0.20" EACH.  
 THREE CYCLES PER DAY (6AM-12:00PM) 4 DAYS  
 TWO CYCLES PER DAY (6AM-12:00PM) NEXT 2-3 WEEKS  
 SINGLE CYCLE RAISING APPLICATION RATE TO 0.30" NEXT 35 MONTHS  
 ADJUST TIMER SETTINGS TO THOSE LISTED IN VALVE SCHEDULE (SET WATER BUDGET PER ABOVE)  
 SCHEDULE SUPPLEMENTAL APPLICATIONS AS REQUIRED BY UNUSUAL CLIMATIC CONDITIONS.

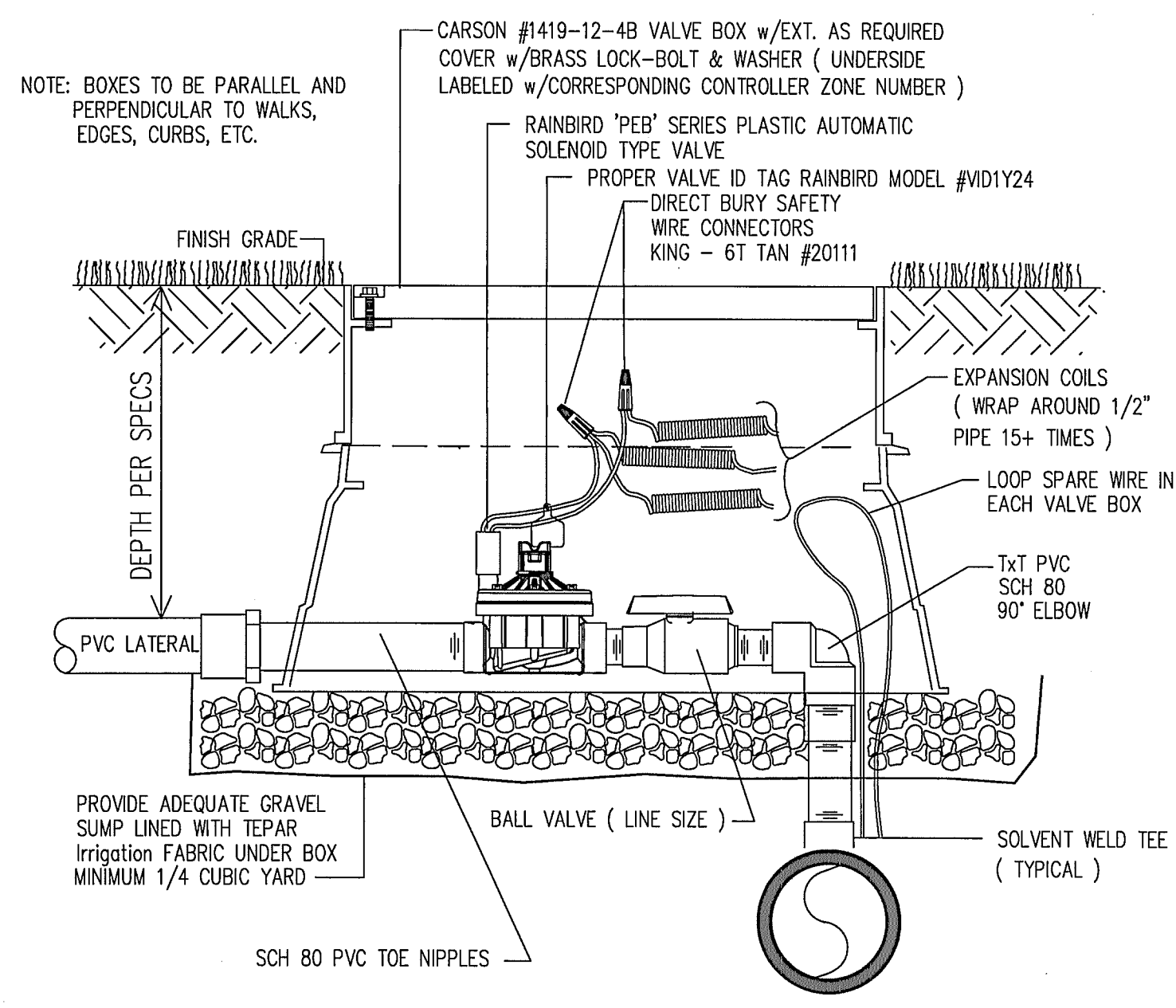
**SEED AREAS**  
 ALL CYCLES NOTED IN VALVE SCHEDULE TABLES ARE BASED ON 0.20"/APPLICATION.  
 ALL CYCLE TIMES SHOULD BE CUT BACK BY ONE-THIRD WITH TYPICAL CYCLE APPLYING 0.10" EACH.  
 SIX CYCLES PER DAY (EVERY FOUR HOURS) 1 MONTH  
 FOUR CYCLES PER DAY (EVERY SIX HOURS) NEXT 2 MONTHS  
 TWO CYCLES RAISING APPLICATION RATE TO 0.20" NEXT 35 MONTHS  
 ADJUST TIMER SETTINGS TO THOSE LISTED IN VALVE SCHEDULE (SET WATER BUDGET PER ABOVE)  
 ALL GUIDELINES HAVE BEEN BASED ON THE RECOMMENDATIONS OF CSU & SOD GROWERS PERSONNEL INPUT. THEY ASSUME GOOD SOIL QUALITY, SPRING PLANTING, PROPER MULCHING, FERTILIZATION & SPRINKLER MAINTENANCE.



**A CONTROLLER DETAIL**  
 Diagrammatic Not To Scale



**B 'PVB' BACKFLOW PREVENTION DETAIL**  
 Diagrammatic Not To Scale



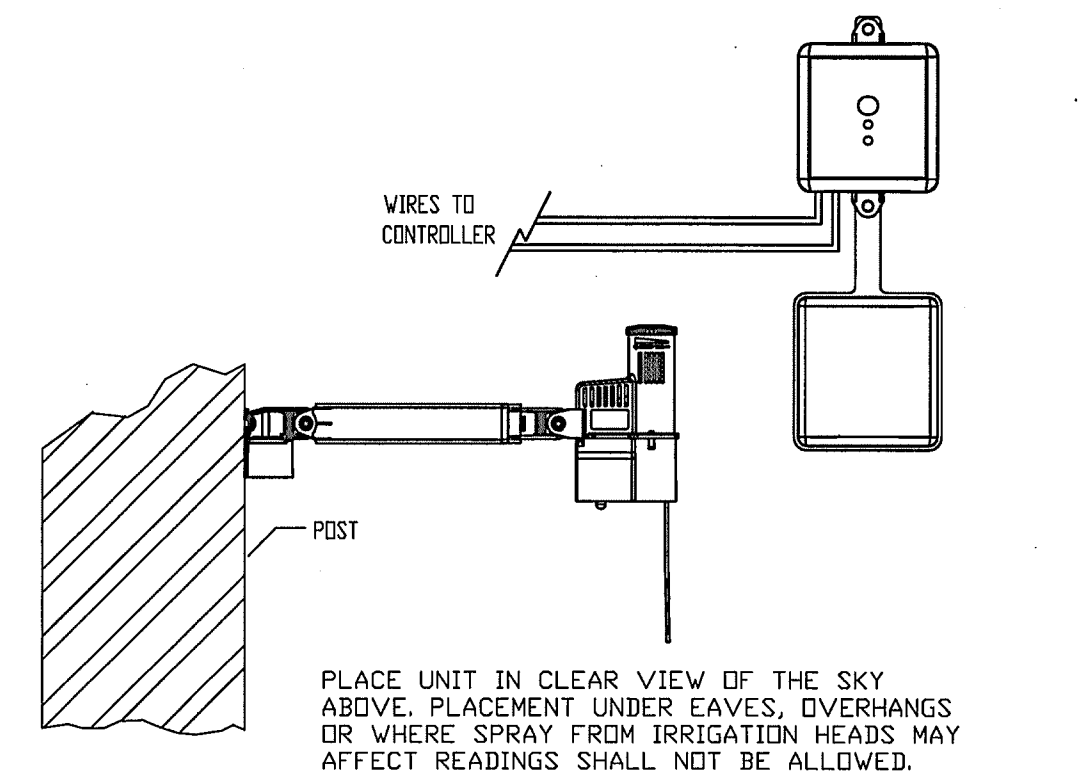
**C SOLENOID VALVE DETAIL**  
 Diagrammatic Not To Scale

P.O.C./TAP #1 (EXISTING 1" SERVICE & 3/4" METER):

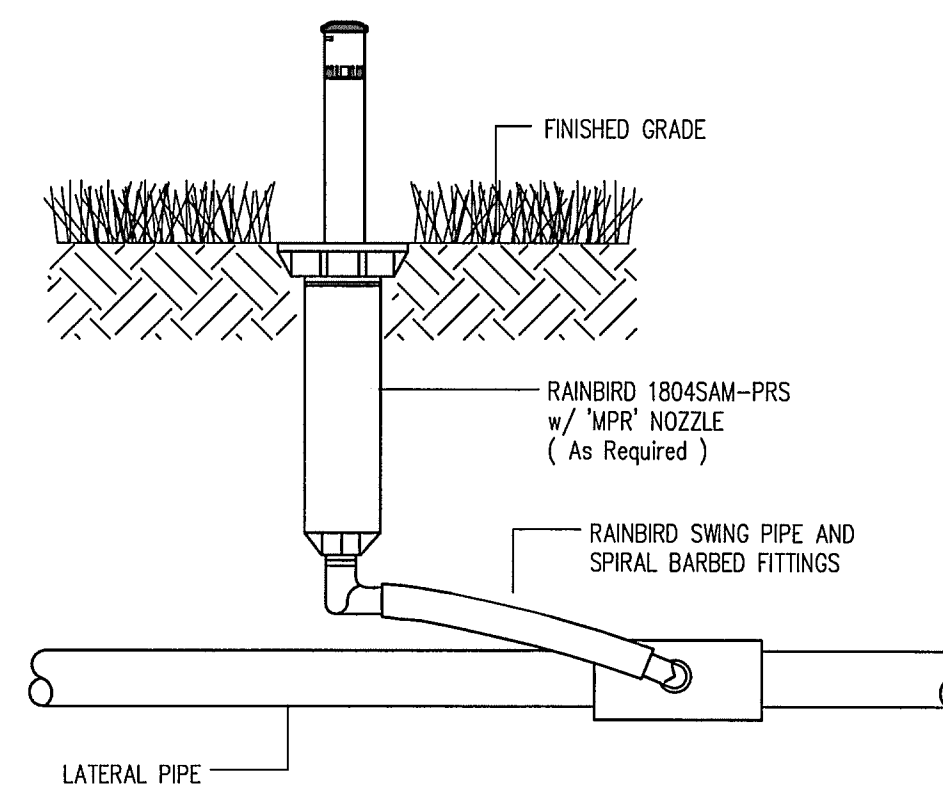
VALVE SCHEDULE (CONTROLLER 'A')

VALVE NO.	EST. GPM	VALVE SIZE	MINS./APP.	HYDROZONE	ZONE TYPE
A1	4.0	1.00"	43	M	MP ROTATORS; SOD
A2	4.5	1.00"	43	M	MP ROTATORS; SOD
A3	4.0	1.00"	30	M	MP ROTATORS; SOD
A4	4.5	1.00"	30	L	MP ROTATORS; NATIVE SEED
A5	4.0	1.00"	30	L	MP ROTATORS; NATIVE SEED
A6	4.5	1.00"	30	L	MP ROTATORS; NATIVE SEED
A7	4.0	1.00"	30	L	MP ROTATORS; NATIVE SEED
A8	4.5	1.00"	30	L	MP ROTATORS; NATIVE SEED
A9	4.0	1.00"	30	L	MP ROTATORS; NATIVE SEED
A10	4.5	1.00"	30	L	MP ROTATORS; NATIVE SEED
A11	4.0	1.00"	30	L	MP ROTATORS; NATIVE SEED
A12	4.5	1.00"	30	L	MP ROTATORS; NATIVE SEED
A13	SPARE	---	---	---	---
A14	SPARE	---	---	---	---
A15	2.90	1.00"	12	L	LANDSCAPE DRIPLINE; PLANTINGS
A16	3.98	1.00"	12	L	LANDSCAPE DRIPLINE; PLANTINGS

RUN TIMES CALCULATED TO APPLY 1.8"/WK SOD, 1.2"/WK NATIVE & 1.0"/WK PLANTINGS ASSUMING 6 DAYS/WK, RESULTING IN A 6.9 HOUR WATER WINDOW. GUIDELINE ONLY. OWNER TO ADJUST TIMES FOR VARYING CLIMATIC CONDITIONS. ASSUMES EXISTING 3/4" WATER SERVICE OFF SUPPLY TO LOCATIONS NOTED FLOW OF 15 GPM @ 85 STATIC PSI REQUIRED. TO BE FIELD VERIFIED PRIOR TO CONSTRUCTION.



**D HUNTER WIRELESS RAIN-CLIK**  
 Diagrammatic Not To Scale



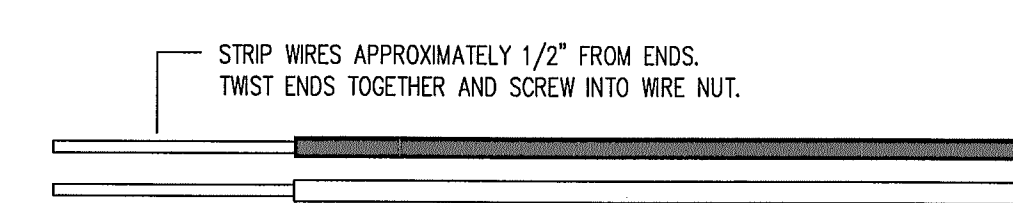
**E MP ROTATOR POP-UP HEAD**  
 Diagrammatic Not To Scale

WORST CASE PSI LOSS - ZONE #A6 @ 14.6 GPM

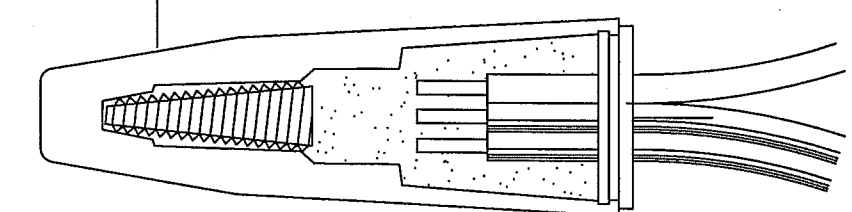
PIPE/DEVICE	DISTANCE	EST. LOSS/CF	EST. PSI LOSS	TOTALS
1.5" CL200 MAINLINE	550'	0.52	2.9	2.9
765BV-1/825 1"	---	---	18.0	8.0
ICZ ZONE VALVE	---	---	2.5	2.5
LATERAL	VARIES	5% OF STATIC	5.0	5.0
3/4" METER	---	---	4.1	4.1
1" SERVICE LINE	100'	8.42	8.5	8.5
ELEVATION GAIN (LOSS)	---	---	---	---
MPR-40-CV	---	---	40.0	40.0
TOTAL CALCULATED SYSTEM STATIC PSI REQUIRED	---	---	71.0	---
STATIC PSI AVAILABLE	---	---	85.0	---
RESIDUAL PSI AVAILABLE	---	---	14.0 PSI	---

**DIRECT BURY/30V SINGLE CONDUCTOR TYPE**  
 FOR ALL UNDERGROUND CONNECTIONS LAWN IRRIGATION SYSTEMS

NOTE: FOR DIRECT BURIAL SPLICES WITH WIRE SIZES No. 14, No. 12 AND No. 10, MAXIMUM OF THREE WIRES PER CONNECTOR.



**STEP 1**  
 1. ALIGN CONDUCTORS (PRE-TWISTING UNNECESSARY)  
 2. PLACE STRIPPED WIRES WITH ENDS EVEN  
 3. TWIST CONNECTOR ONTO WIRES PUSHING FIRMLY (DO NOT OVER TORQUE)



**STEP 2**  
 IMPORTANT: TURN OFF POWER BEFORE INSTALLING OR REMOVING CONNECTOR.

**F WIRE CONNECTION DETAIL**  
 Diagrammatic Not To Scale

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DESIGNED BY: JIM HACKWORTH  
 DRAWN BY: JIM HACKWORTH  
 DATE: MARCH 2010  
 SCALE: AS NOTED  
 REVISIONS:

**metro**  
 MOUNTAIN METROPOLITAN TRANSIT

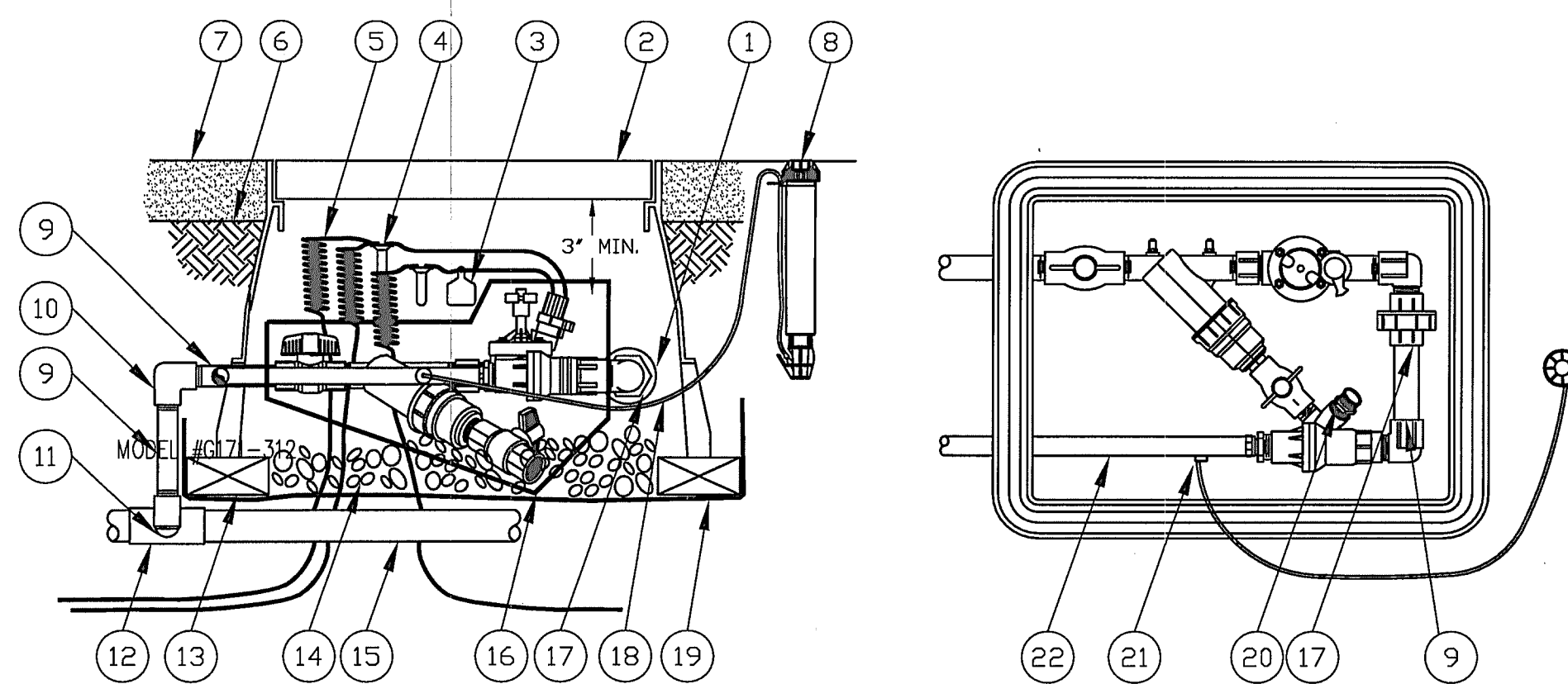
TITLE:  
**CONTRACTOR BUILDING 1070 TRANSIT DRIVE**  
 FINAL IRRIGATION PLAN

SHEET  
**IR-2**

FILE NUMBER:  
 CPC DP 09-082  
 CPC ZC 09-081

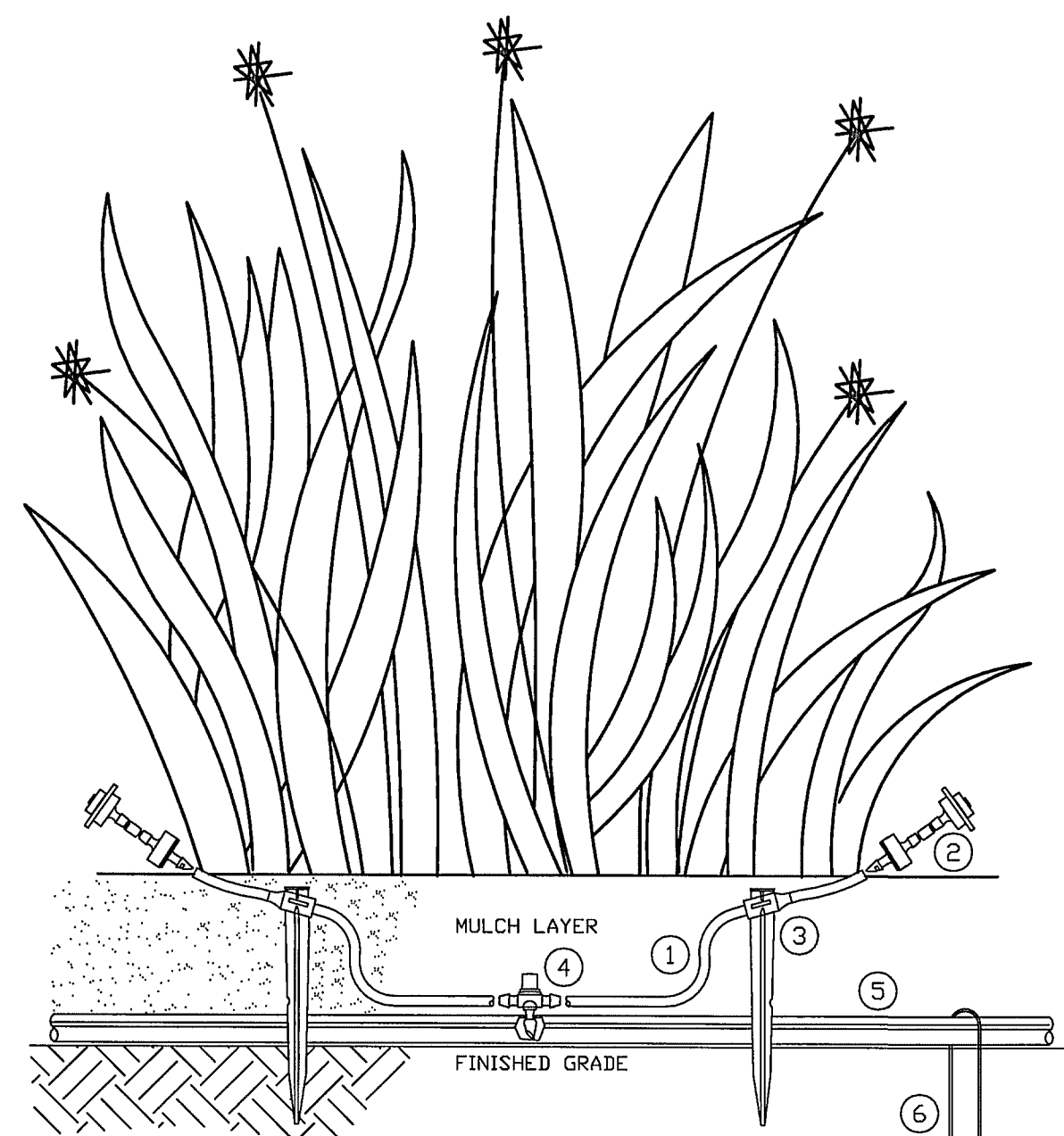
**hackworth consulting, inc**  
 IRRIGATION DESIGN BY:  
 James Hackworth  
 C.I.D. #00062  
 hjcm@comcast.net  
 3544 Cope Romain Drive  
 (719) 599-3998 Ph  
 (719) 269-7725 Fax  
 Colorado Springs, CO 80920  
 CITY FILE No. AR DP 09-338



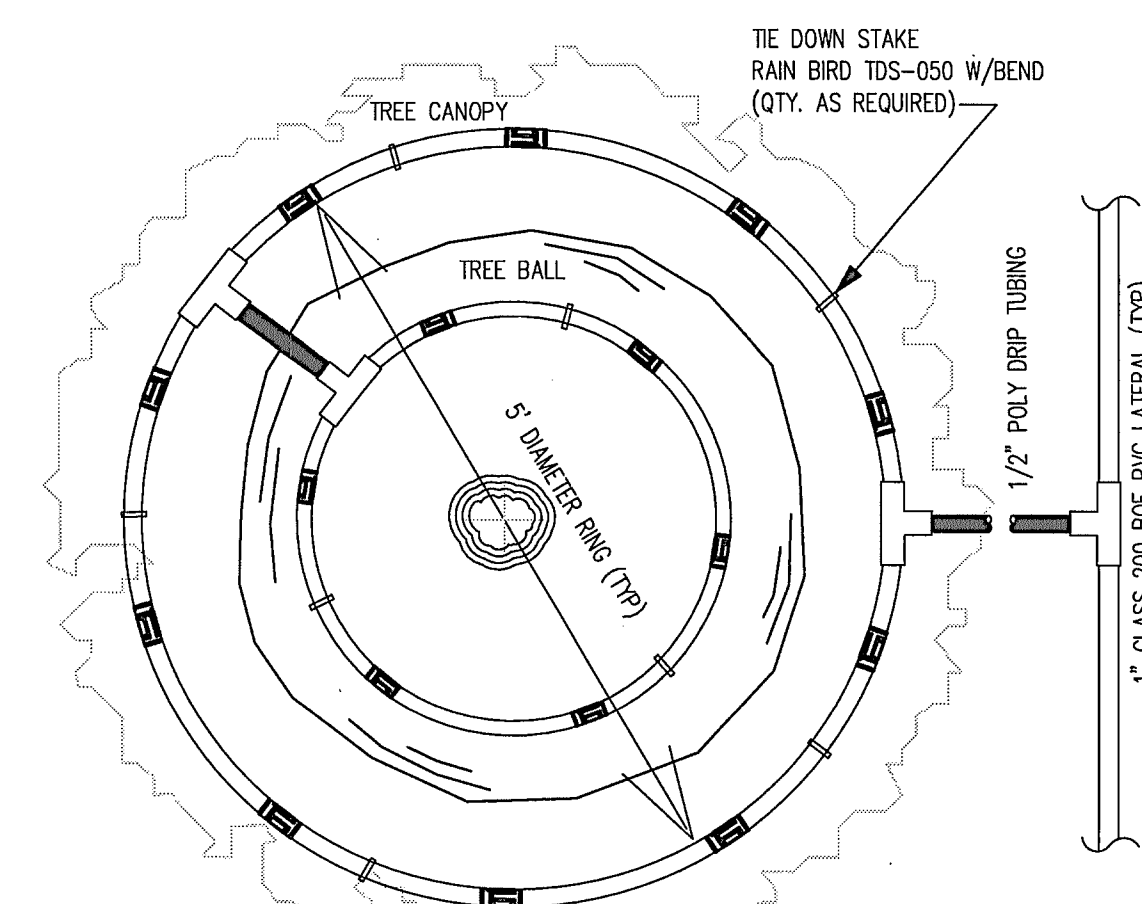


**D DRIP VALVE ASSEMBLY**  
 Diagrammatic Not To Scale

- |                                                                          |                                                          |
|--------------------------------------------------------------------------|----------------------------------------------------------|
| 1) PVC SCH 80 NIPPLE (CLOSE)                                             | 12) PVC SCH 40 TEE OR ELL                                |
| 2) VALVE BOX WITH COVER 1324-3B CARSON JUMBO SERIES                      | 13) BRICK (1 OF 4)                                       |
| 3) ID TAG, RAIN BIRD SERIES ID TAG                                       | 14) 3.0-INCH MINIMUM DEPTH OF 3/4-INCH WASHED GRAVEL     |
| 4) WATER PROOF CONNECTION                                                | 15) PVC MAINLINE                                         |
| 5) 30-INCH LINEAR LENGTH OF WIRE, COILED                                 | 16) CONTROL ZONE KIT: RAINBIRD MODEL XGZ-100-B-CIM       |
| 6) FINISH GRADE                                                          | 17) PVC SCH 80 UNION FOR SERVICING ASSEMBLY              |
| 7) TOP OF MULCH                                                          | 18) RAINBIRD DT-025 DISTRIBUTION TUBING                  |
| 8) RAIN BIRD XP-600X WITH SHUTOFF NOZZLE PAINT ORANGE FOR ZONE INDICATOR | 19) LANDSCAPE FABRIC WRAP                                |
| 9) PVC SCH 80 NIPPLE (LENGTH AS REQUIRED)                                | 20) 3/4" BRASS MPTxHOSE TREAD ADAPTER                    |
| 10) PVC SCH 40 ELL                                                       | 21) 1/4" SELF-PIERCING BARB CONNECTOR: RAIN BIRD SPB-025 |
| 11) PVC SCH 80 NIPPLE (2-INCH LENGTH, HIDDEN) AND PVC SCH 40 ELL         | 22) 1/2" POLYETHYLENE TUBING: RAIN BIRD XERT-TUBE 700    |



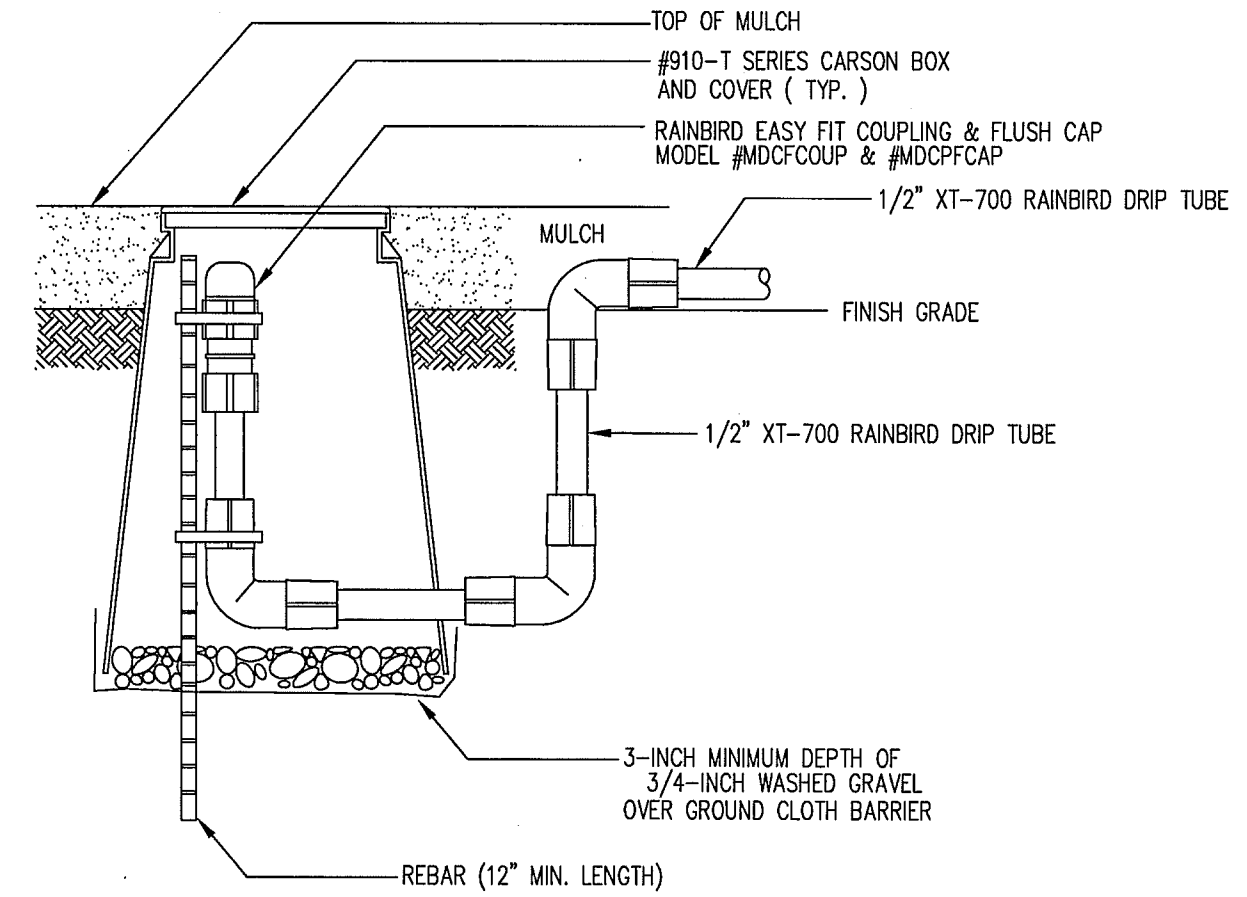
- E POINT DRIP EMITTERS**  
 Diagrammatic Not To Scale
- NOTE: USE RAINBIRD XERIMAN TOOL MODEL #XM-TDOL TO INSERT CONNECTOR DIRECTLY INTO 1/2" POLYETHYLENE TUBING
- 1/2" RAINBIRD MODEL #XQ POLY DISTRIBUTION TUBING (MAX. LENGTH OF 5' TRANSFER TEE TO EMITTER)
  - RAINBIRD PRESSURE COMPENSATING EMITTER MODEL #PC-05 W/ DIFFUSER CAP MODEL #DBC-025
  - 1/2" RAINBIRD TUBING STAKE MODEL #TS-025
  - 1/2" RAINBIRD BARB TRANSFER TEE MODEL #XBF3TEE
  - 1/2" RAINBIRD XBS BLACK STRIP POLYETHYLENE TUBING
  - RAINBIRD GALV. TIE DOWN STAKE MODEL #TDS-050 (EVERY 10' MIN)



**F TREE RING DETAIL**  
 Diagrammatic Not To Scale

NOTE: 3" CALIPER TREES & LARGER REQUIRE DOUBLE LOOP, ALL SMALLER REQUIRE ONLY 5' DIAMETER LOOP.

NOTE: CENTER RING ON TREE TRUNK USING LD-09-24 RAINBIRD DRIPLINE TUBING. MINIMUM OF SIX PORTS PER TREE.



**G DRIP FLUSHING END VALVE DETAIL**  
 Diagrammatic Not To Scale

DRAWINGS AND SETTINGS ADMINISTRATION BY: EDUCATIONAL SERVICES TRANSIST SERVICES DEPT. VICEPRESIDENT BLDG. INSTRUCTIONS: FINAL-HELDING 08

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**DRAWN BY:** JIM HACKWORTH  
**DATE:** MARCH 2010  
**SCALE:** AS NOTED  
**REVISIONS:**

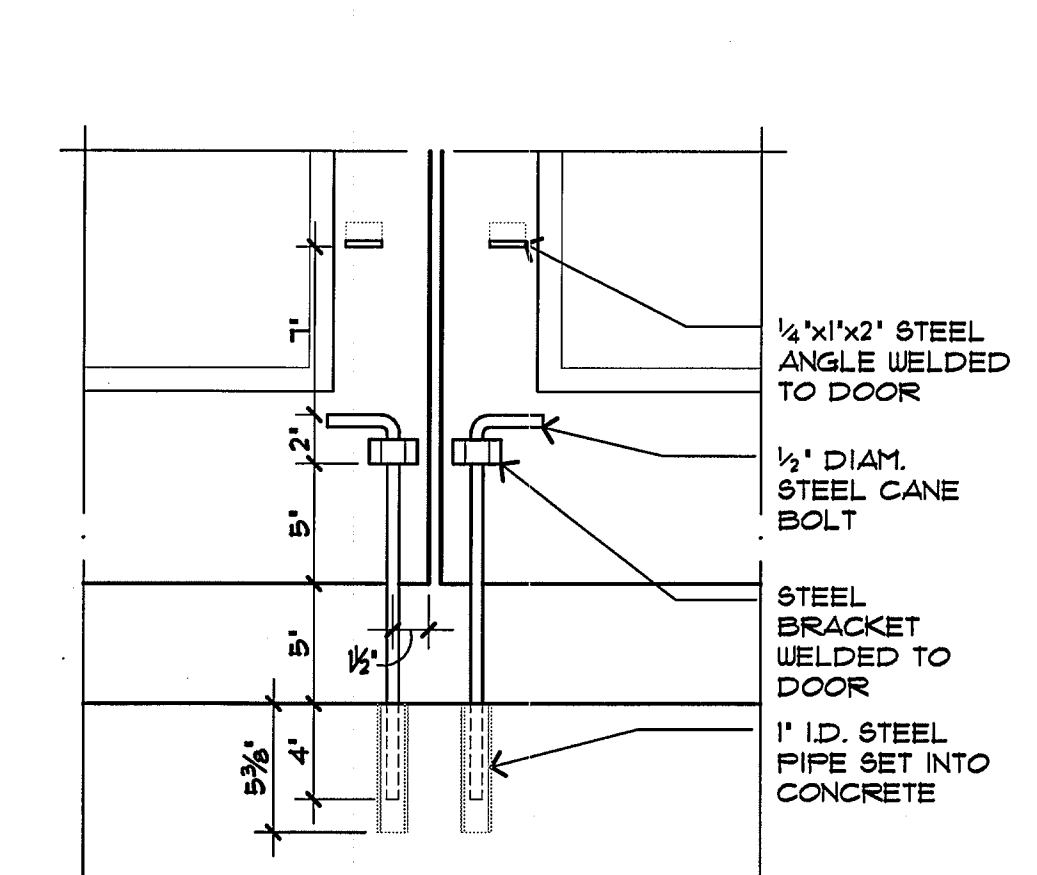
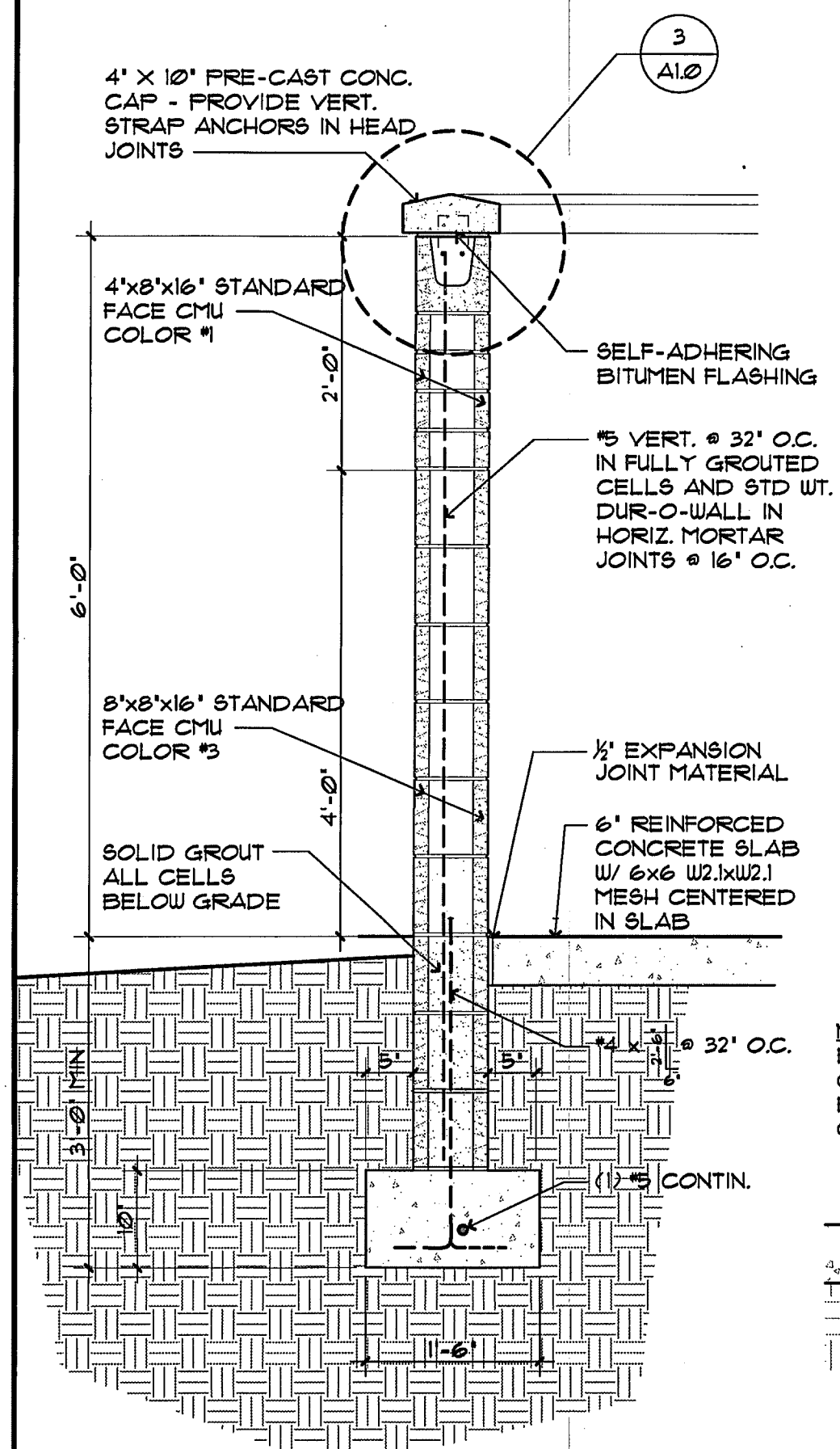


**TITLE:**  
**CONTRACTOR BUILDING 1**  
**1070 TRANSIT DRIVE**  
**FINAL IRRIGATION PLAN**

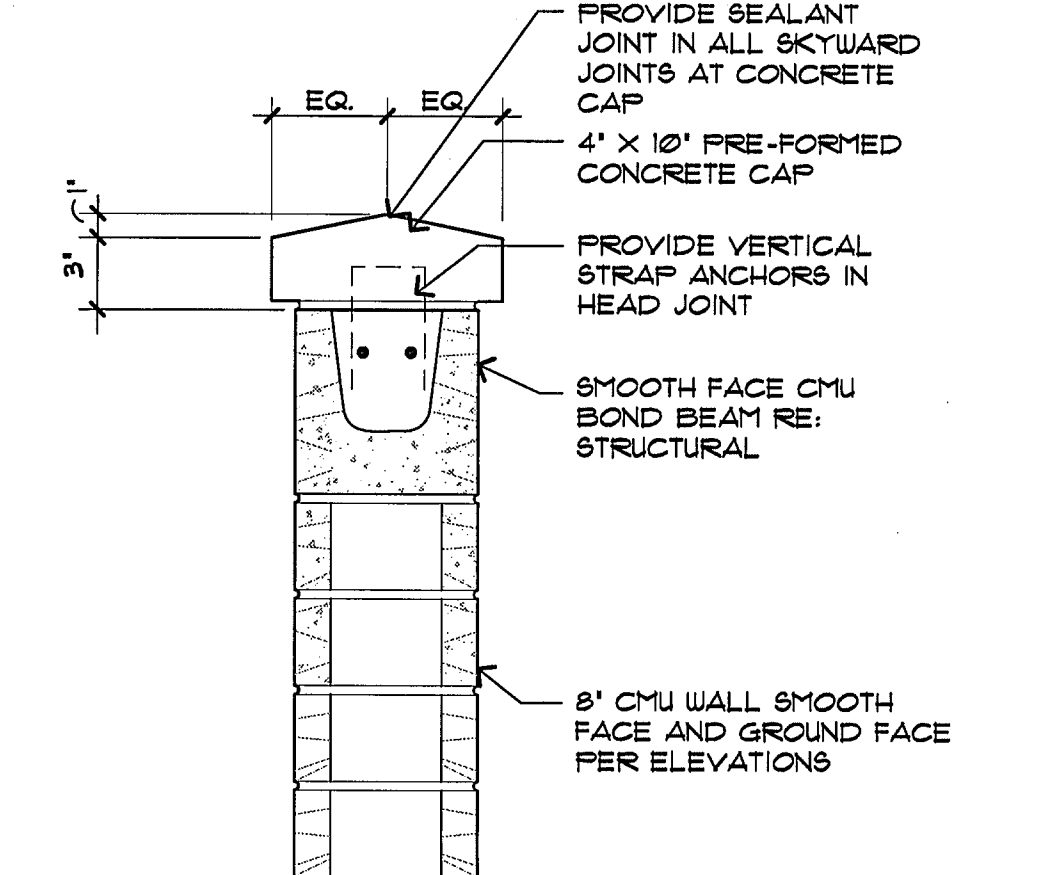
**SHEET**  
**IR-3**

**FILE NUMBER:**  
 CPC DP 09-082  
 CPC ZC 09-081

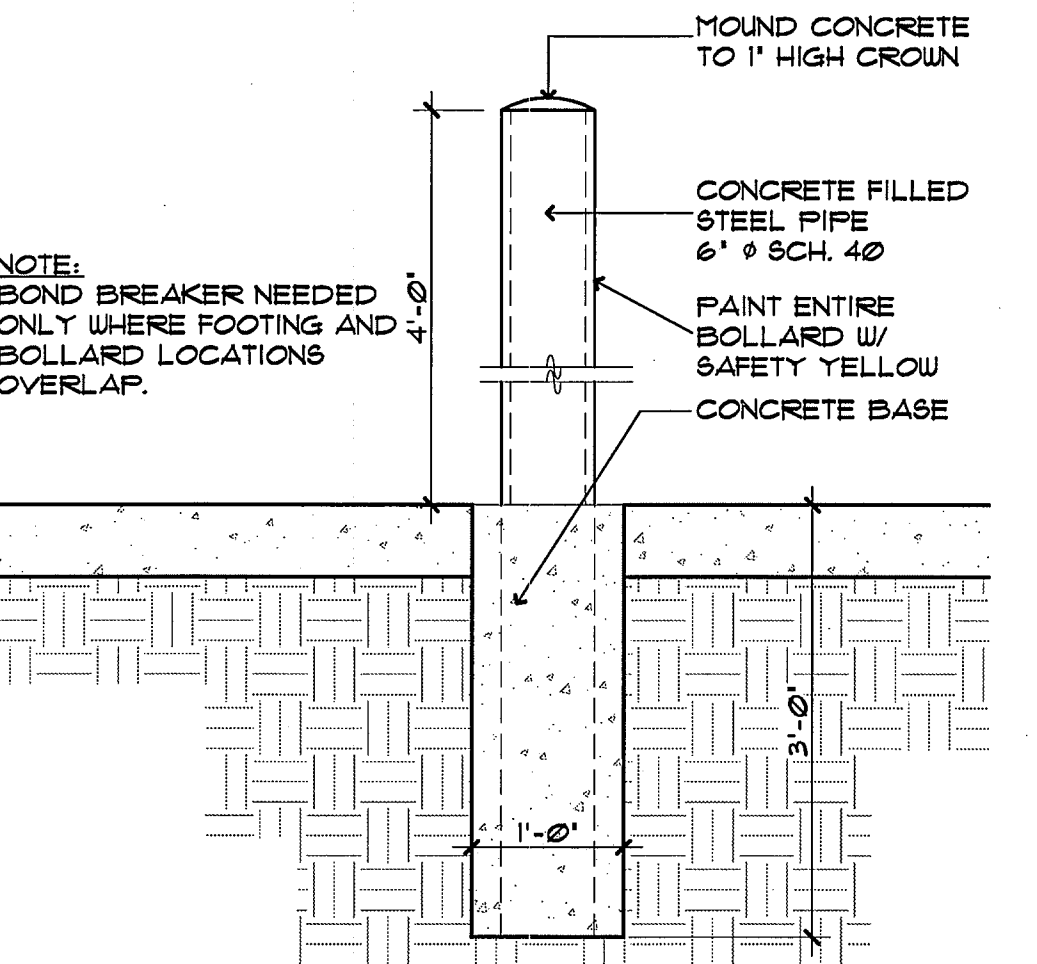
**hackworth consulting, inc**  
 IRRIGATION DESIGN BY:  
 James Hackworth  
 C.I.D. #000082  
 hjjm@comcast.net  
 3544 Cape Roman Drive  
 (719) 599-3998 Ph  
 (719) 260-7725 Fax  
 Colorado Springs, CO 80920  
 CITY FILE No.: AR DP 09-338



2 TRASH ENCLOSURE DETAIL  
SCALE: 3/4" = 1'-0"

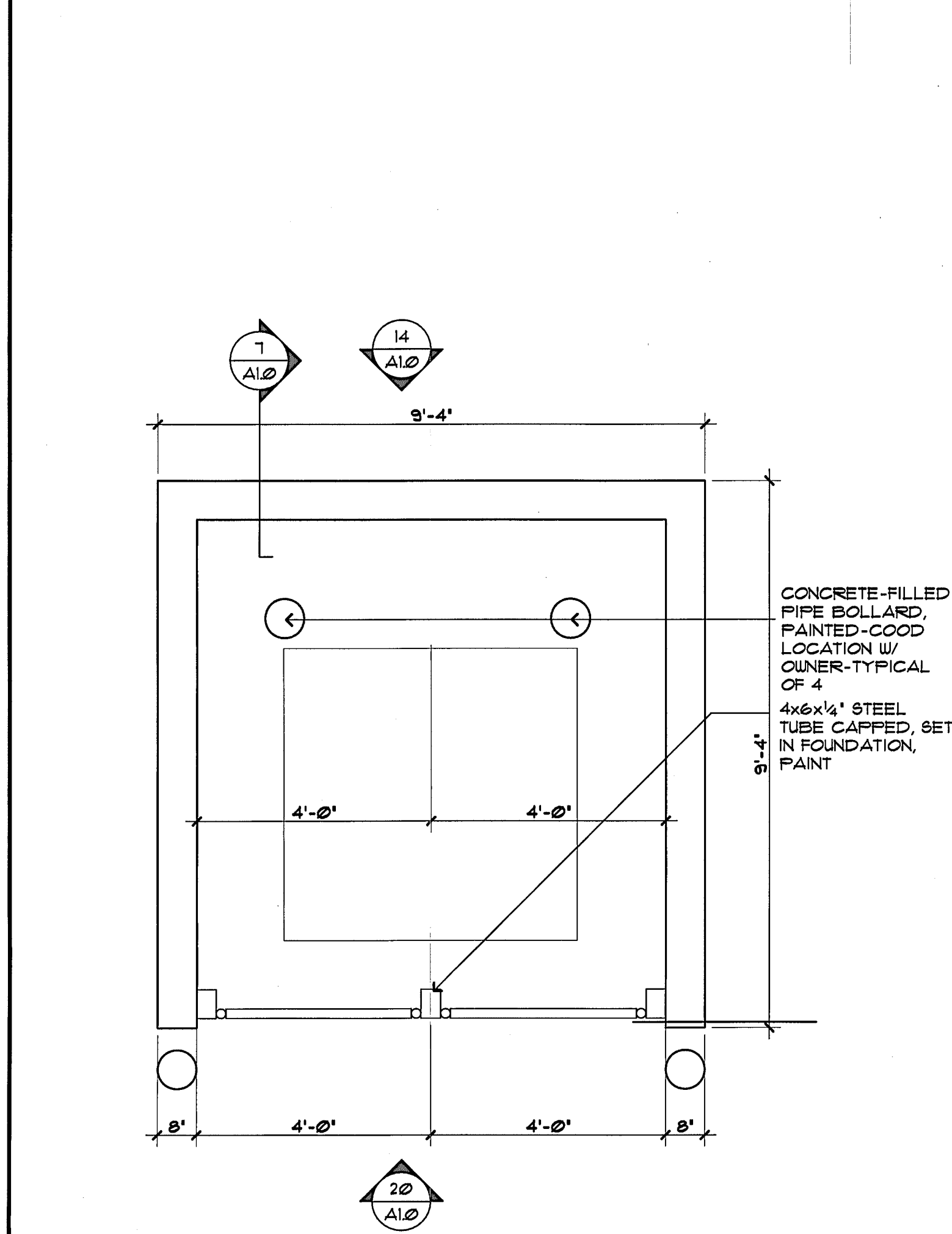


3 TRASH ENCLOSURE DETAIL  
SCALE: 3/4" = 1'-0"

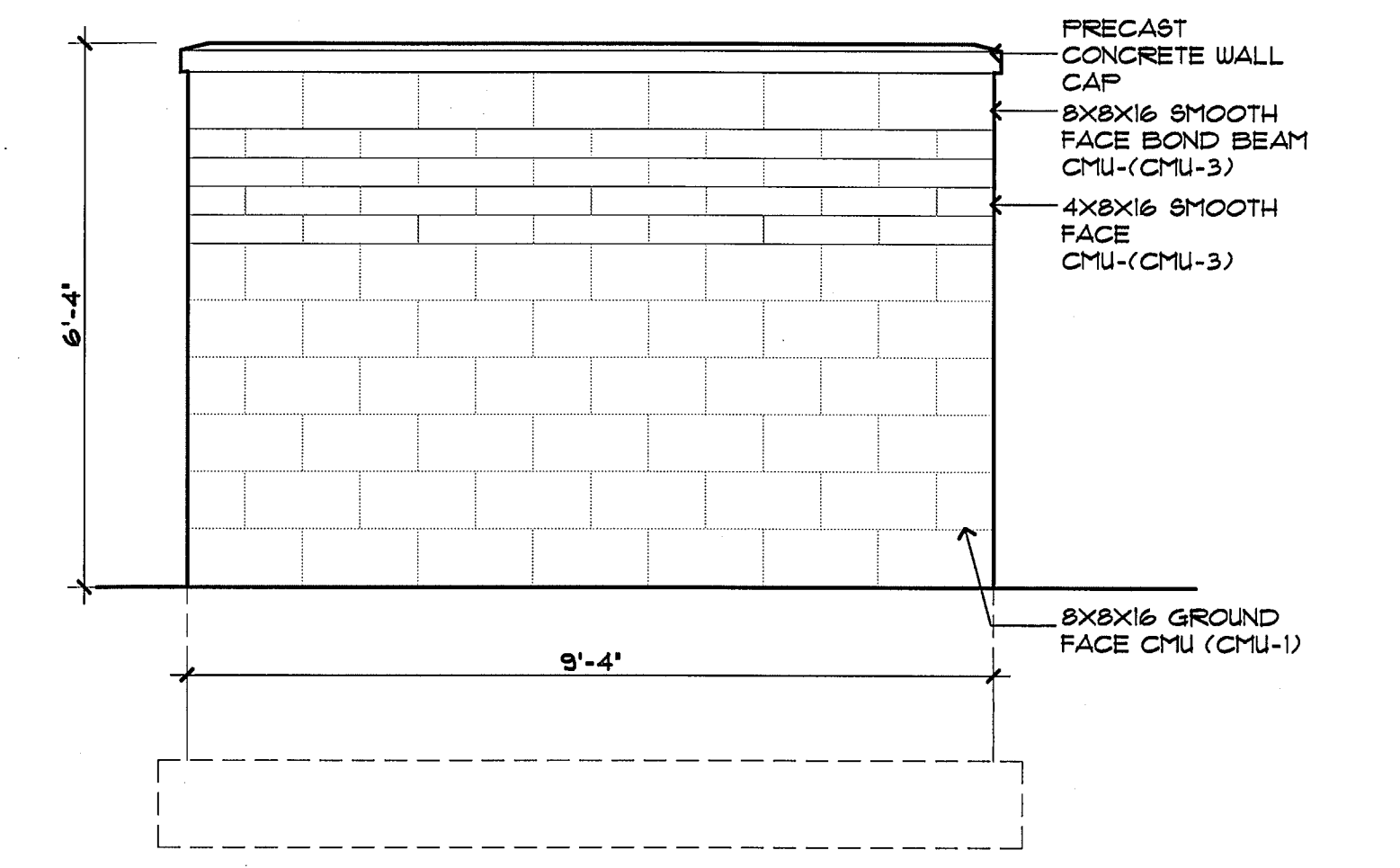


8 TYP. PIPE BOLLARD  
SCALE: 3/4" = 1'-0"

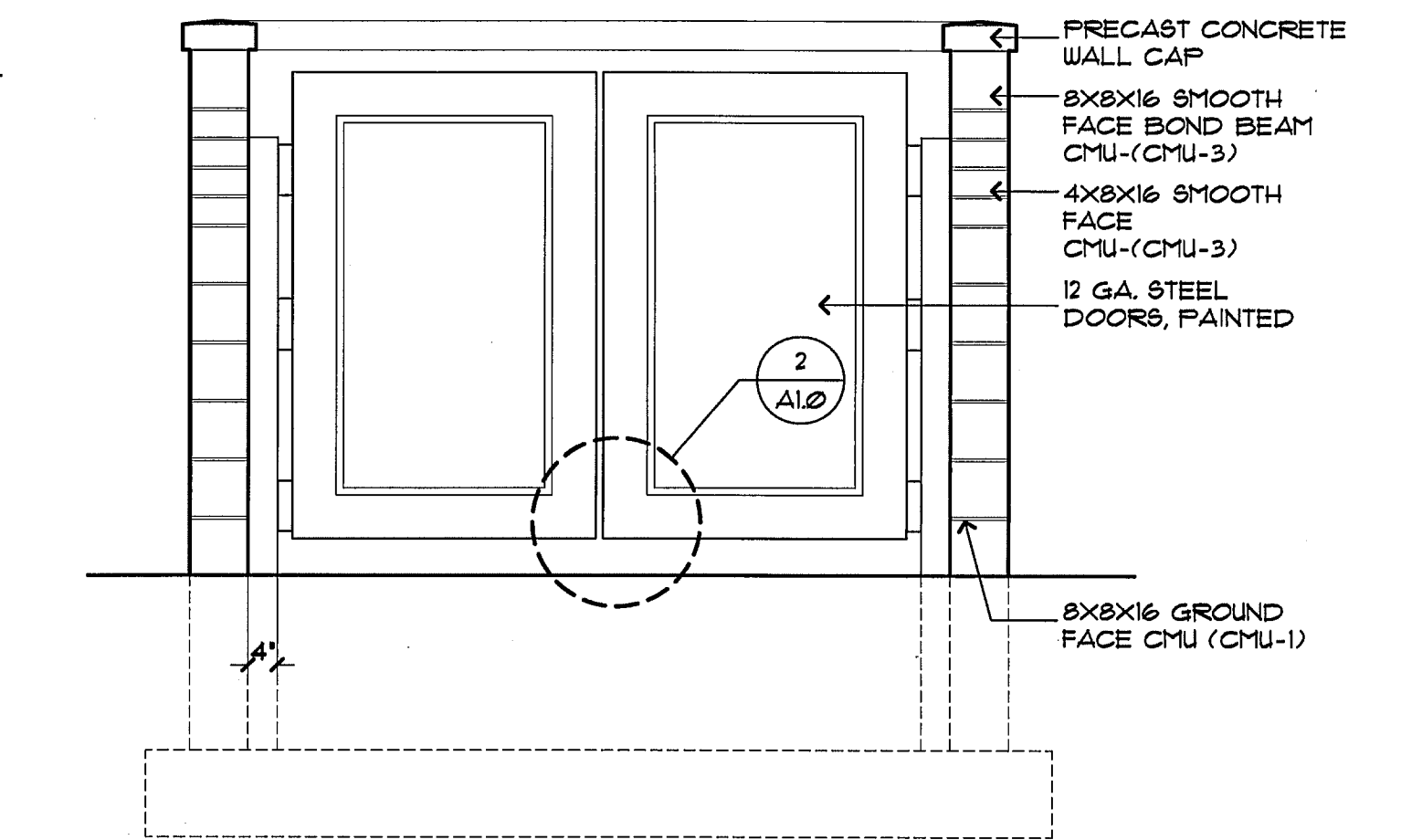
7 TRASH ENCLOSURE DETAIL  
SCALE: 3/4" = 1'-0"



19 TRASH ENCLOSURE PLAN  
SCALE: 1/2" = 1'-0"



14 TRASH ENCLOSURE ELEV  
SCALE: 1/2" = 1'-0"



21 TRASH ENCLOSURE ELEV  
SCALE: 1/2" = 1'-0"

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COLORADO SPRINGS, CO 80903  
TELEPHONE: (719) 667-1972  
482 S. BROADWAY  
DENVER, COLORADO 80209  
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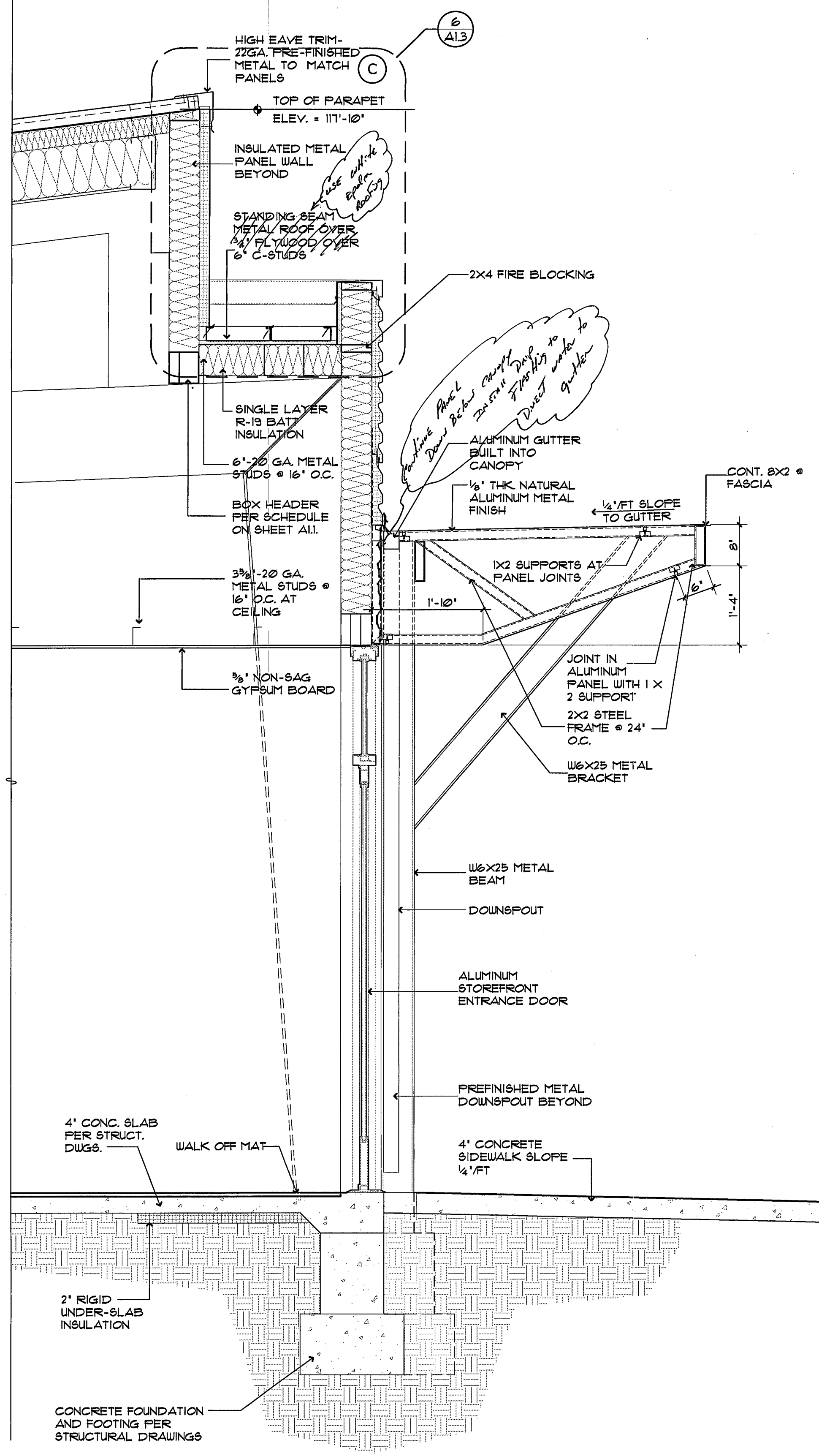
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RBD PLAN REVIEW 10/28/2010  
CHANGES

PROJECT NO. 9016  
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CHECKED BY: SGT  
DATE: 10/28/2010

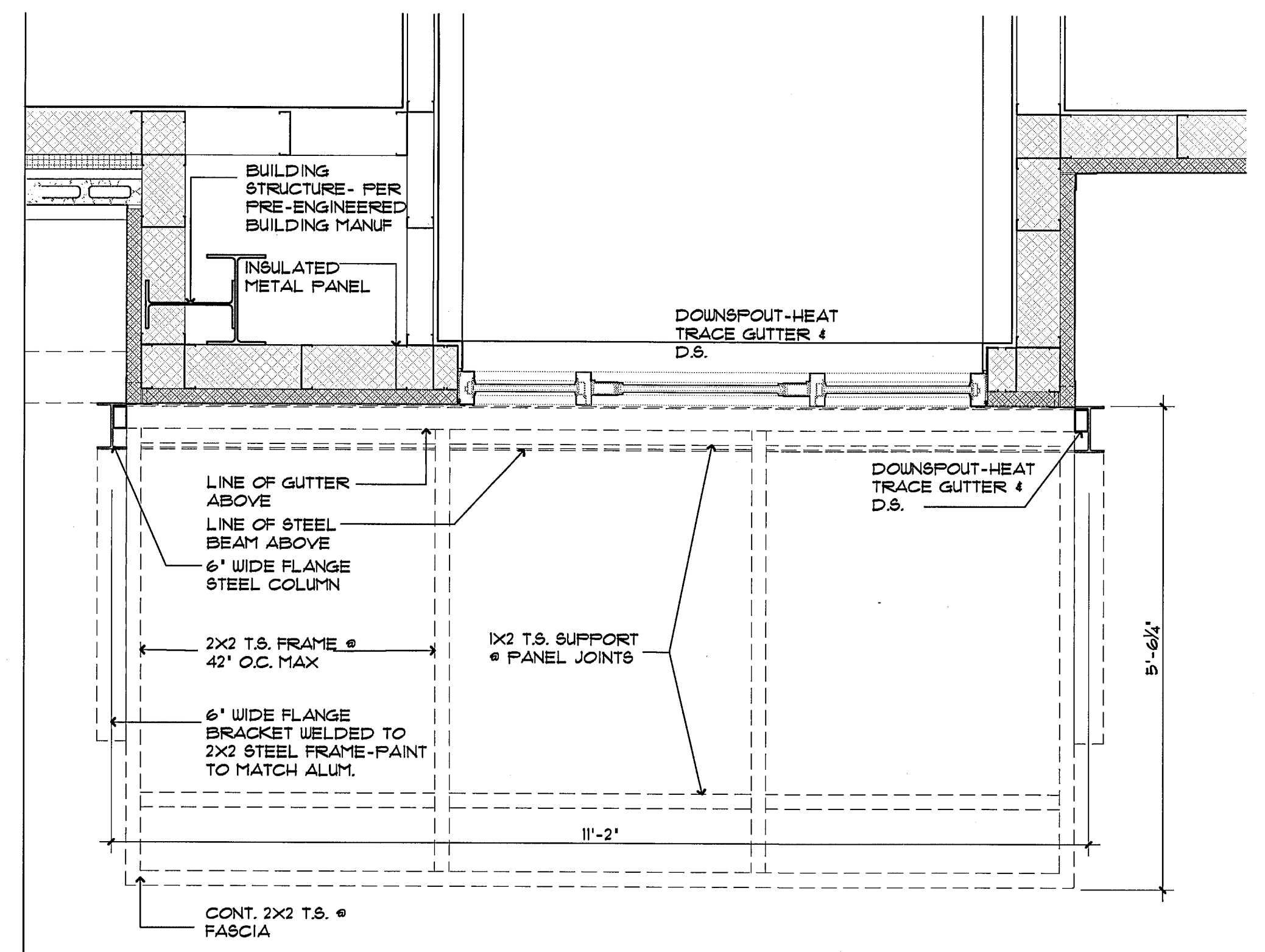
SHEET TITLE:  
TRASH ENCLOSURE DETAILS

SHEET NO.  
**A1.00**





**1 ENTRY SECTION**  
SCALE: 3/4" = 1'-0"



**2 ENTRY CANOPY PLAN**  
SCALE: 3/4" = 1'-0"

### COLD-FORMED STEEL FRAMING

#### TYPICAL CURTAINWALL FRAMING

**NOTE: VERTICAL SLIP CONNECTION. DO NOT SCREW TRACKS TOGETHER.**

**REFER TO FRAMING DETAILS FOR ROOF FRAMING REQUIREMENTS**

#### HEADER SCHEDULE

SPAN	HEADER SIZE (SSMA DESIGNATION)	TRIMMER STUDS	KING STUDS	BRACING REQ'D
UP TO 4'-0"	(2) 600S137-33 + (1) 600T125-33 TRACKS TOP AND BOTTOM	ONE	ONE	NO
4'-0" TO 8'-0"	(2) 600S137-43 + (1) 600T125-33 TRACKS TOP AND BOTTOM	ONE	TWO	NO
8'-0" TO 12'-0"	(2) 600S162-54 (50 ksi) + (1) 600T125-33 TRACKS TOP AND BOTTOM	TWO	TWO	YES
12'-0" TO 16'-0"	(2) 1000S250-54 (50 ksi) + (1) 600T125-33 TRACKS TOP AND BOTTOM	TWO	THREE	YES
16'-0" TO 20'-0"	(3) 1200S162-54 (50 ksi) + (1) 600T125-33 TRACKS TOP AND BOTTOM	THREE	THREE	YES

**NOTES:**

1. HEADER SIZES ABOVE ARE TO BE USED UNLESS NOTED OTHERWISE ON PLANS
2. PROVIDE WEB STIFFENERS AT BEARING LOCATIONS
3. ALL HEADER SECTIONS ARE TO BE UNPUNCHED
4. PROVIDE MINIMUM BEARING LENGTH FOR WEB CRIPPLING

#### SSMA DESIGNATION

MEMBER DEPTH (i.e. 600 x 1/100")

FLANGE WIDTH (i.e. 162 x 1/100")

600 S 162 - 43

STYLE  
S=STUD OR JOIST SECTION  
T=TRACK SECTION  
U=CHANNEL SECTION

MATERIAL THICKNESS (i.e. 43 x 1/1000")

#### MINIMUM ALLOWABLE SECTIONS

STUD DEPTH	SSMA DESIGNATION	STUD DEPTH	SSMA DESIGNATION
3 5/8"	362S162-43	8"	600S162-43
4"	400S162-43	10"	1000S162-54 (50 ksi)
6"	600S162-43	12"	1200S162-54 (50 ksi)

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PROJECT NO. 9016  
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DATE: 10/28/2010

SHEET TITLE:  
CANOPY DETAILS

SHEET NO.  
**A1.0**

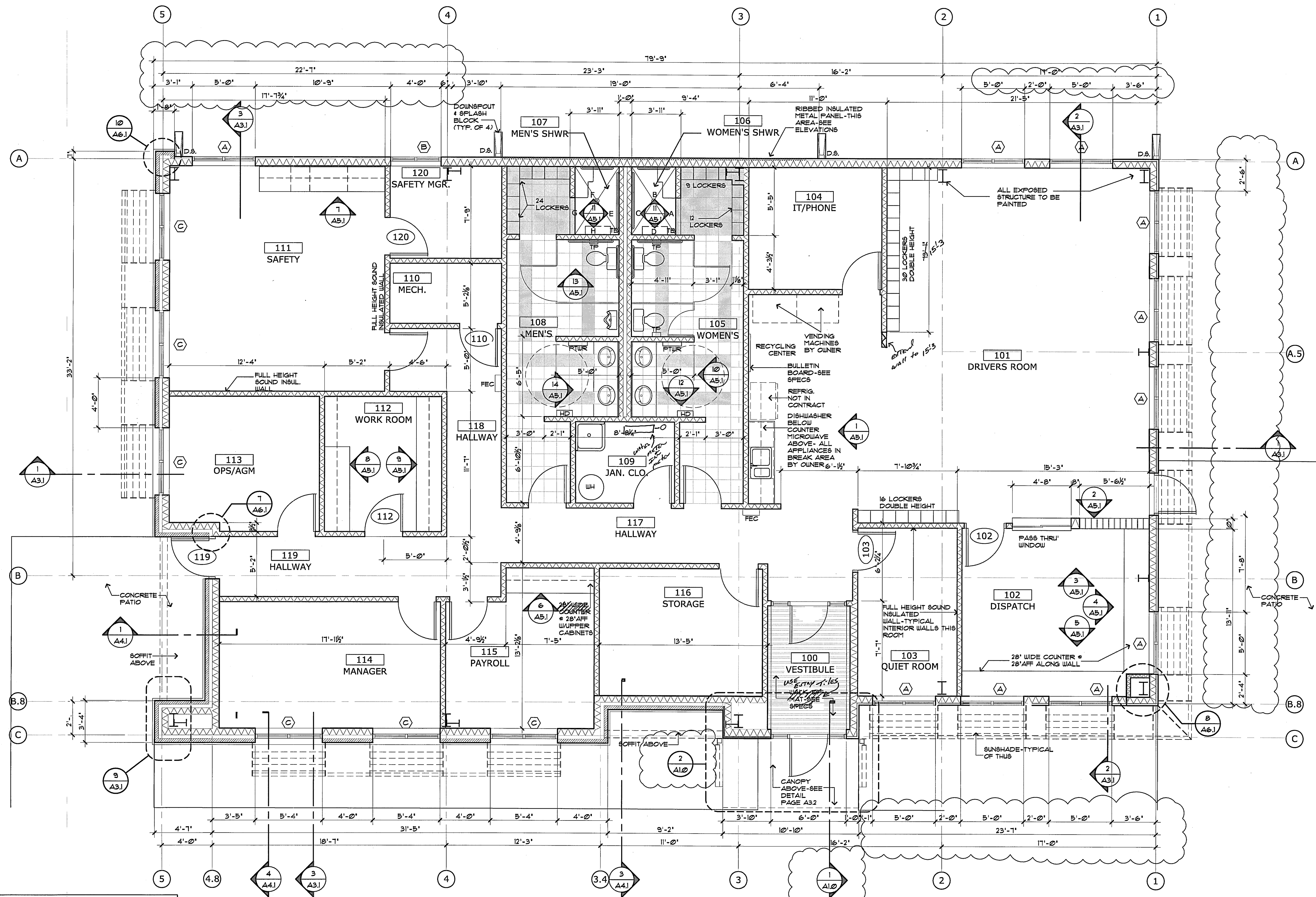
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PROJECT NO. 9016  
DRAWN BY:  
CHECKED BY: SGT  
DATE: 10/28/2010

SHEET TITLE:  
FLOOR PLAN

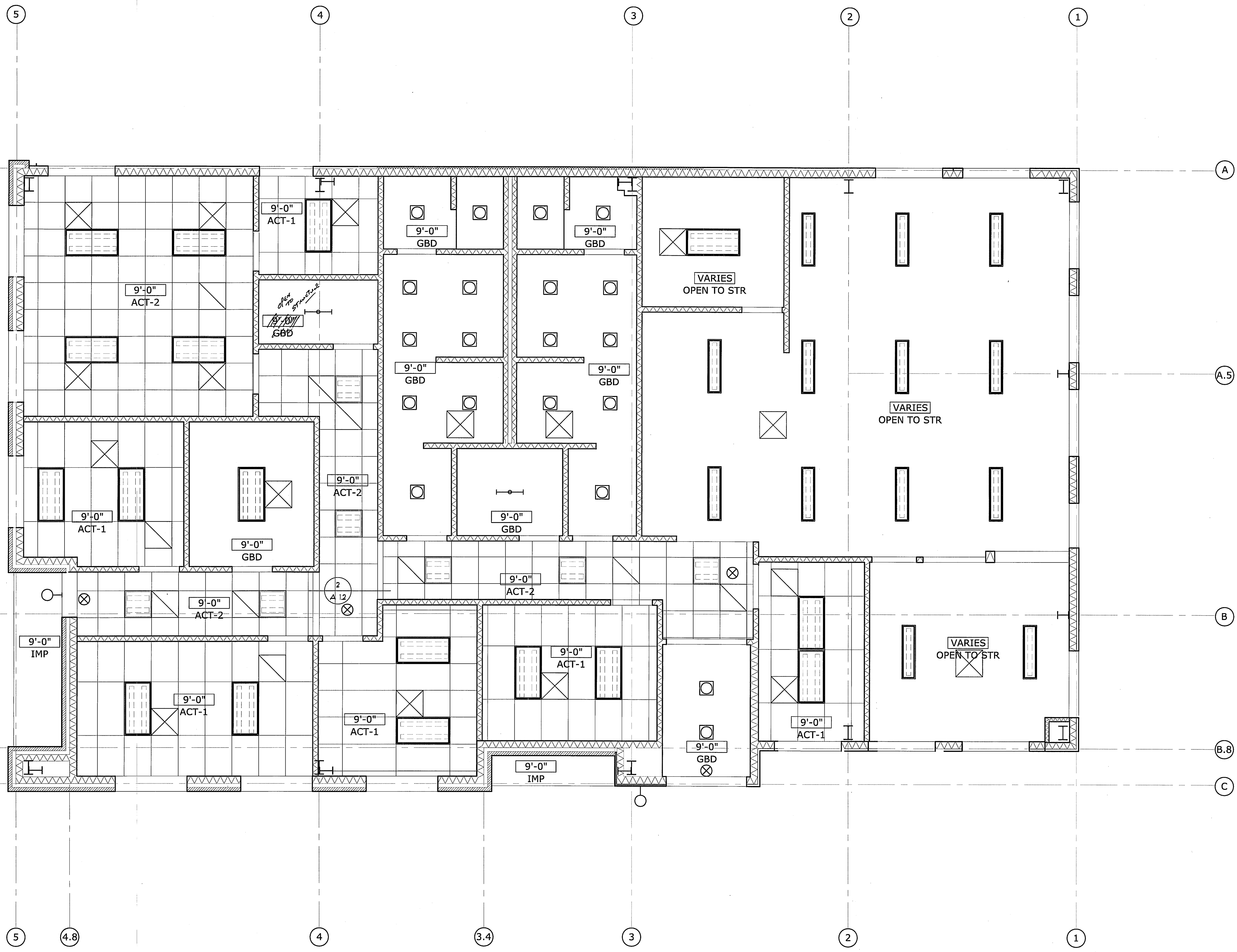
SHEET NO.  
**A1.1**



- GENERAL NOTES**
1. COLUMNS AND GRID LINES HAVE BEEN APPROXIMATELY LOCATED AND DIMENSIONED. BUILDING MANUFACTURER WILL DETERMINE FINAL GRID AND COLUMN LAYOUT IN COORDINATION WITH THE ARCHITECT AND STRUCTURAL ENGINEER.
  2. FEC WILL BE LOCATED BASED ON FIRE DEPARTMENT REVIEW.
  3. ALL RESTROOM, QUIET ROOM, AND SAFETY ROOM PERIMETER WALLS WILL BE SOUND INSULATED.
  4. PROVIDE SOUND INSULATION IN CEILING AT RESTROOMS.

**1 FLOOR PLAN**  
SCALE: 1/4" = 1'-0"

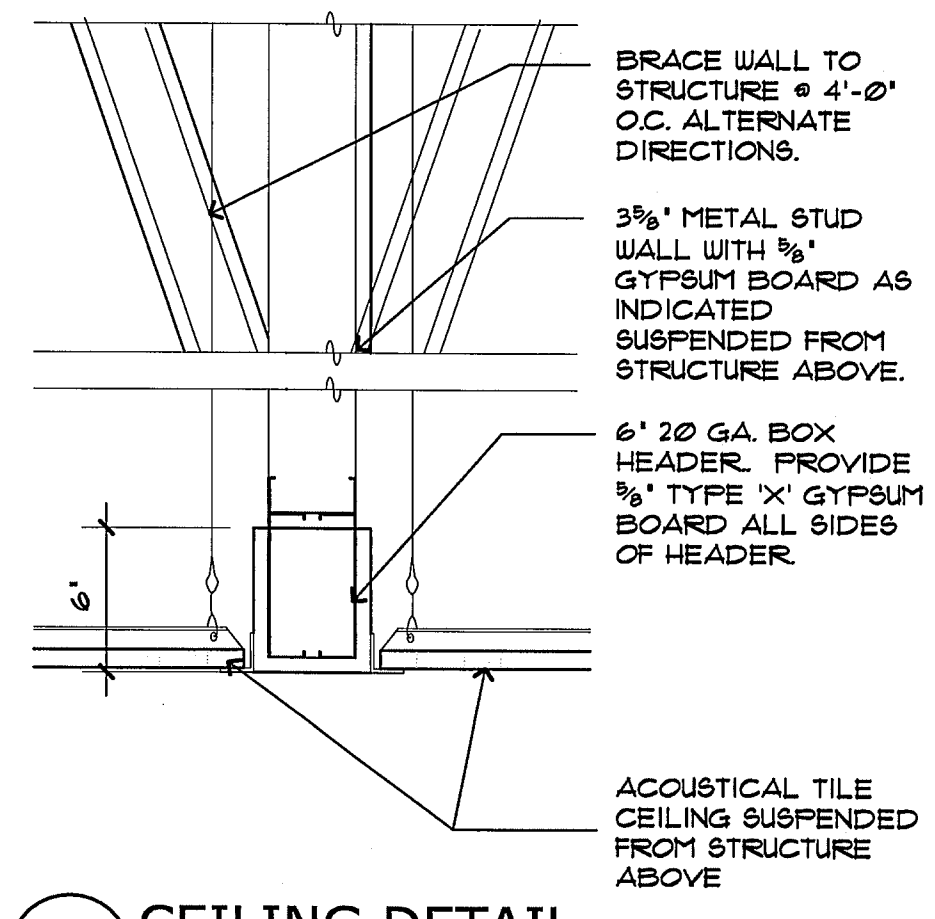




- NOTES**
1. GYPSUM BOARD CEILING TO HAVE A LEVEL 4' GYPSUM BOARD FINISH, UNLESS OTHERWISE NOTED.
  2. 9'-0" • CEILING HEIGHT 4' ACT
  3. REFER TO FLOOR PLAN FOR WALL CONSTRUCTION.
  4. WALL SCANCES SHOULD BE MOUNTED AT 9'-0" AFF. TO 4' OF MOUNTING OF FIXTURE UNLESS OTHERWISE NOTED.
  5. REFER TO ELECTRICAL PLAN FOR ADDITIONAL LIGHTS THAT MAY NOT BE SHOWN IN THE REFLECTED CEILING PLAN
  6. COORDINATE LIGHT FIXTURE LOCATION WITH DUCTWORK, NOTIFY ARCHITECT OF ANY CONFLICTS PRIOR TO INSTALLATION.
  7. GYPSUM BOARD CEILING INDICATED SHALL BE SUSPENDED PER SPECS OR ATTACHED TO CEILING STUDS TYPICALLY 3/8" • 16' O.C.

**LEGEND**

	2'x4' FLUORESCENT PANEL
	FLUORESCENT STRIP LIGHT VARYING LENGTHS
	EXIT SIGN
	RECESSED LIGHT FIXTURE
	WALL-MOUNTED LIGHT FIXTURE (SCONCE)
	LINEAR SCONCE LIGHTING-LENGTHS VARY
	SUPPLY GRILL
	RETURN AIR GRILL



**1 REFLECTED CEILING PLAN**  
SCALE: 1/4" = 1'-0"

**2 CEILING DETAIL**  
SCALE: 1 1/2" = 1'-0"

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711 N. CASCADE AVE. SUITE 100  
COLORADO SPRINGS, CO 80903  
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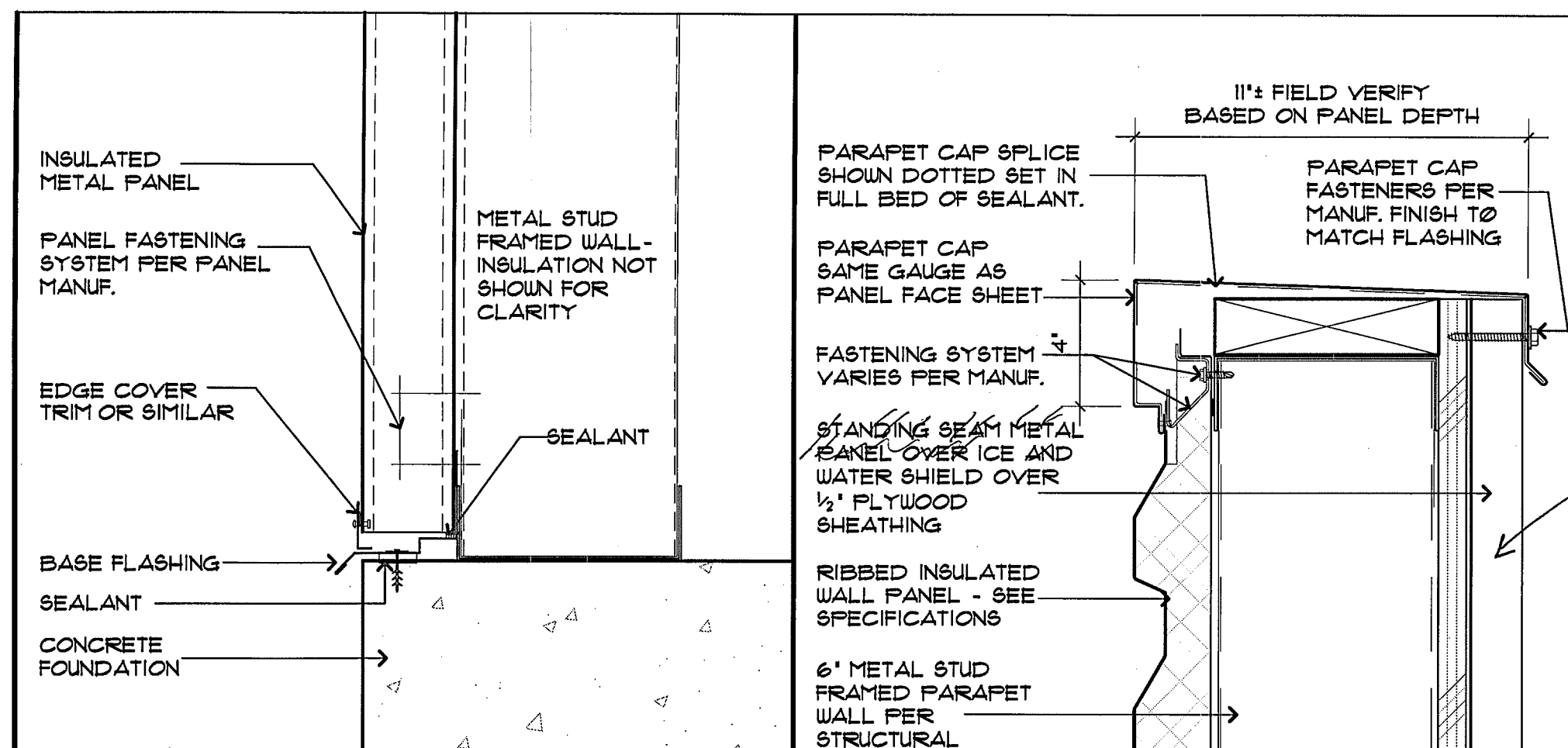
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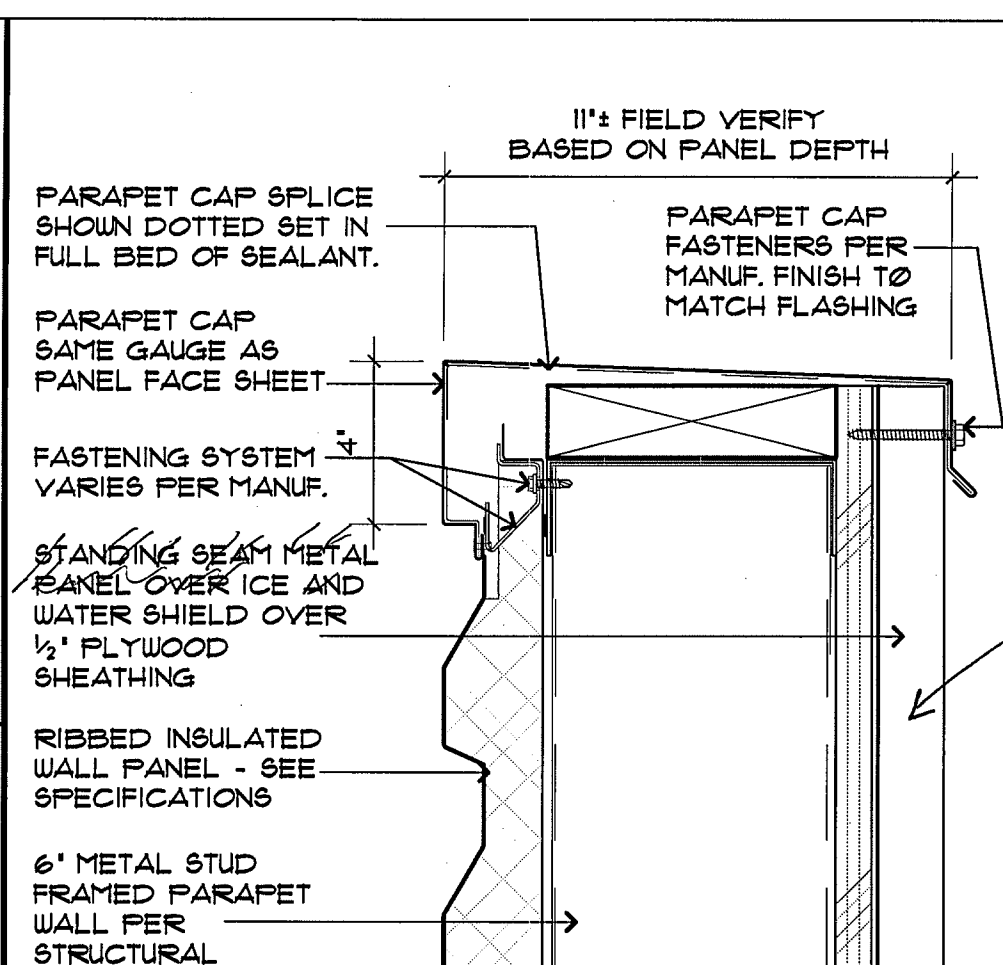
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DATE: 10/28/2010

SHEET TITLE:  
REFLECTED CEILING PLAN

SHEET NO.  
**A1.2**

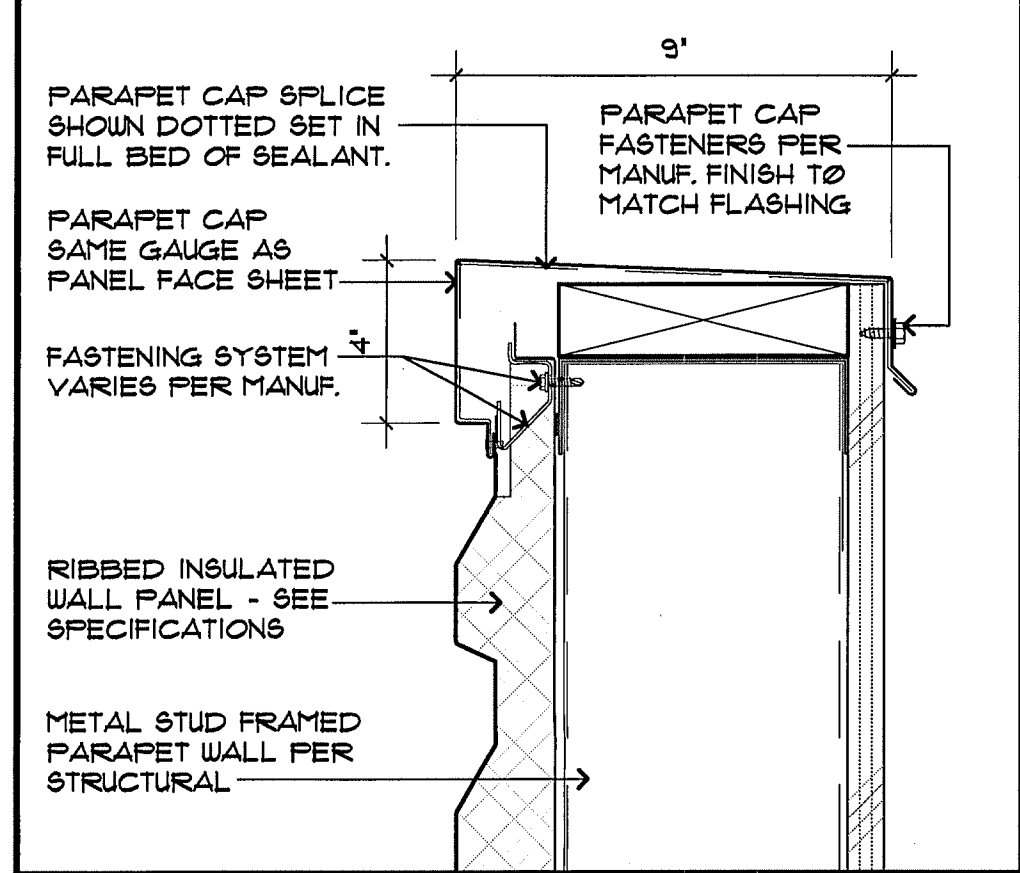


**2 PANEL BASE DETAIL**  
SCALE: 3" = 1'-0"

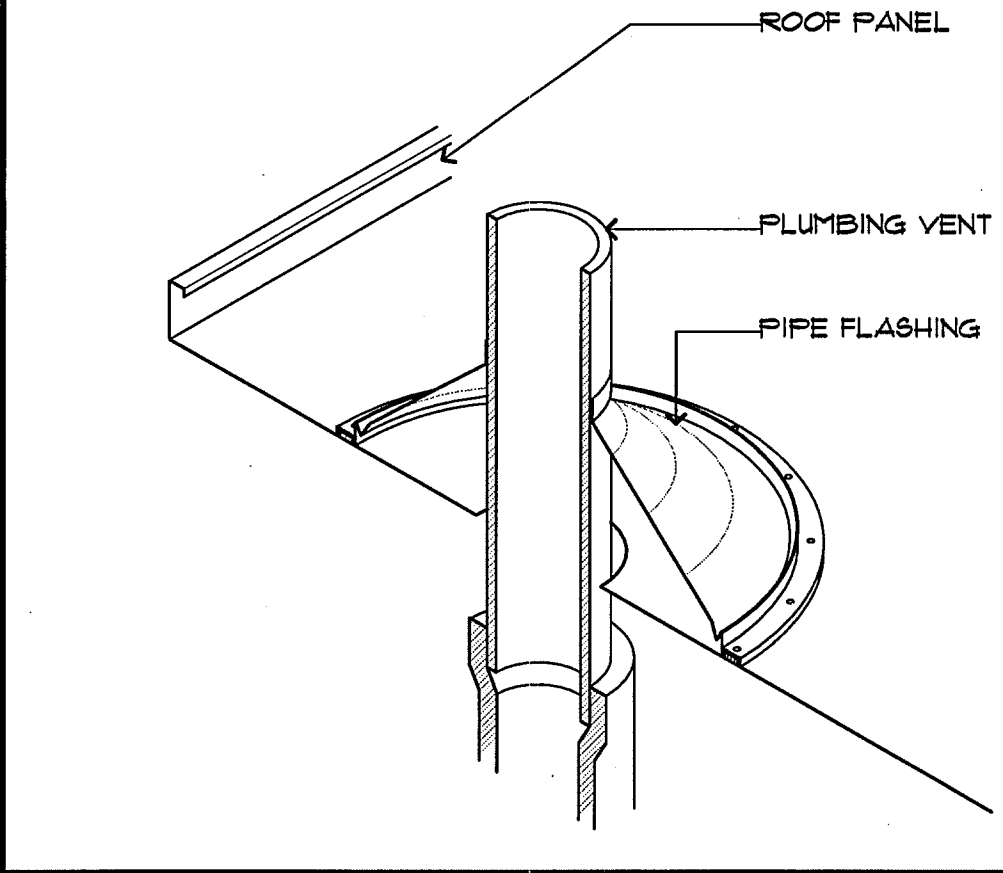


**1 PARAPET DETAIL**  
SCALE: 3" = 1'-0"

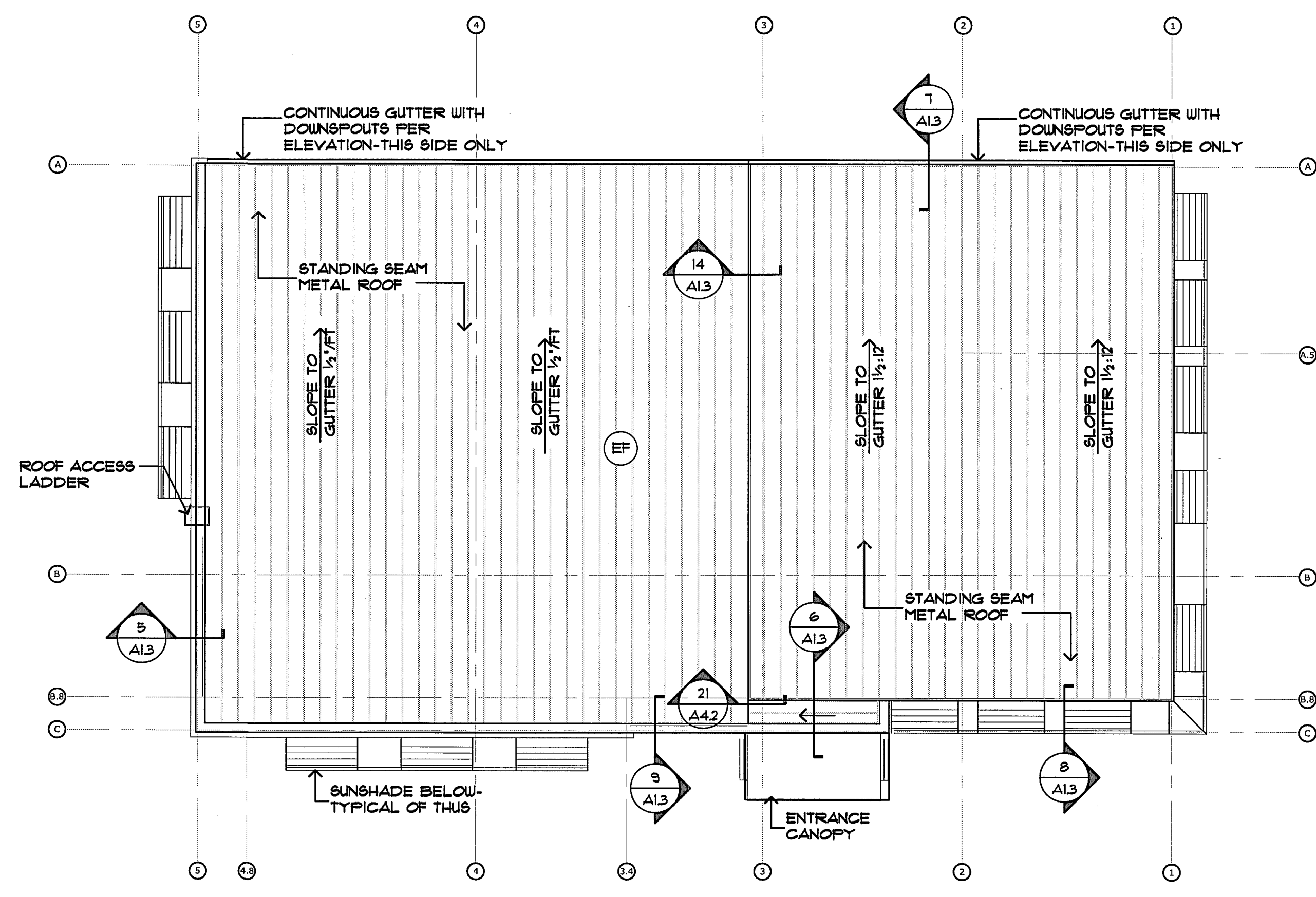
*use metal flashings*



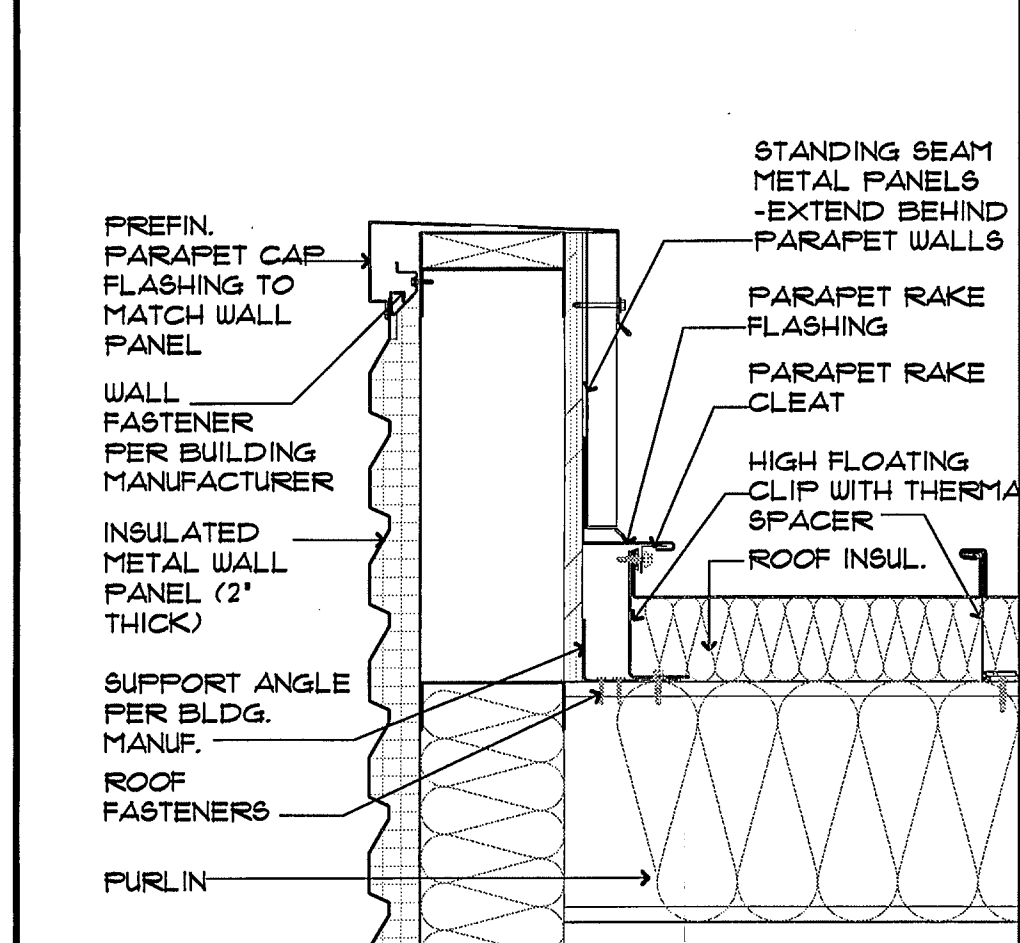
**3 PARAPET CAP DETAIL**  
SCALE: 3" = 1'-0"



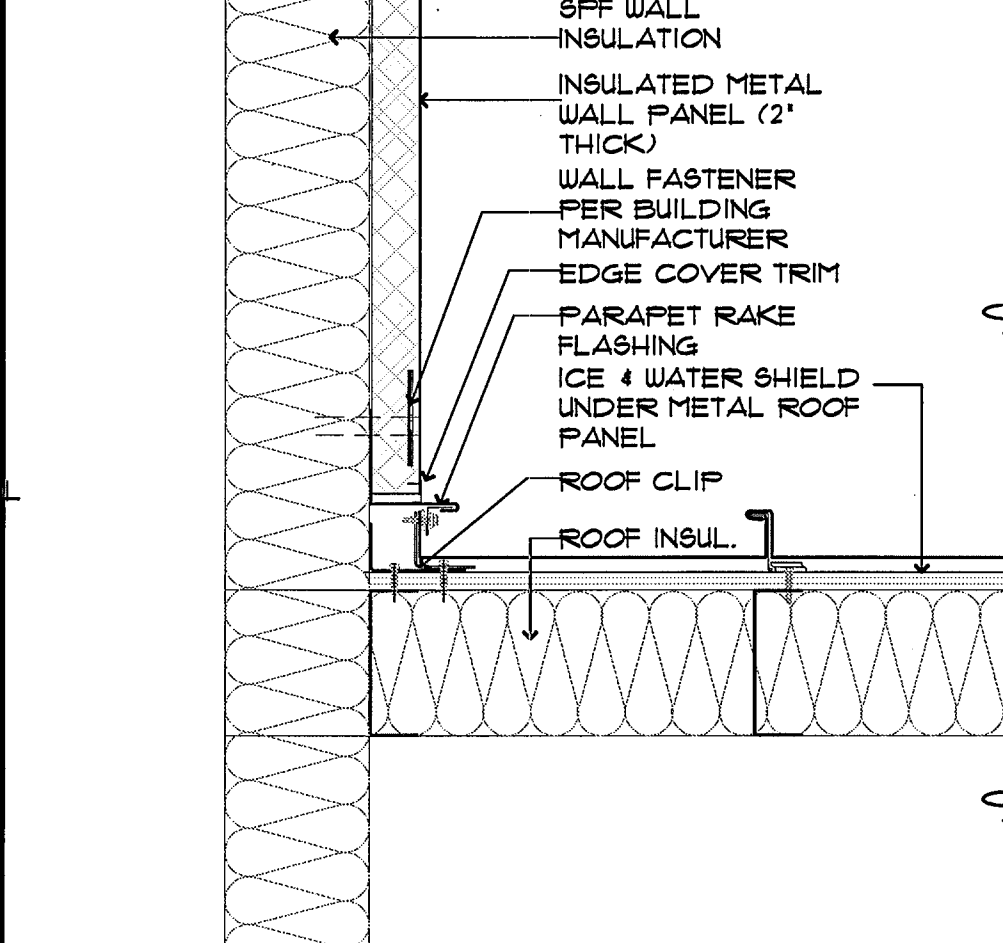
**4 ROOF VENT/PIPE FLASHING**  
SCALE: N.T.S.



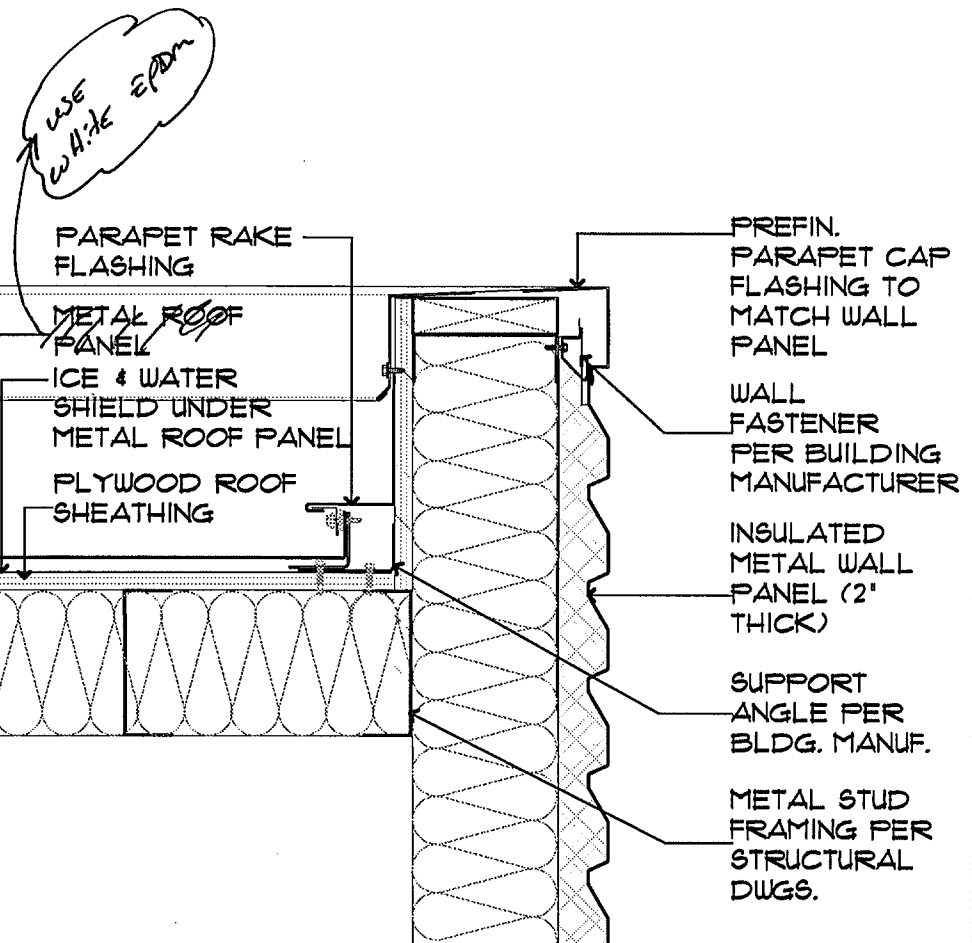
**ROOF PLAN**  
SCALE: 1/8" = 1'-0"



**5 PARAPET DETAIL**  
SCALE: 1 1/2" = 1'-0"

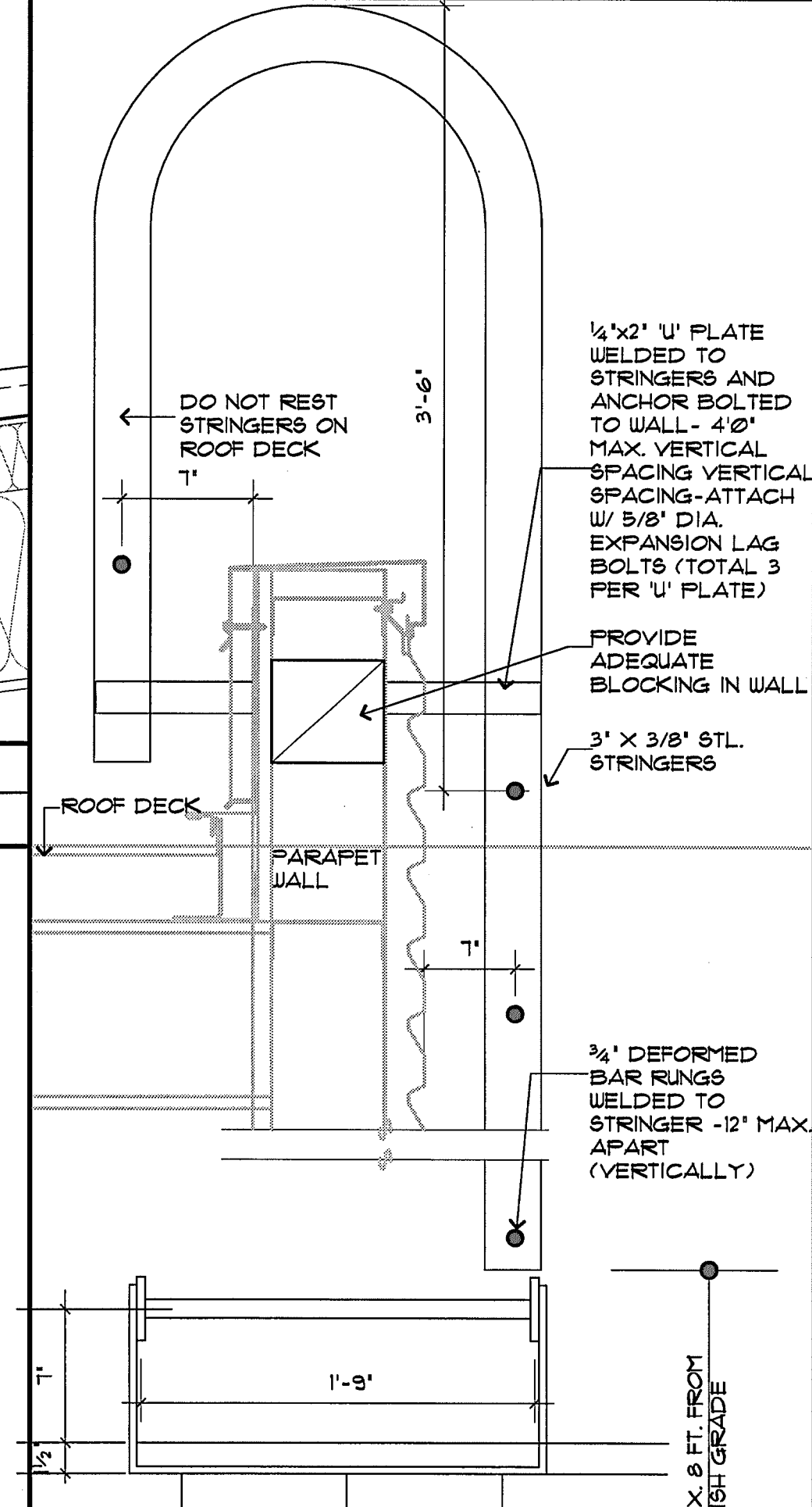


**6 ENTRY ROOF DETAIL**  
SCALE: 1 1/2" = 1'-0"

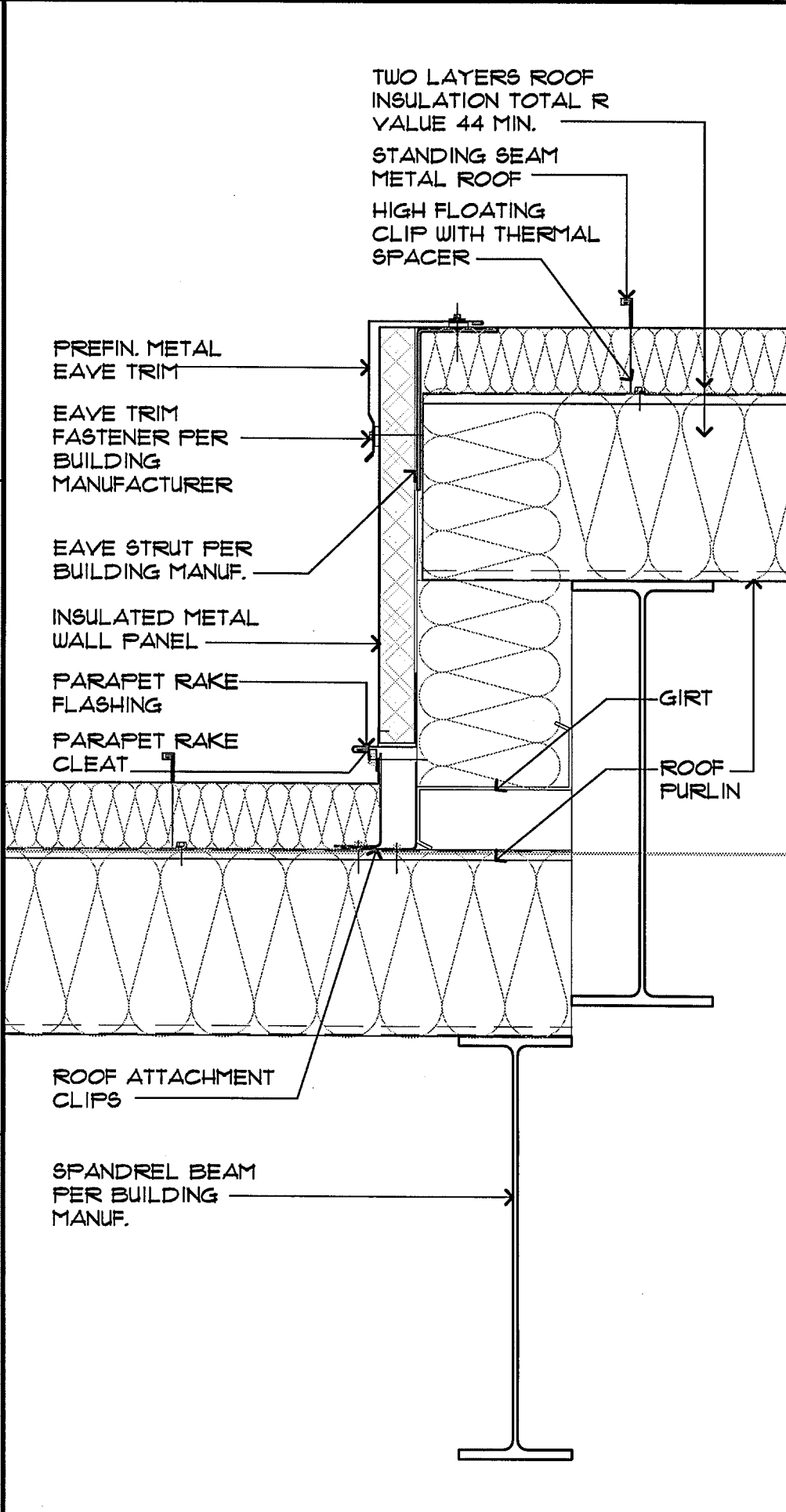


**7 GUTTER DETAIL**  
SCALE: 1 1/2" = 1'-0"

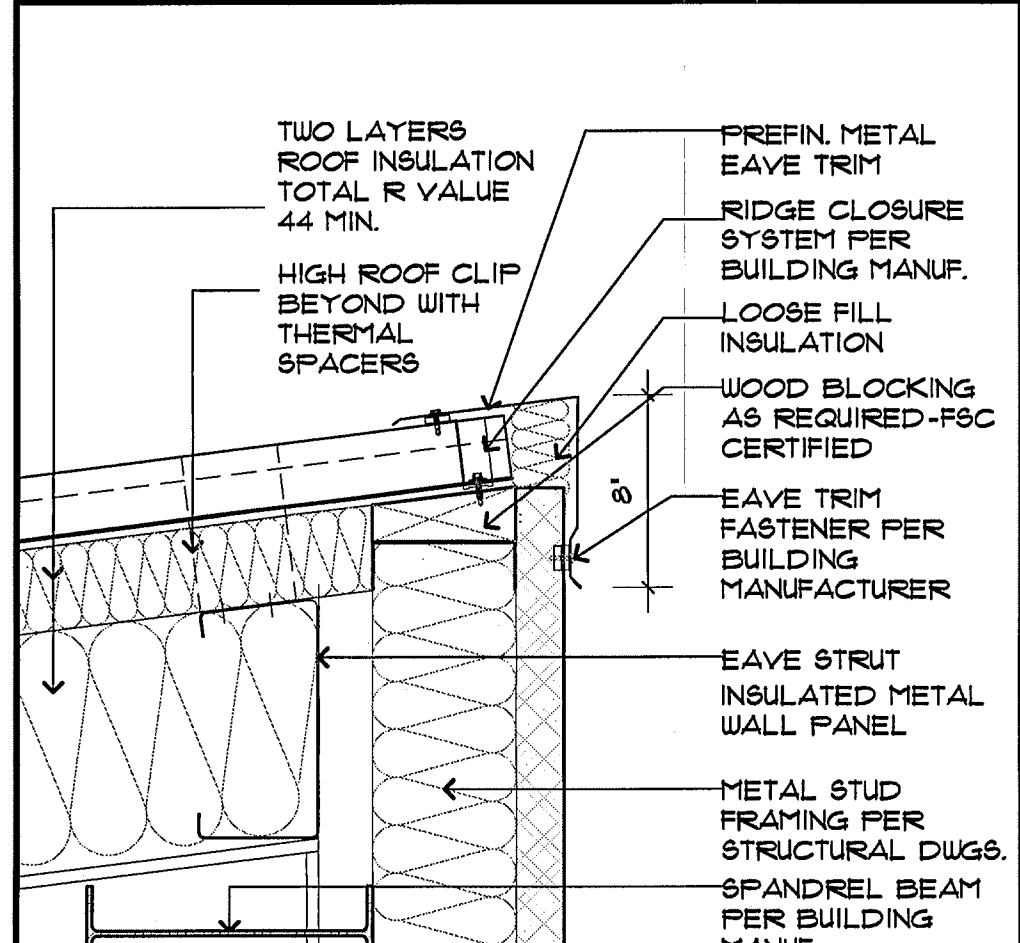
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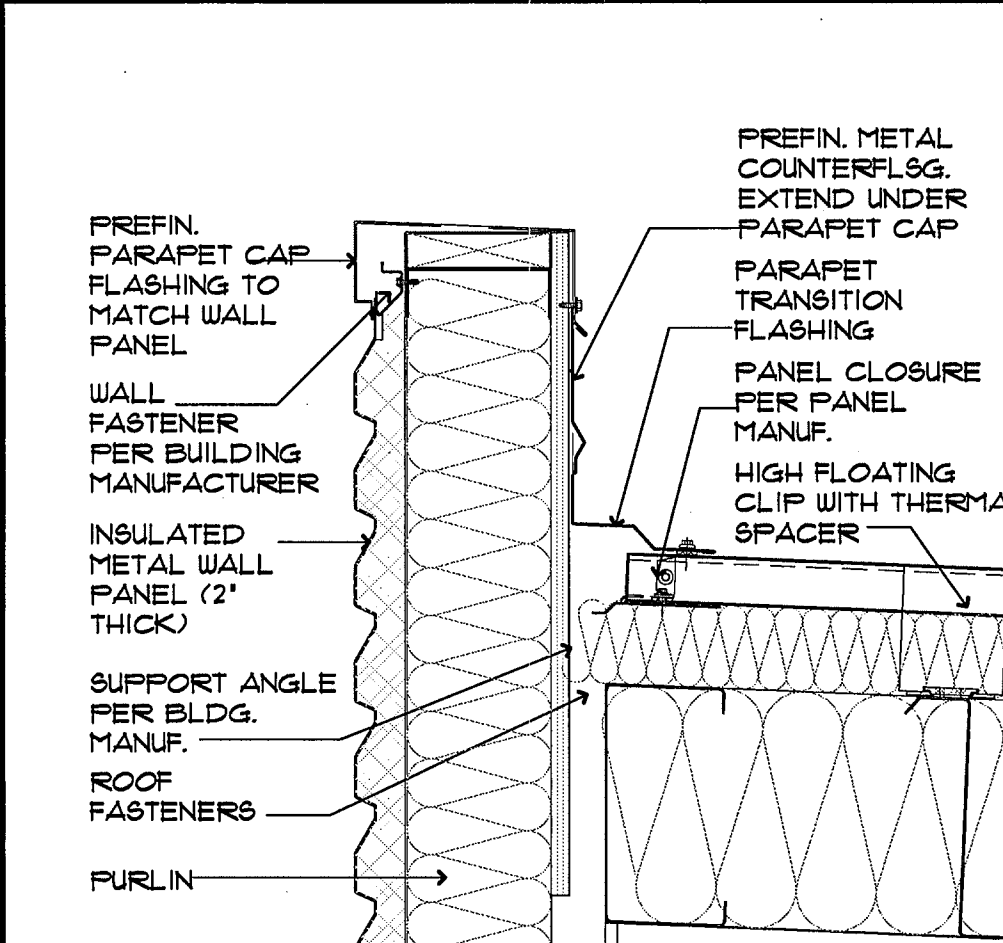
**SECTION AA**  
**13 ROOF LADDER DETAIL**  
SCALE: 1 1/2" = 1'-0"



**14 ROOF DETAIL**  
SCALE: 1 1/2" = 1'-0"



**8 HIGH RAKE DETAIL**  
SCALE: 1 1/2" = 1'-0"



**9 PARAPET DETAIL**  
SCALE: 1 1/2" = 1'-0"

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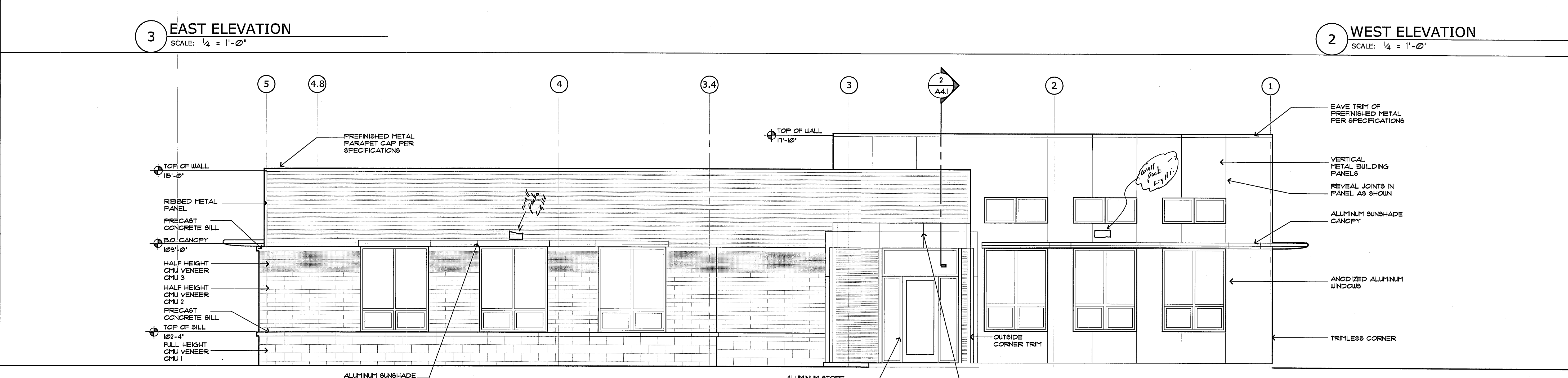
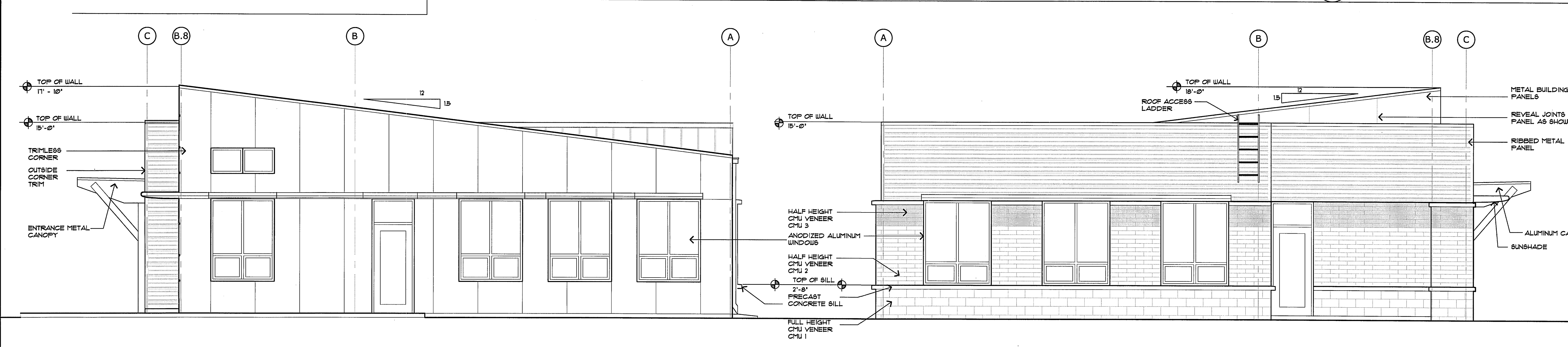
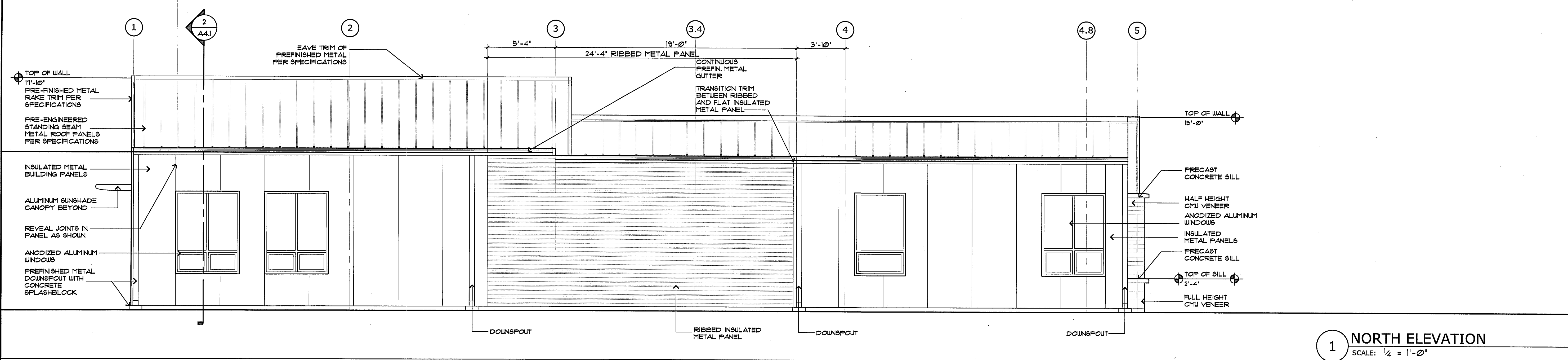
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DATE: 10/28/2010

SHEET TITLE:  
ROOF PLAN

SHEET NO.

**A1.3**







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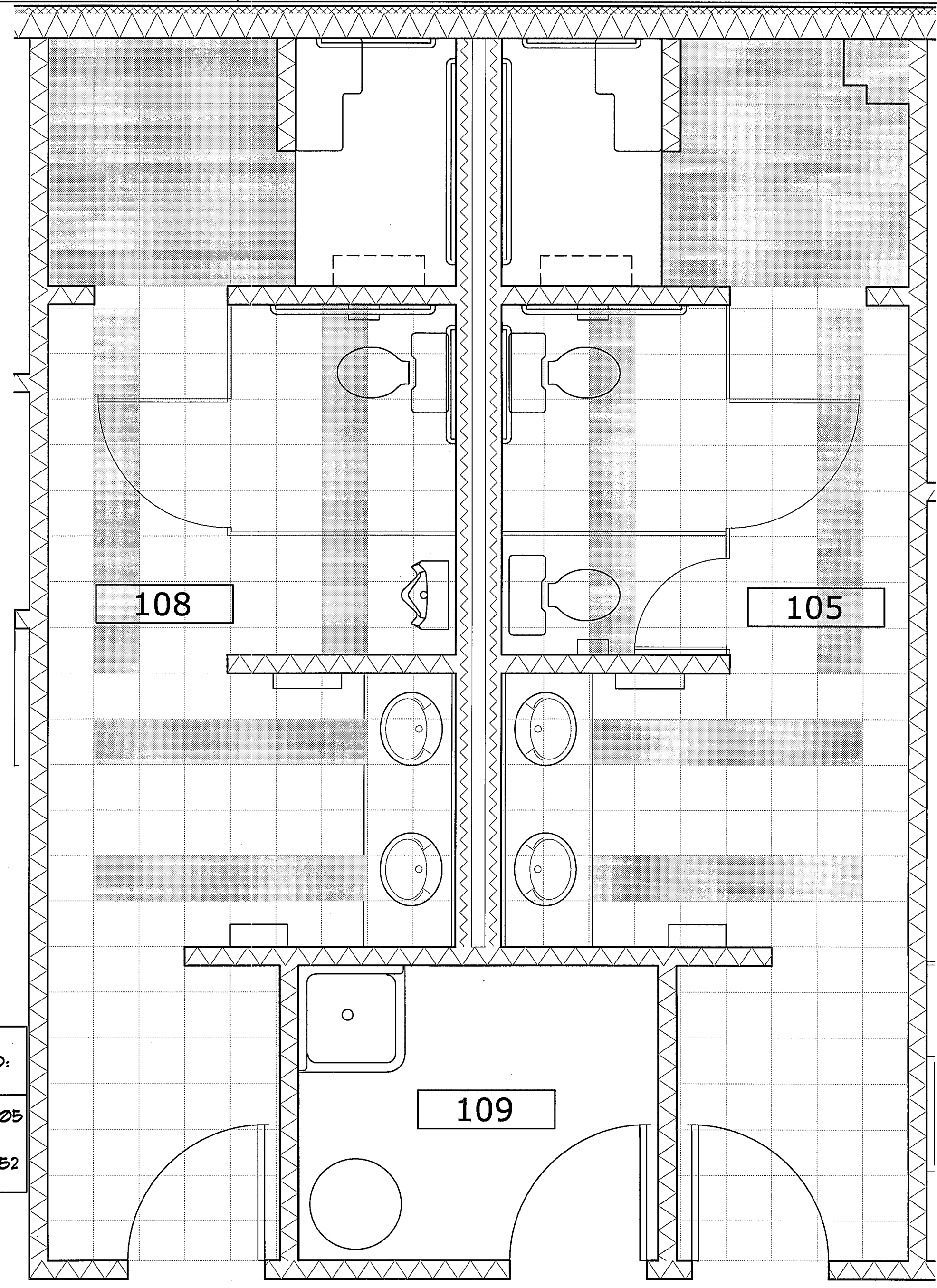
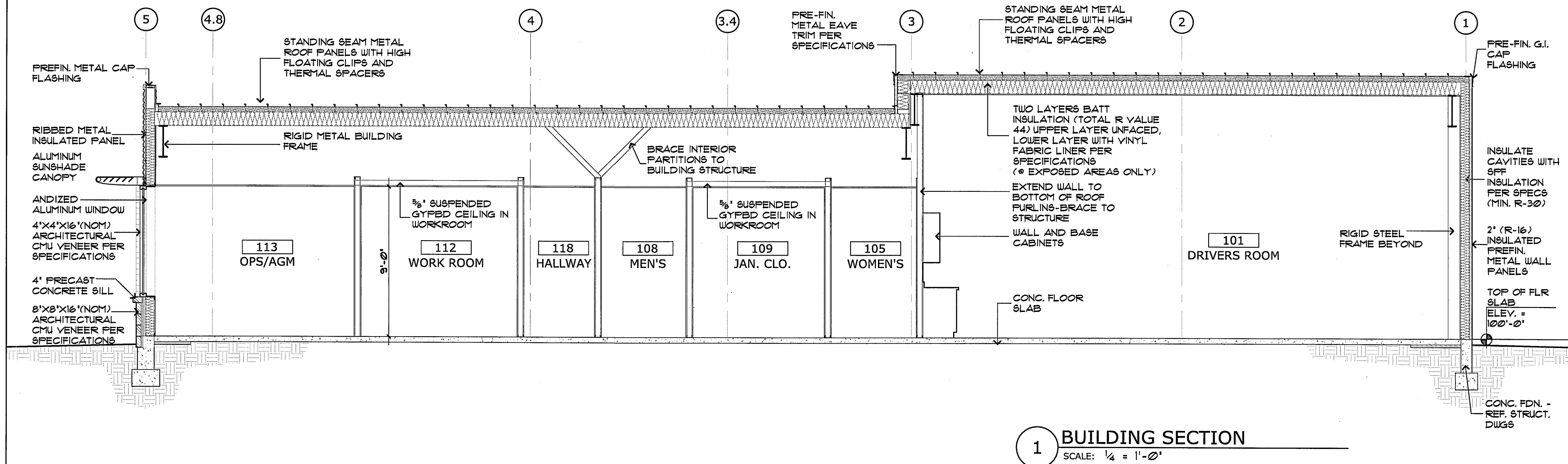
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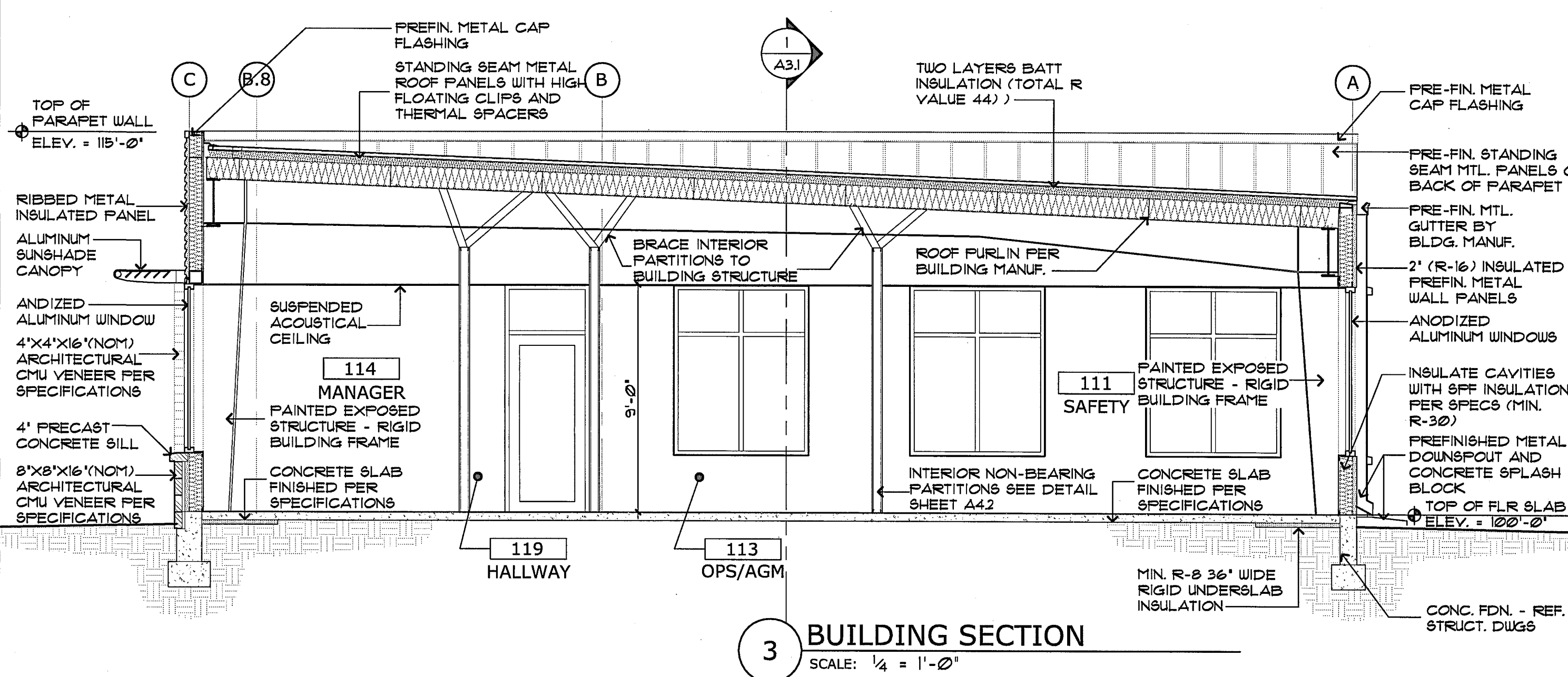
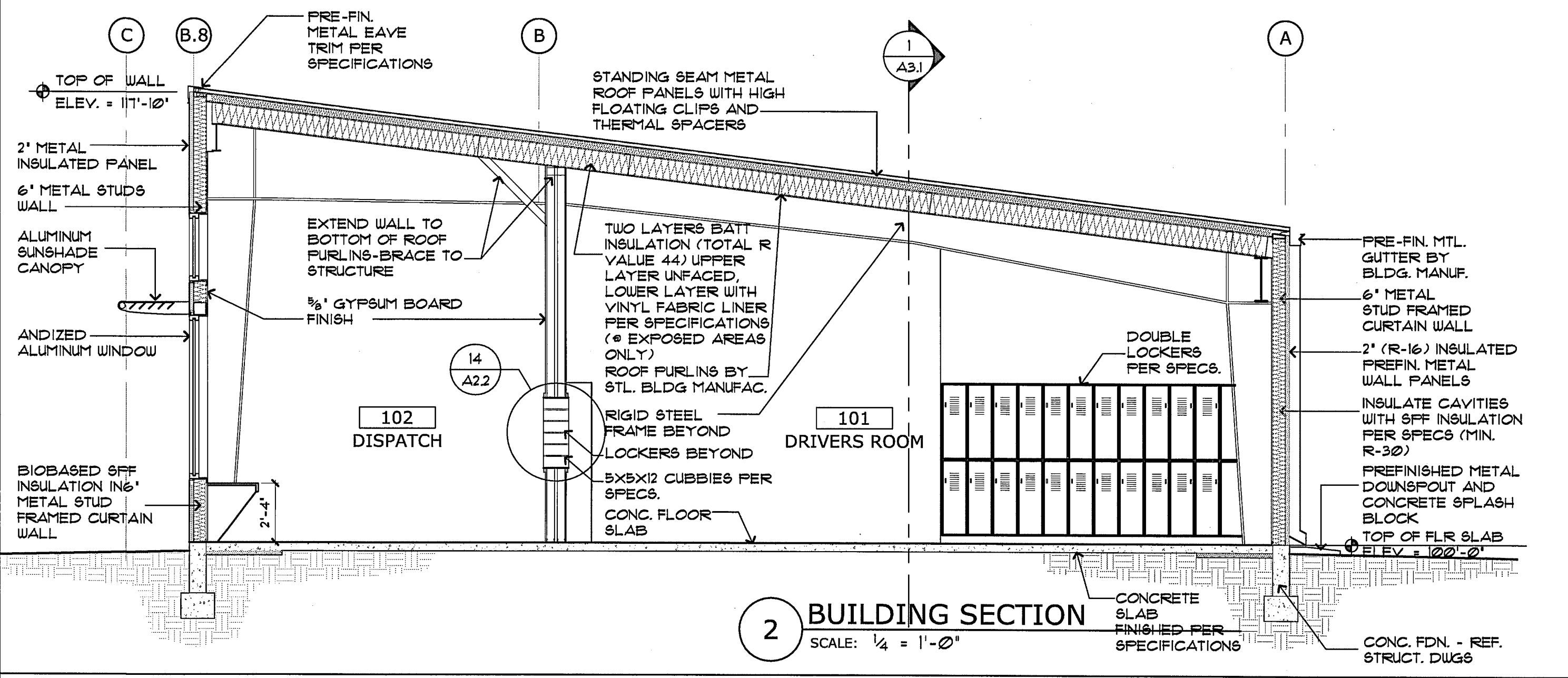
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SHEET TITLE:  
 BUILDING SECTIONS

SHEET NO.  
**A3.1**



TILES BY DAL TILE	COLOR	NO.
FIELD TILE	DAL TILE 'DESERT GRAY'	B925
ACCENT TILE	DAL-TILE 'GRAPPLE'	B952





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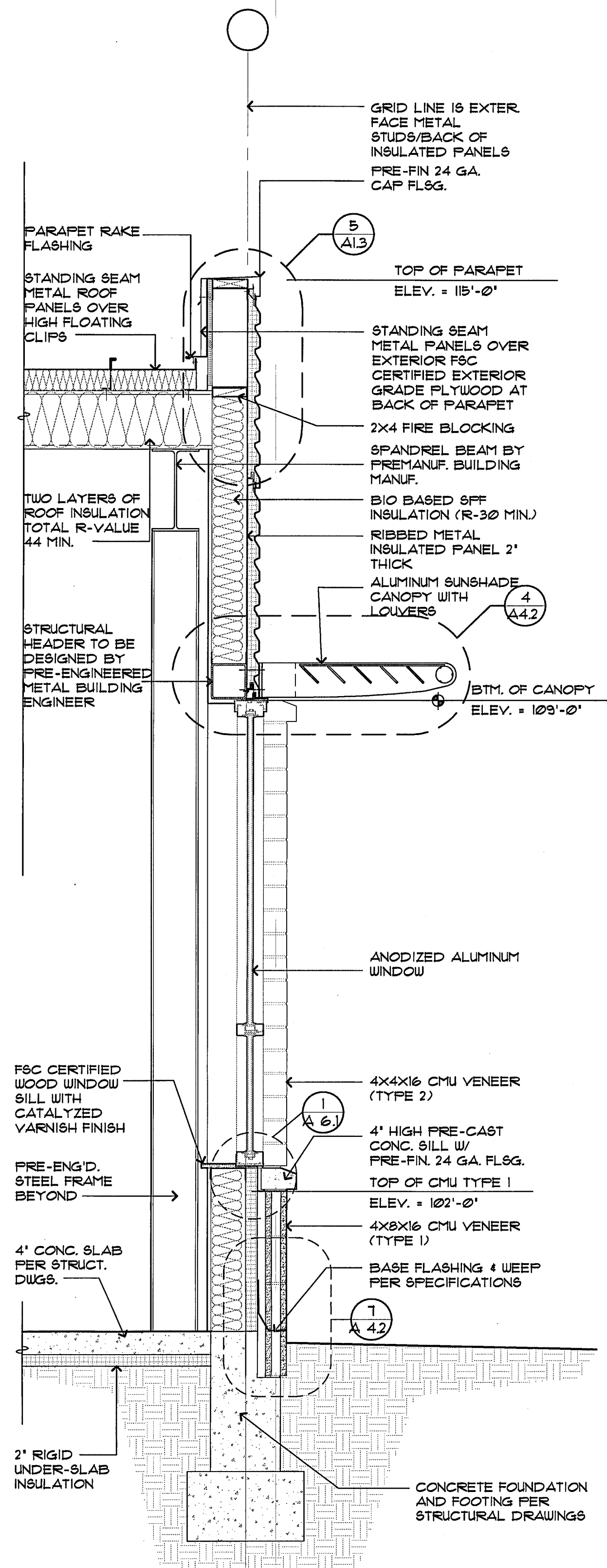
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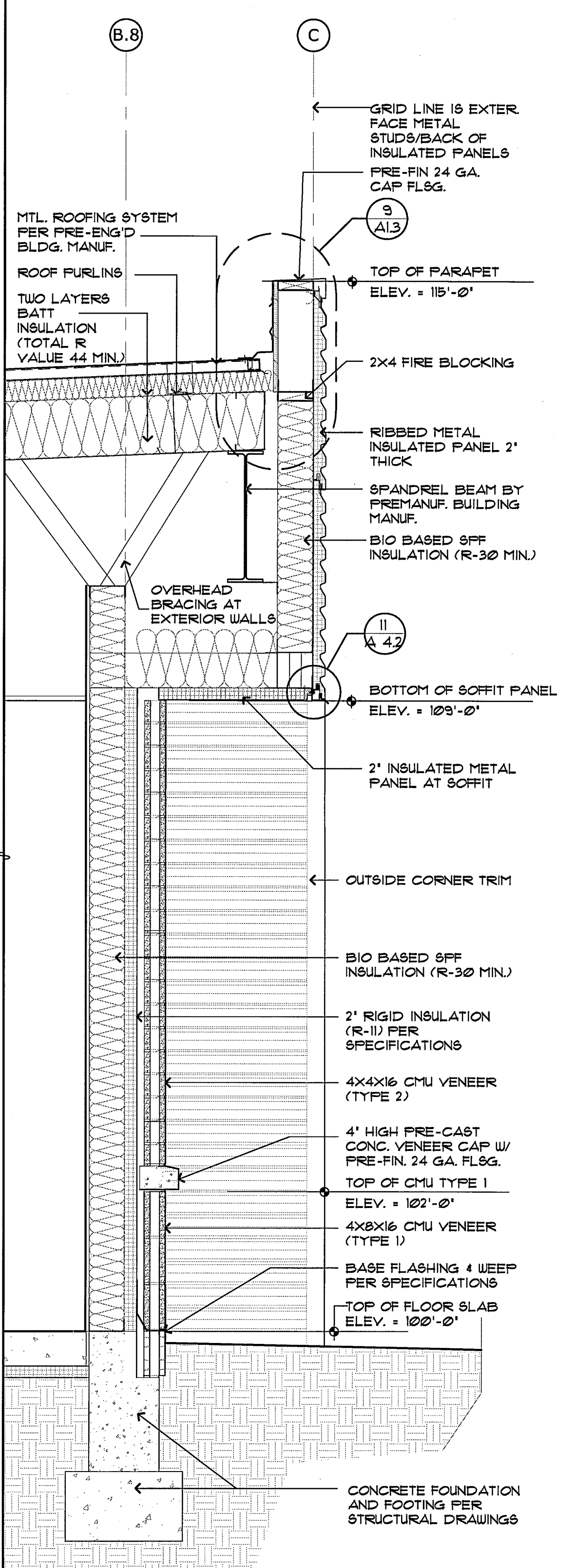
PROJECT NO.	9016
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DATE:	10/28/2010

SHEET TITLE:

WALL SECTIONS

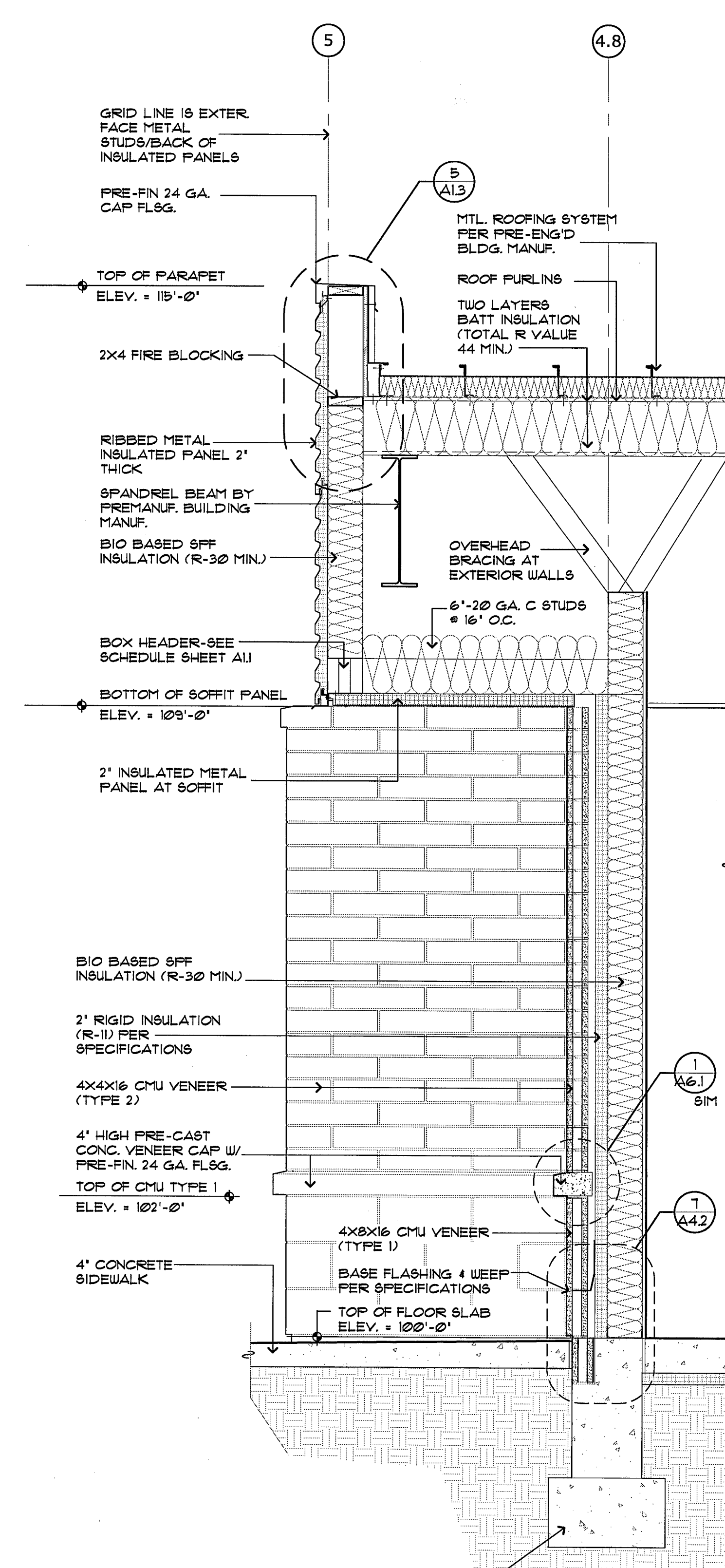


**4 WALL SECTION**  
SCALE: 1/4" = 1'-0"



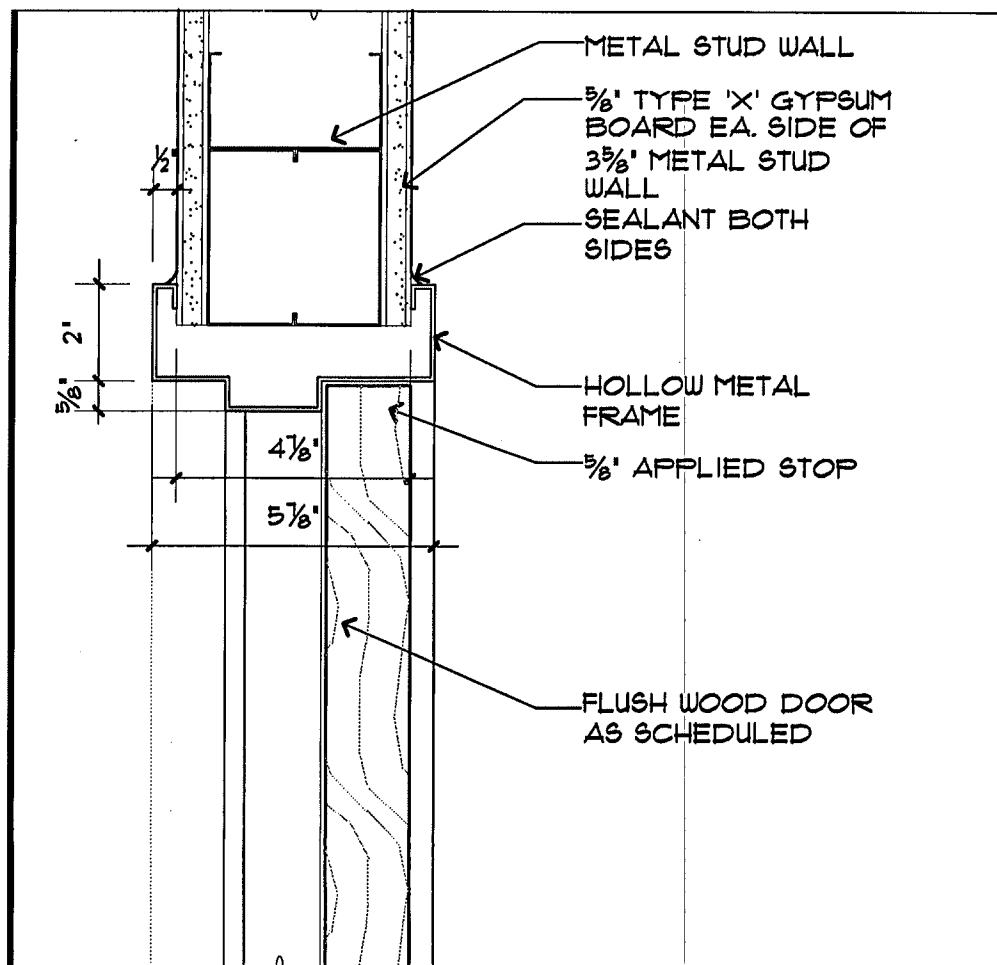
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**2 NOT USED**  
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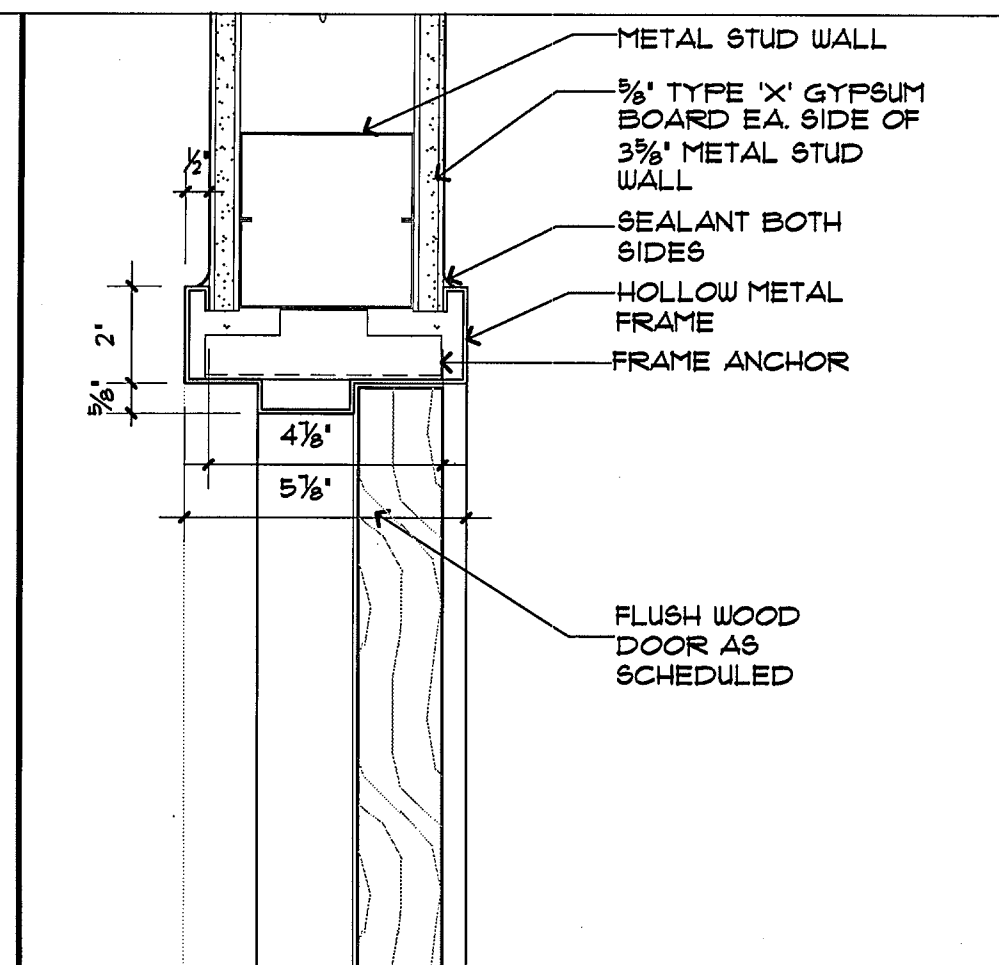


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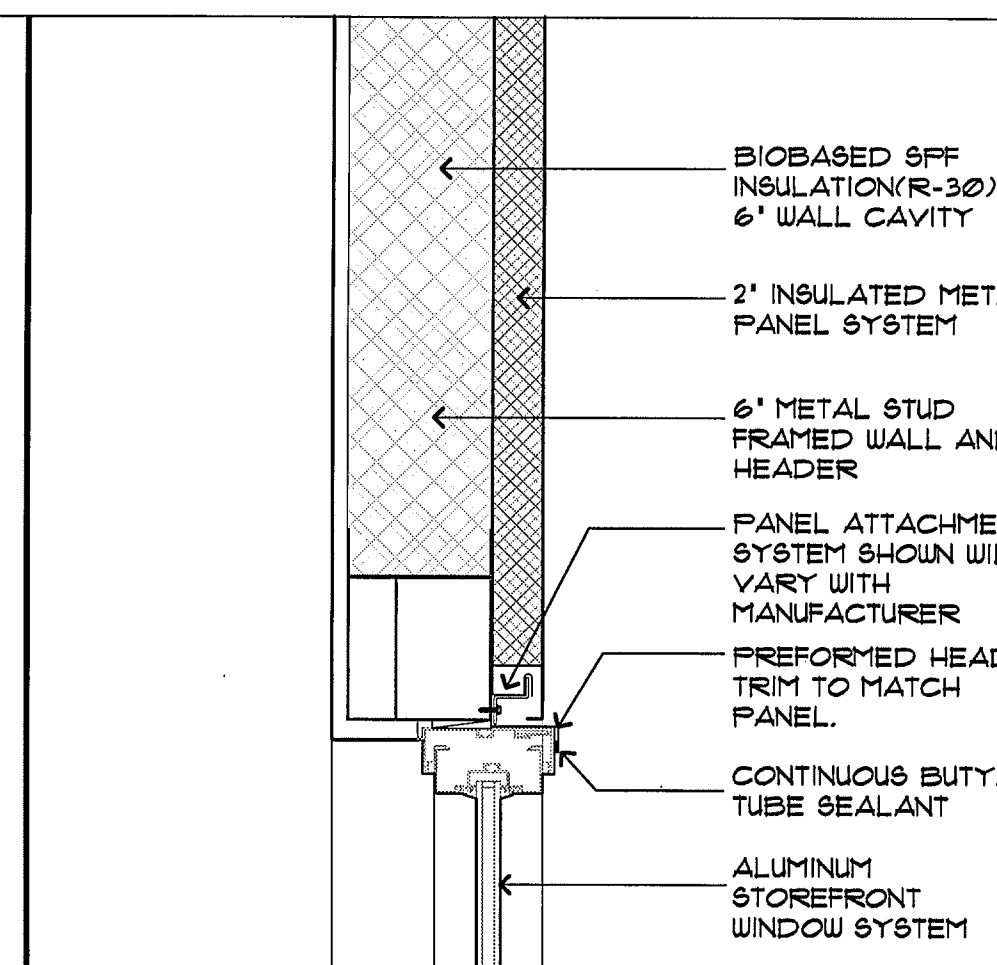




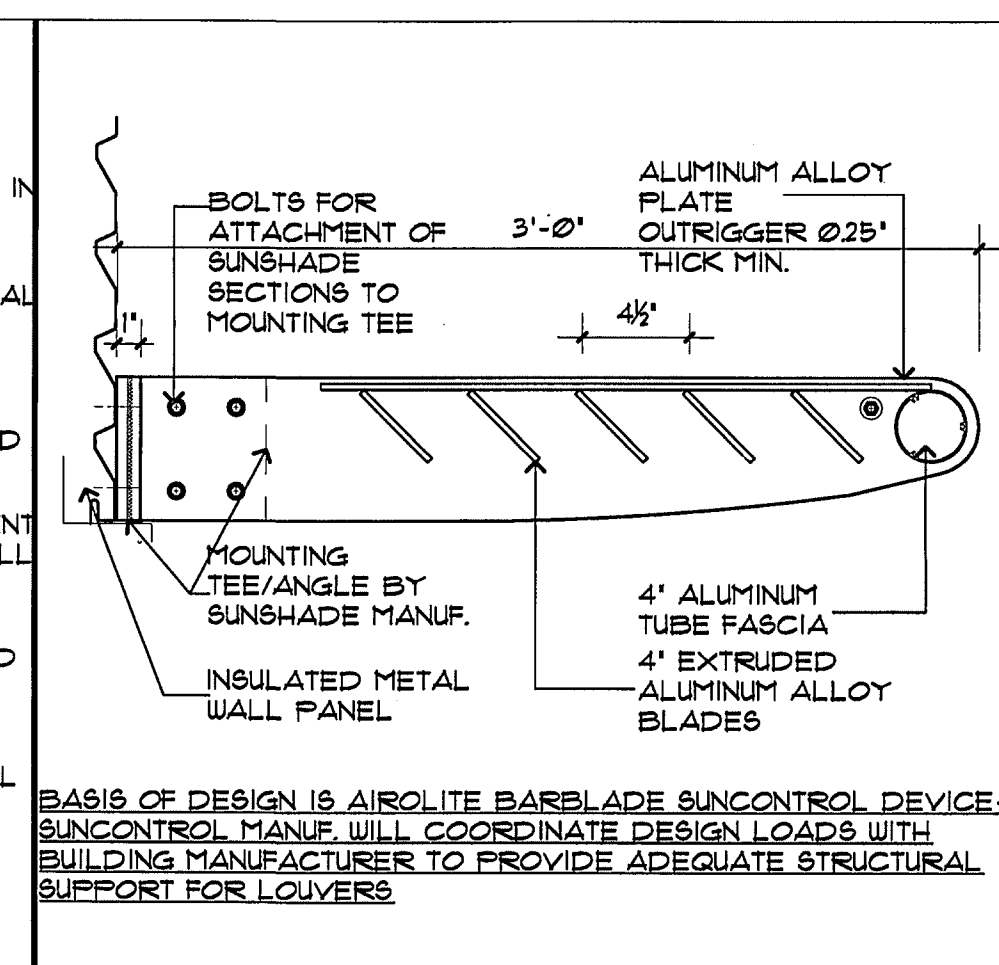
1 H.M. DOOR HEAD  
SCALE: 3 = 1'-0"



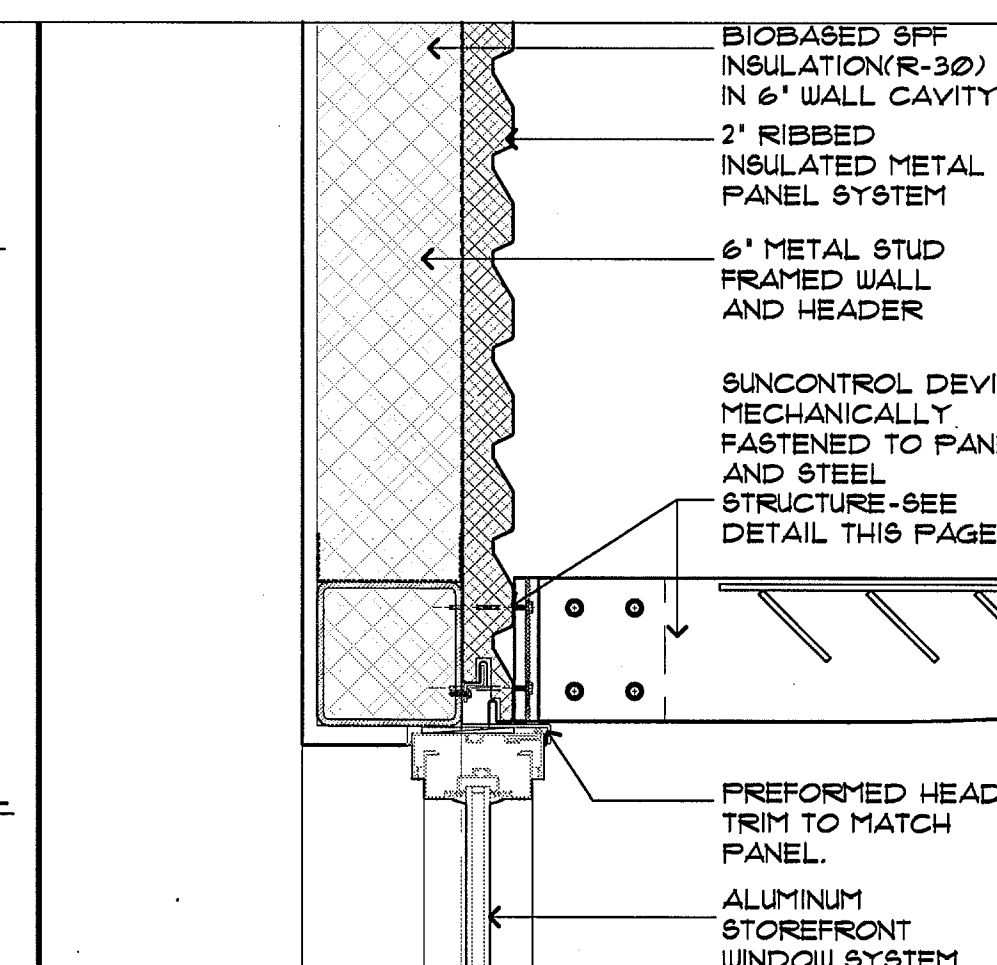
2 H.M. DOOR JAMB  
SCALE: 3 = 1'-0"



3 WINDOW HEAD @ PANEL WALL  
SCALE: 1 1/2 = 1'-0"

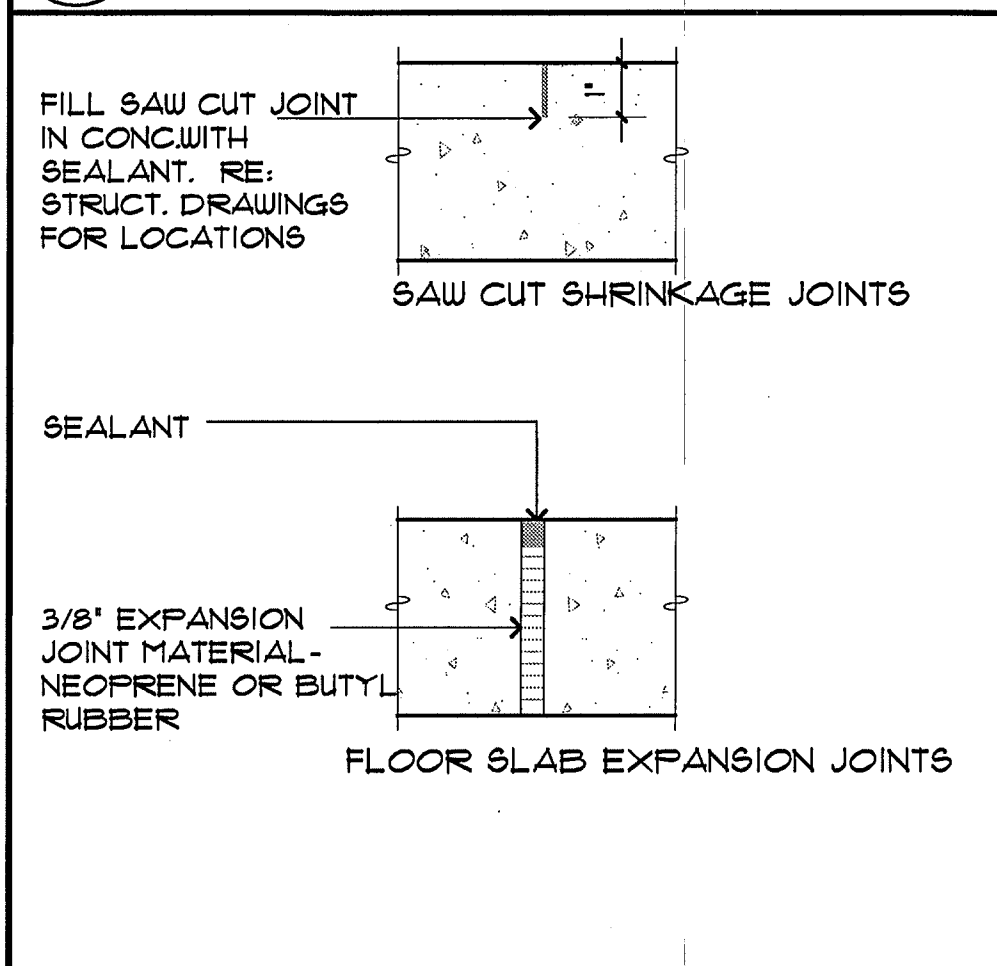


4 SUNSHADE DETAIL  
SCALE: 1 1/2 = 1'-0"

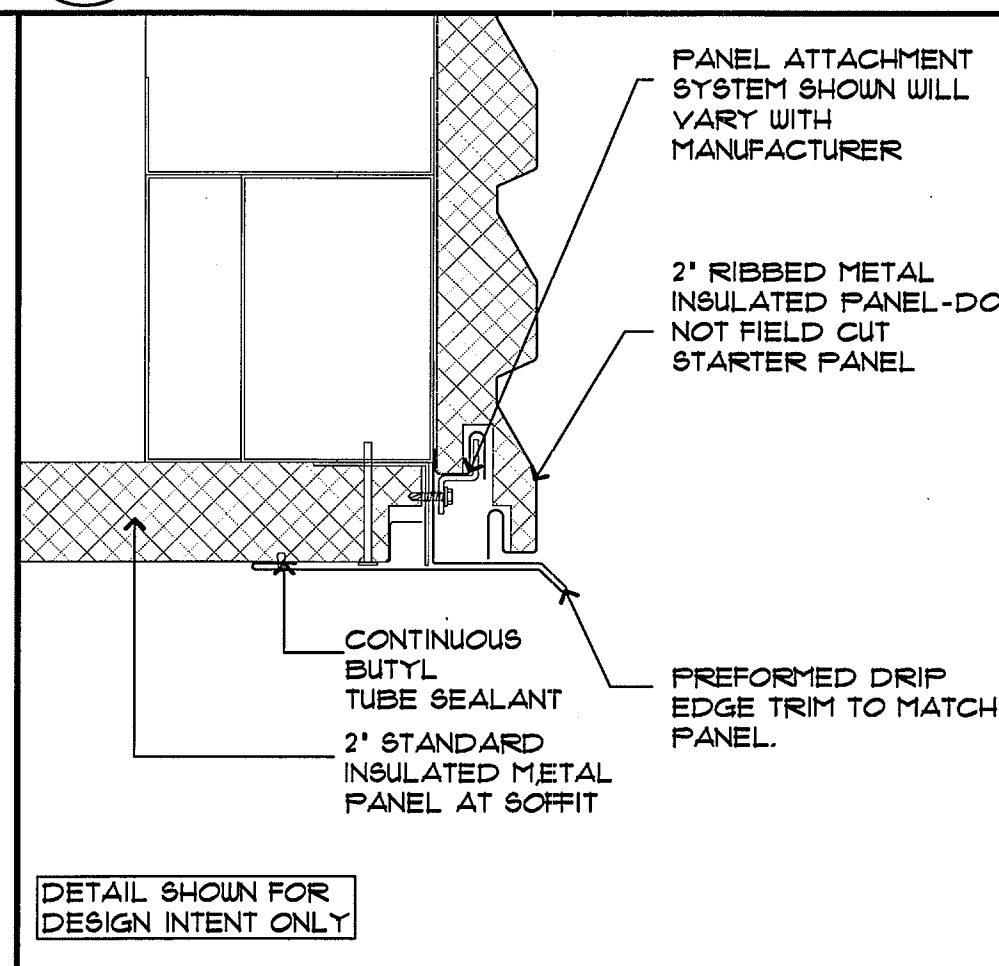


5 WINDOW HEAD @ SUNSHADE  
SCALE: 1 1/2 = 1'-0"

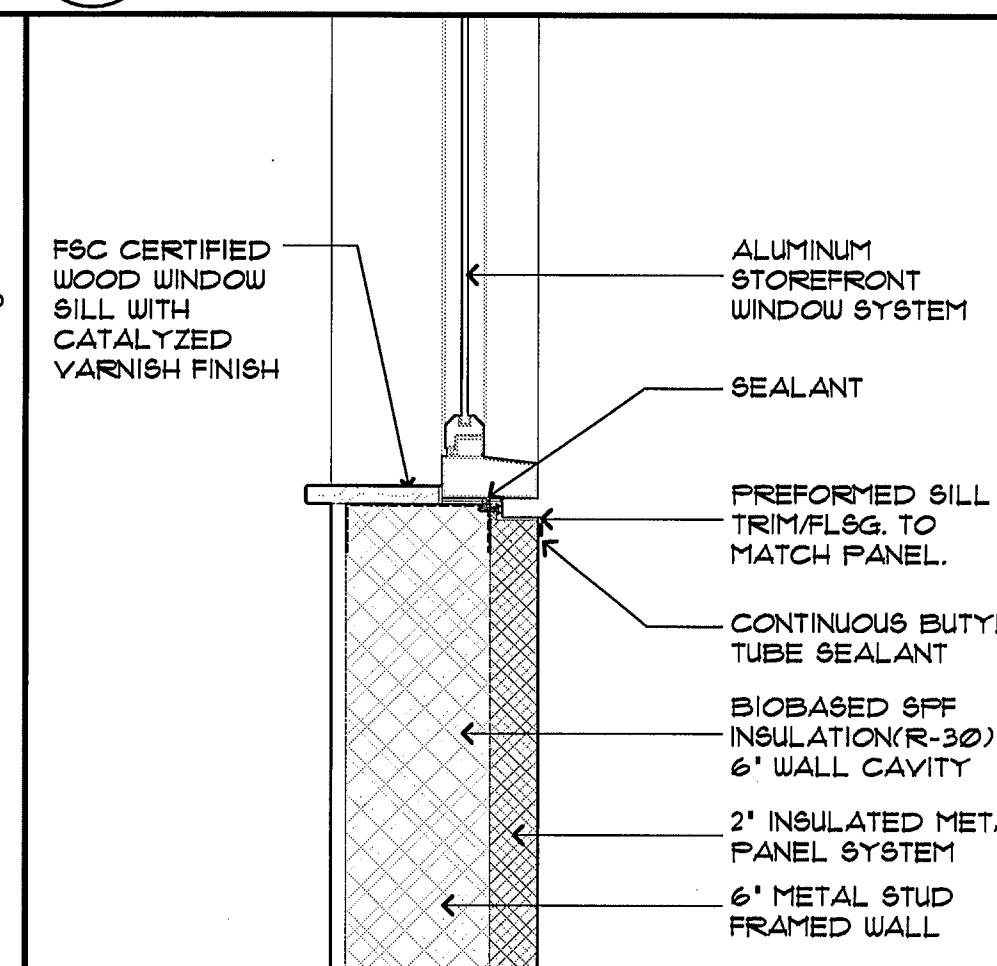
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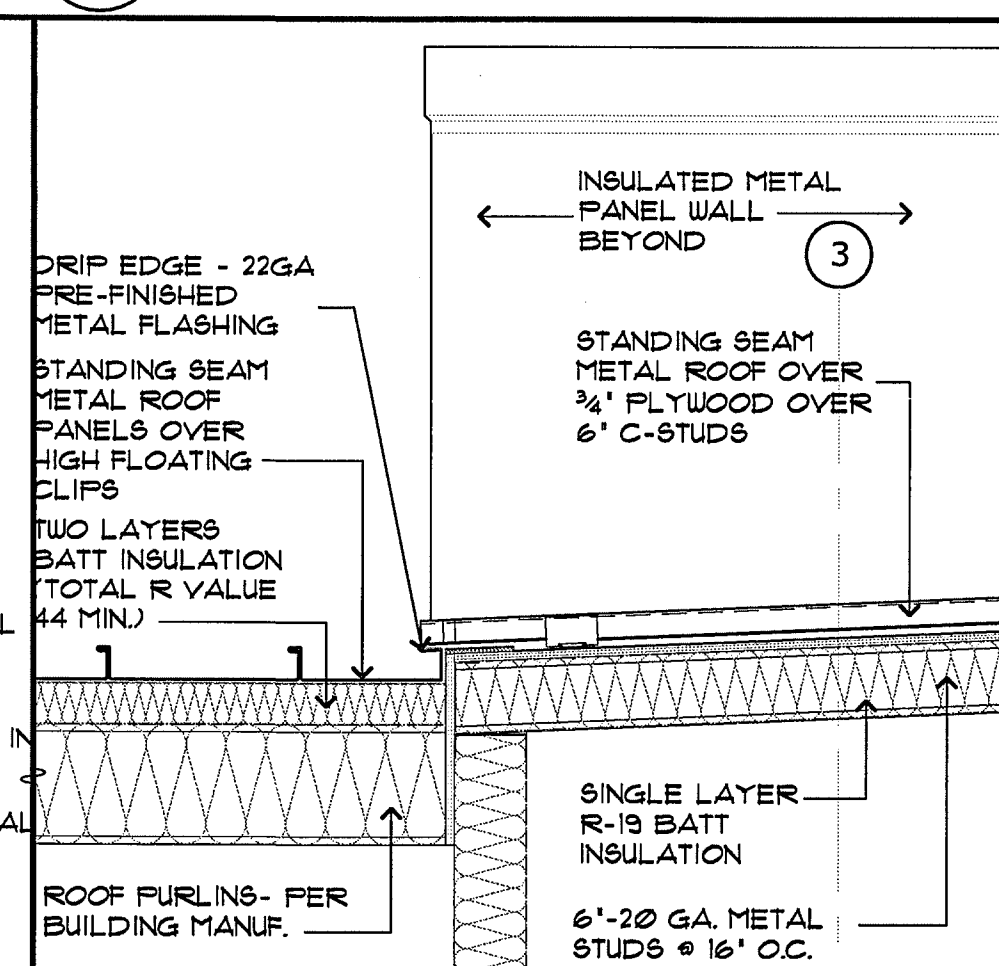
12 CONCRETE JOINT DETAIL  
SCALE: 3 = 1'-0"



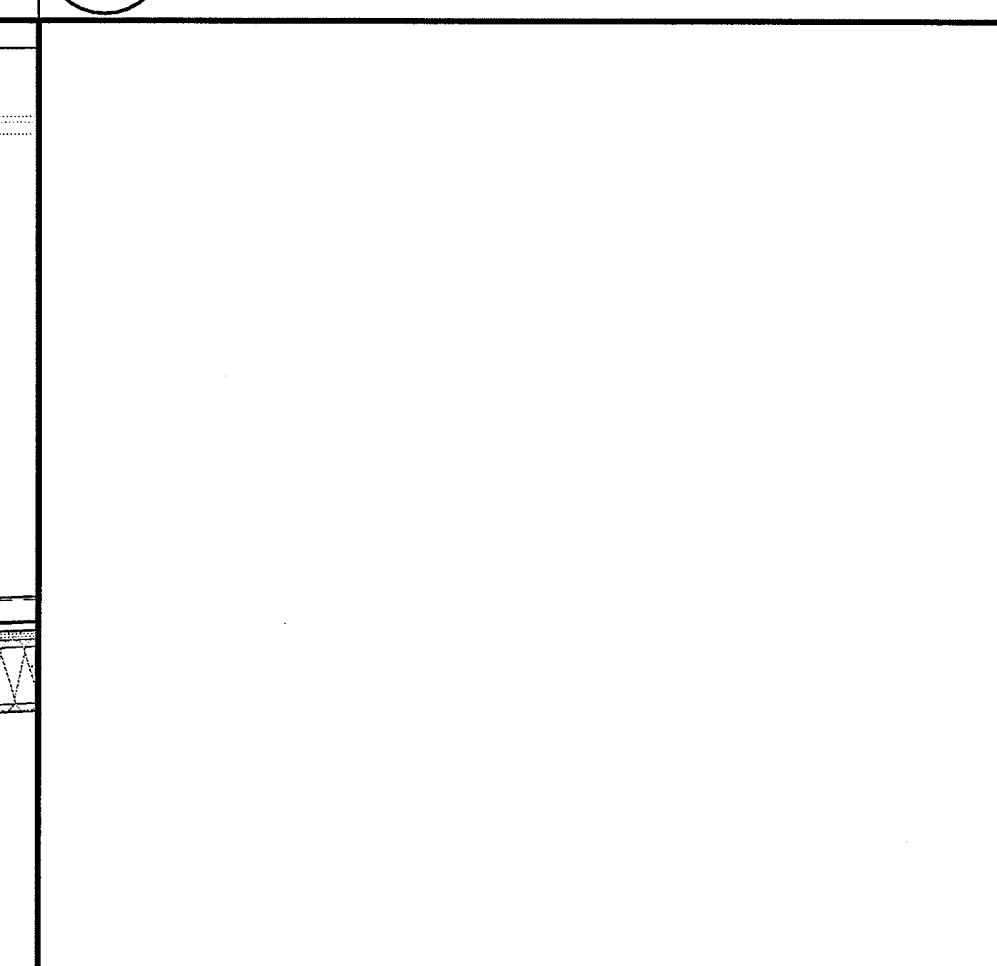
11 SOFFIT DETAIL  
SCALE: 3 = 1'-0"



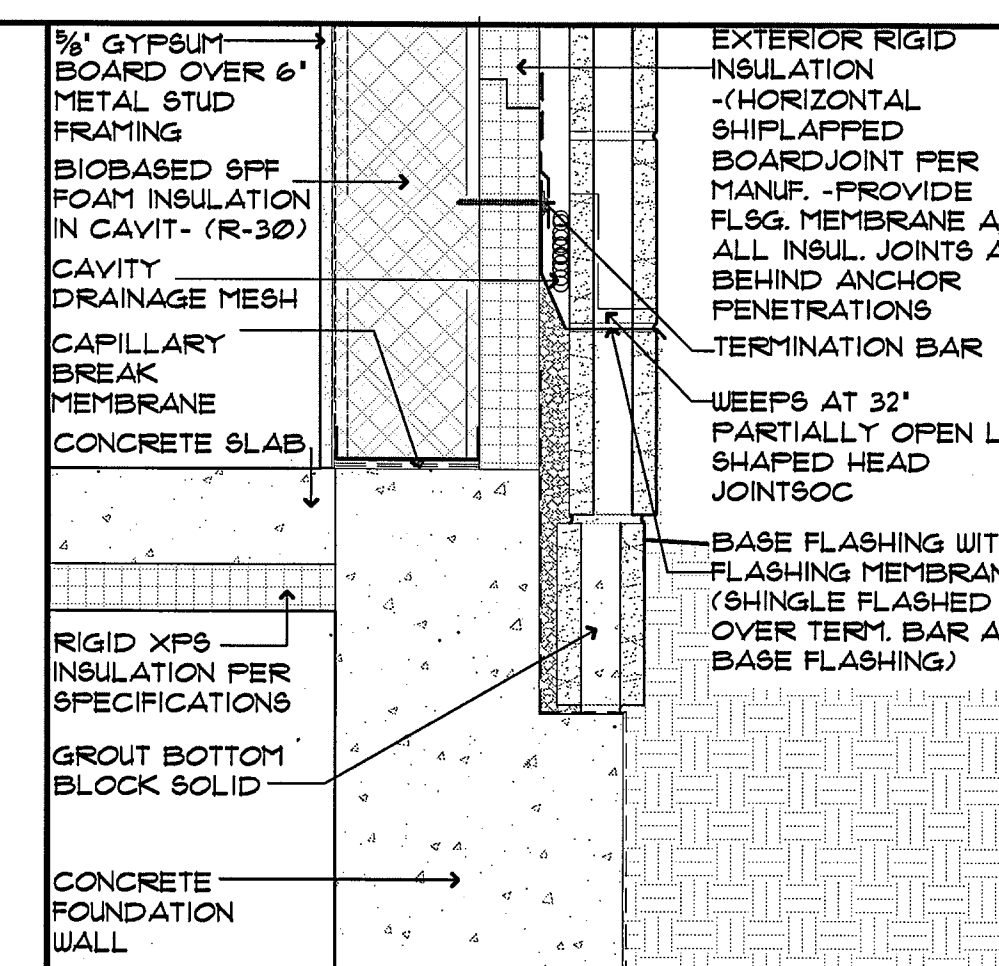
10 WINDOW SILL @ PANEL WALL  
SCALE: 1 1/2 = 1'-0"



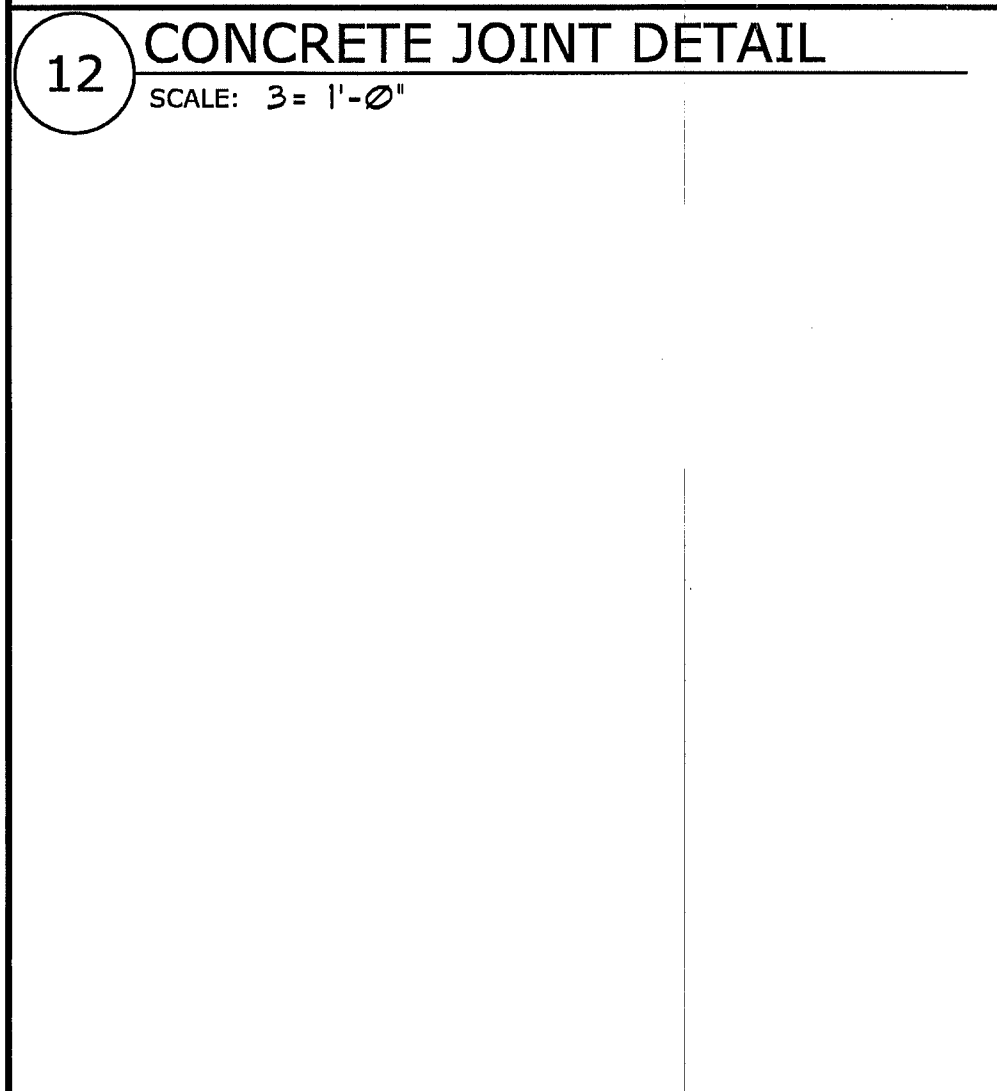
21 WALL SECTION  
SCALE: 3/4 = 1'-0"



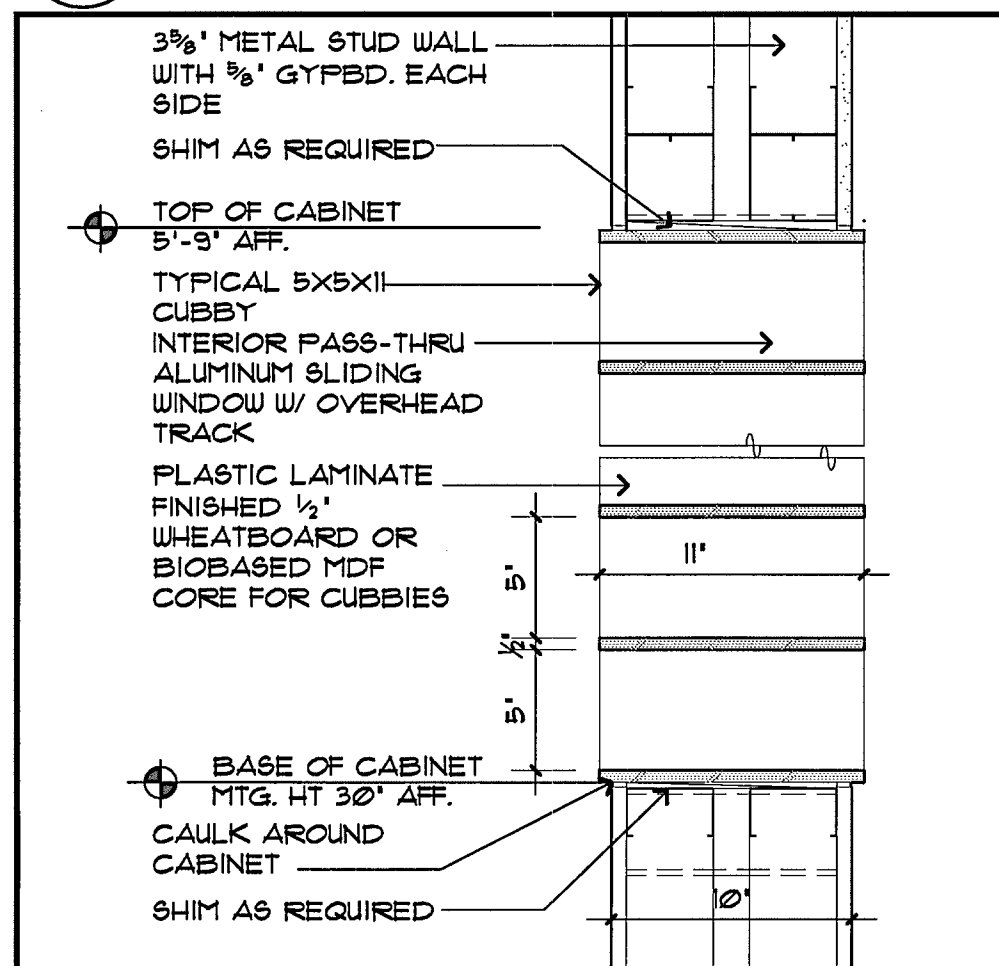
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SCALE: 3/4 = 1'-0"



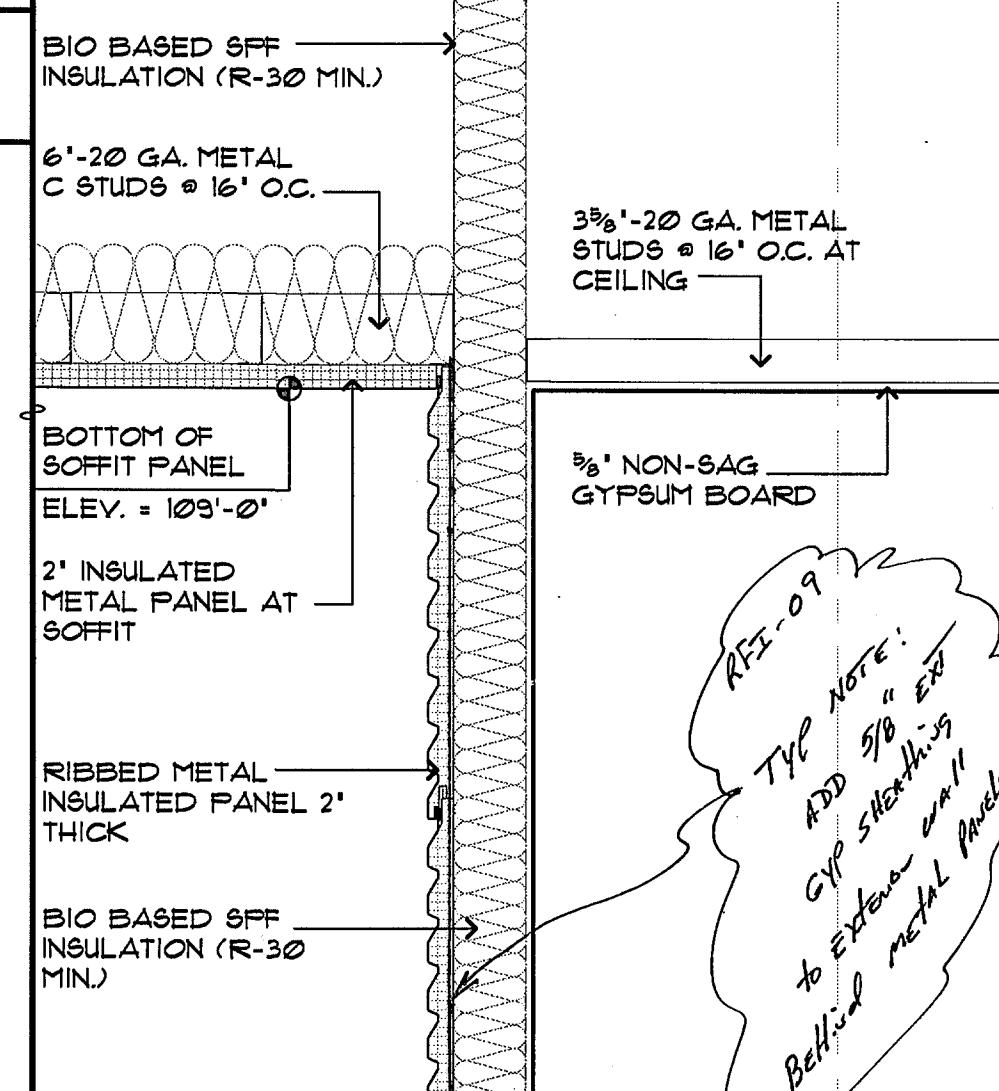
19 TYP. PARTIAL HT. INT. WALL  
SCALE: 3/4 = 1'-0"



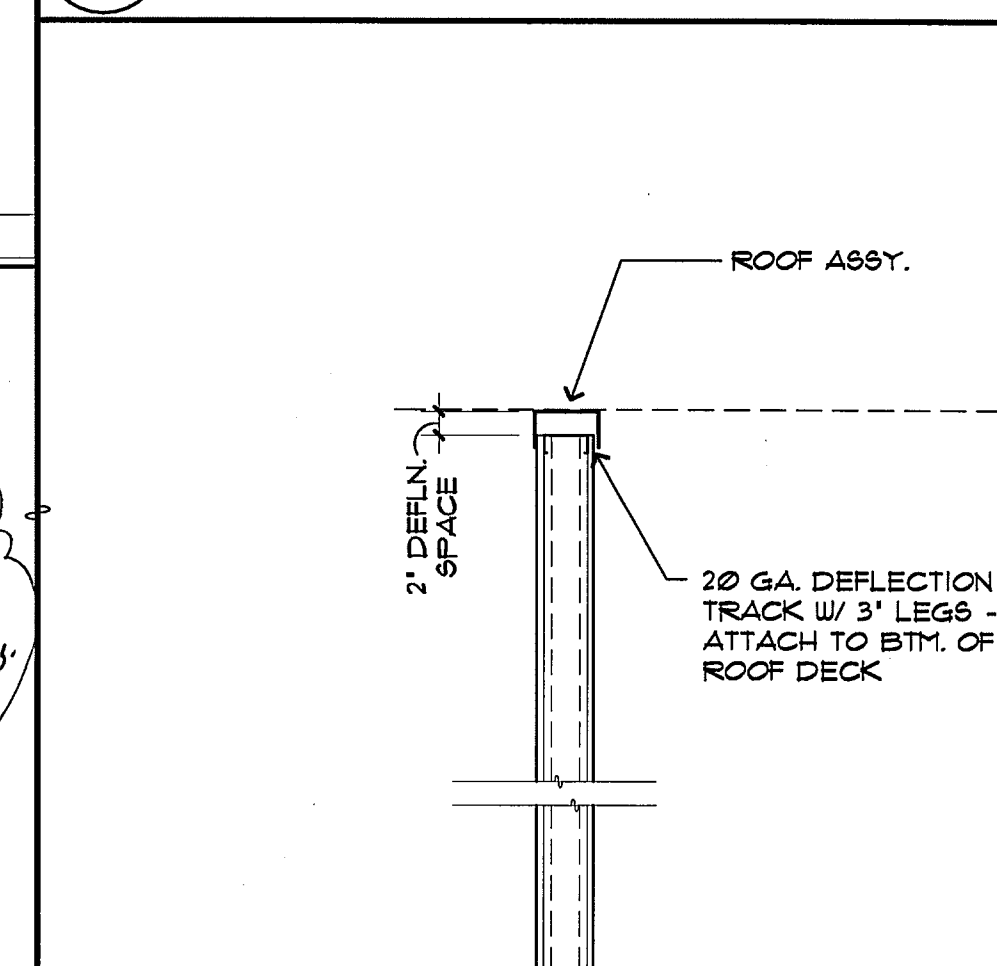
14 CUBBY WALL DETAIL  
SCALE: 1 1/2 = 1'-0"



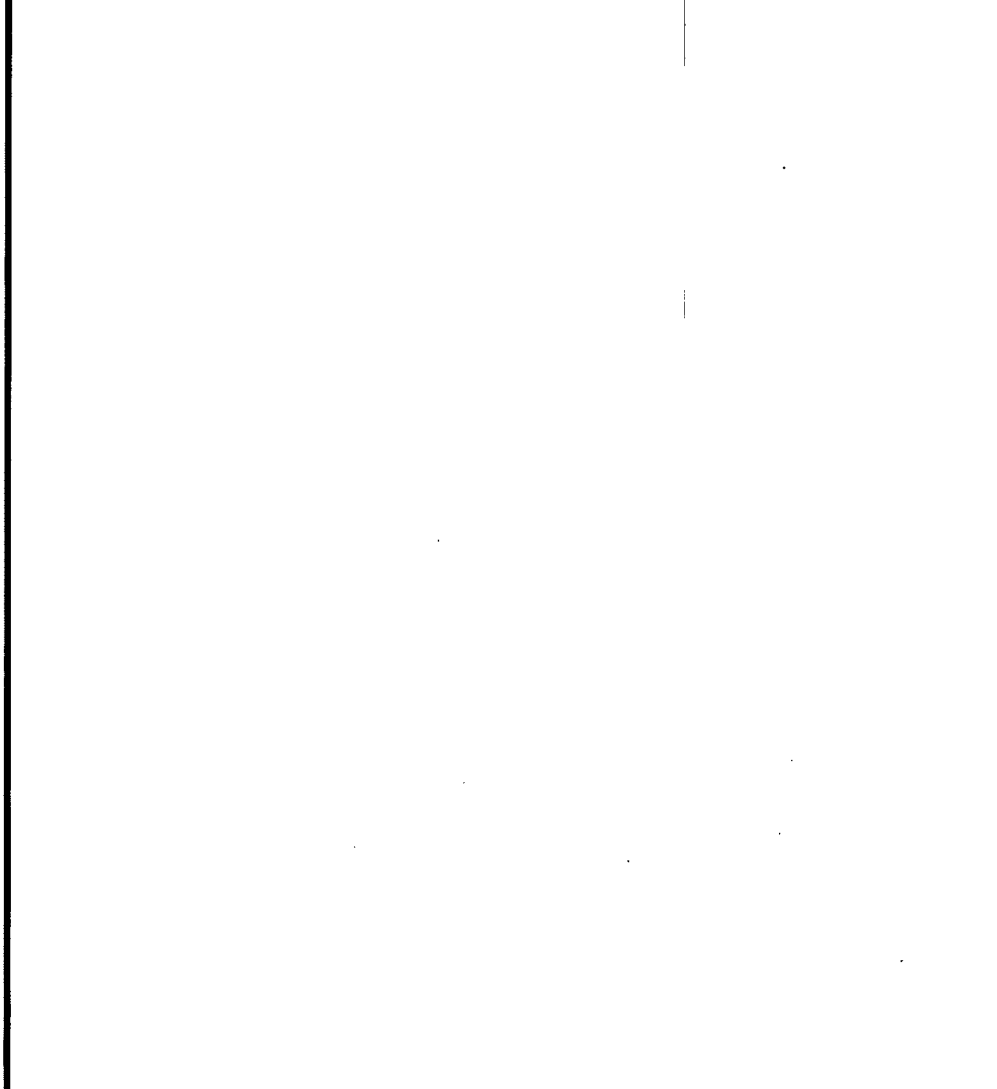
15 TYPICAL WORK COUNTER  
SCALE: 3/4 = 1'-0"



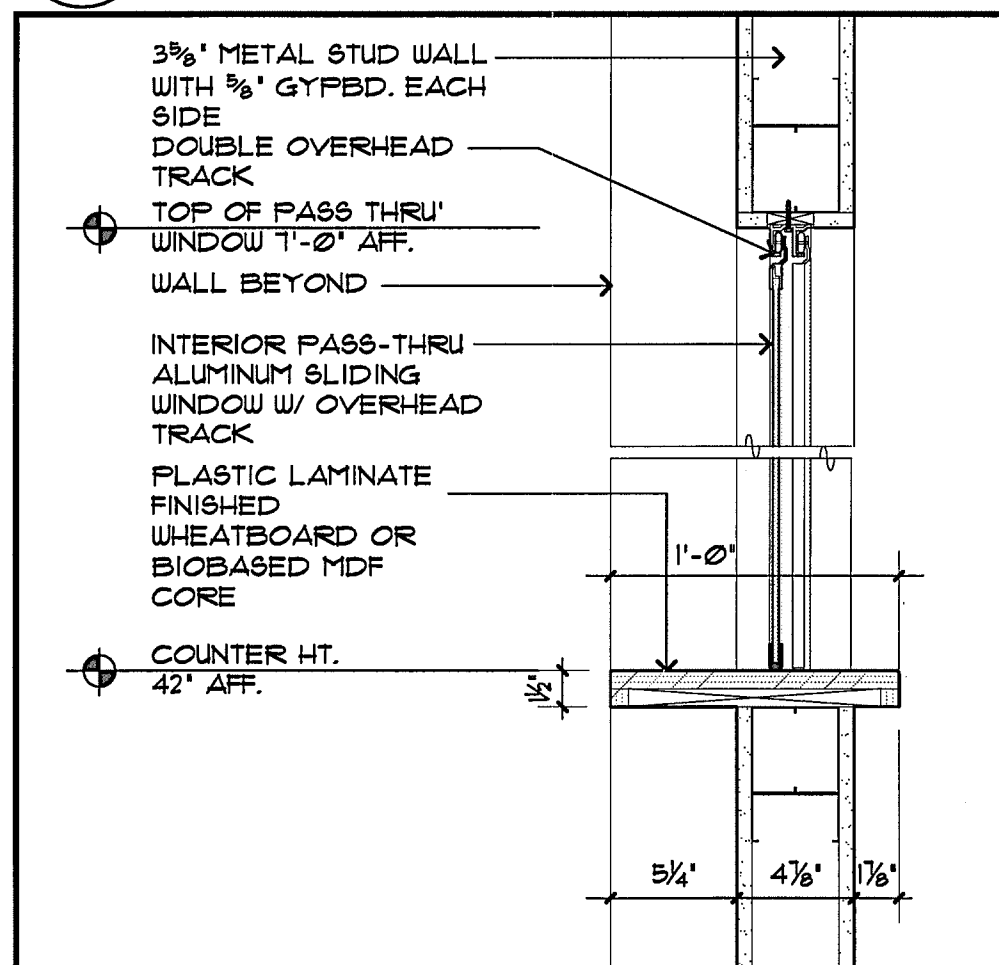
8 NOTUSED  
SCALE:



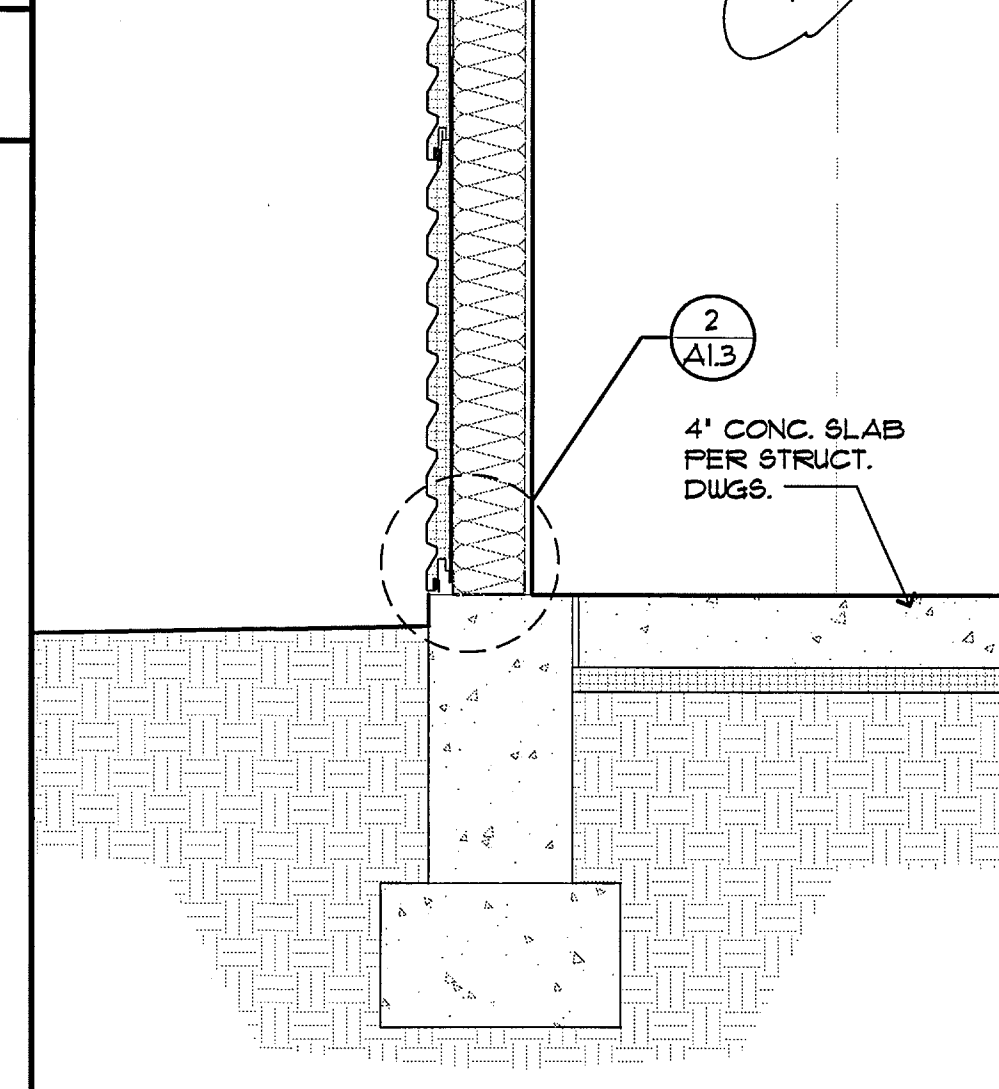
7 WALL BASE @ CMU VENEER  
SCALE: 1 1/2 = 1'-0"



23 PASS-THRU WINDOW DETAIL  
SCALE: 1 1/2 = 1'-0"

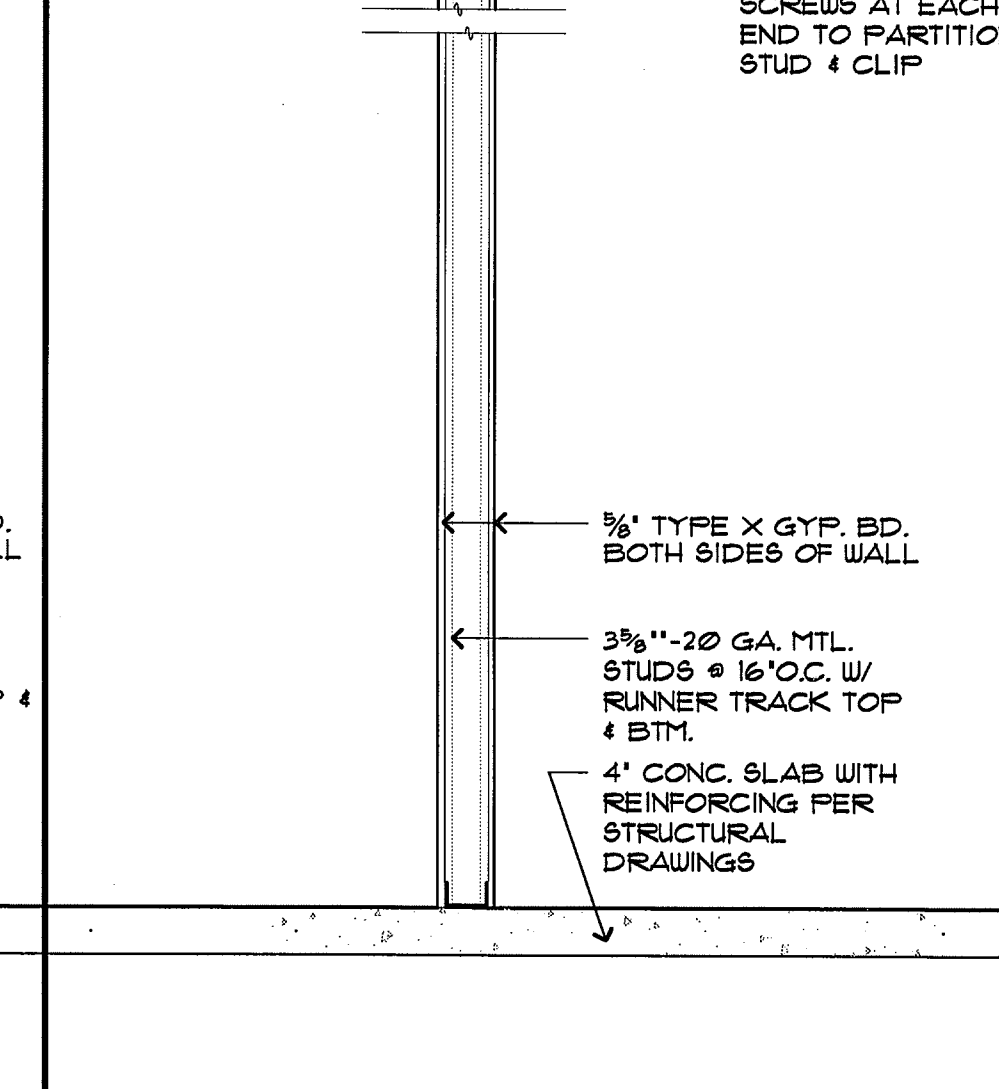


22 LAVATORY COUNTER  
SCALE: 3/4 = 1'-0"



20 TYP. FULL HT. INTERIOR WALL  
SCALE: 3/4 = 1'-0"

20 TYP. FULL HT. INTERIOR WALL  
SCALE: 3/4 = 1'-0"



19 TYP. PARTIAL HT. INT. WALL  
SCALE: 3/4 = 1'-0"

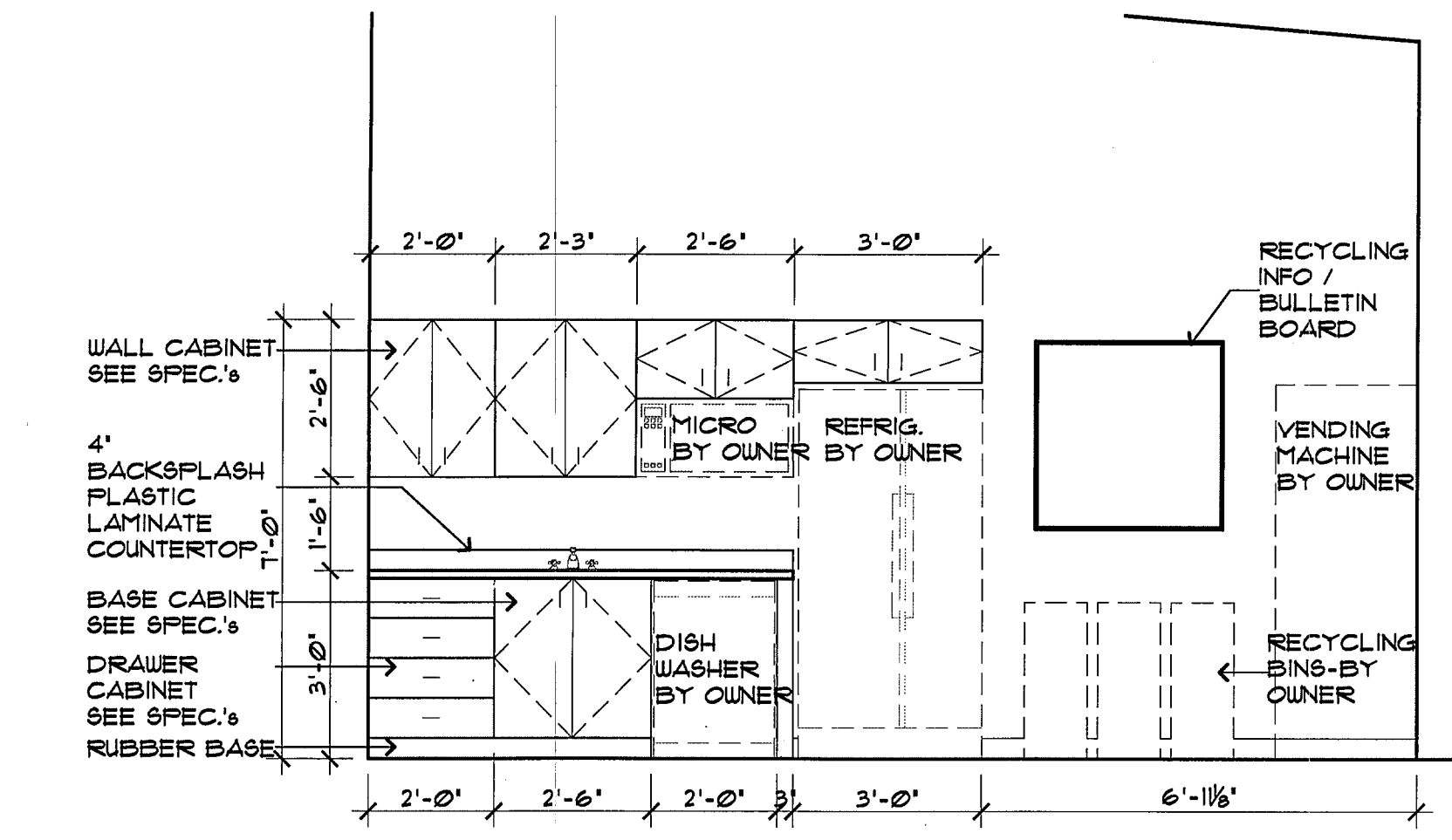
DESIGN EDGE  
architecture interior design  
711 N. CASCADE AVE. SUITE 100  
COLORADO SPRINGS, CO 80903  
TELEPHONE: (719) 667-1972  
482 S. BROADWAY  
DENVER, COLORADO 80209  
TELEPHONE: (303) 260-7277  
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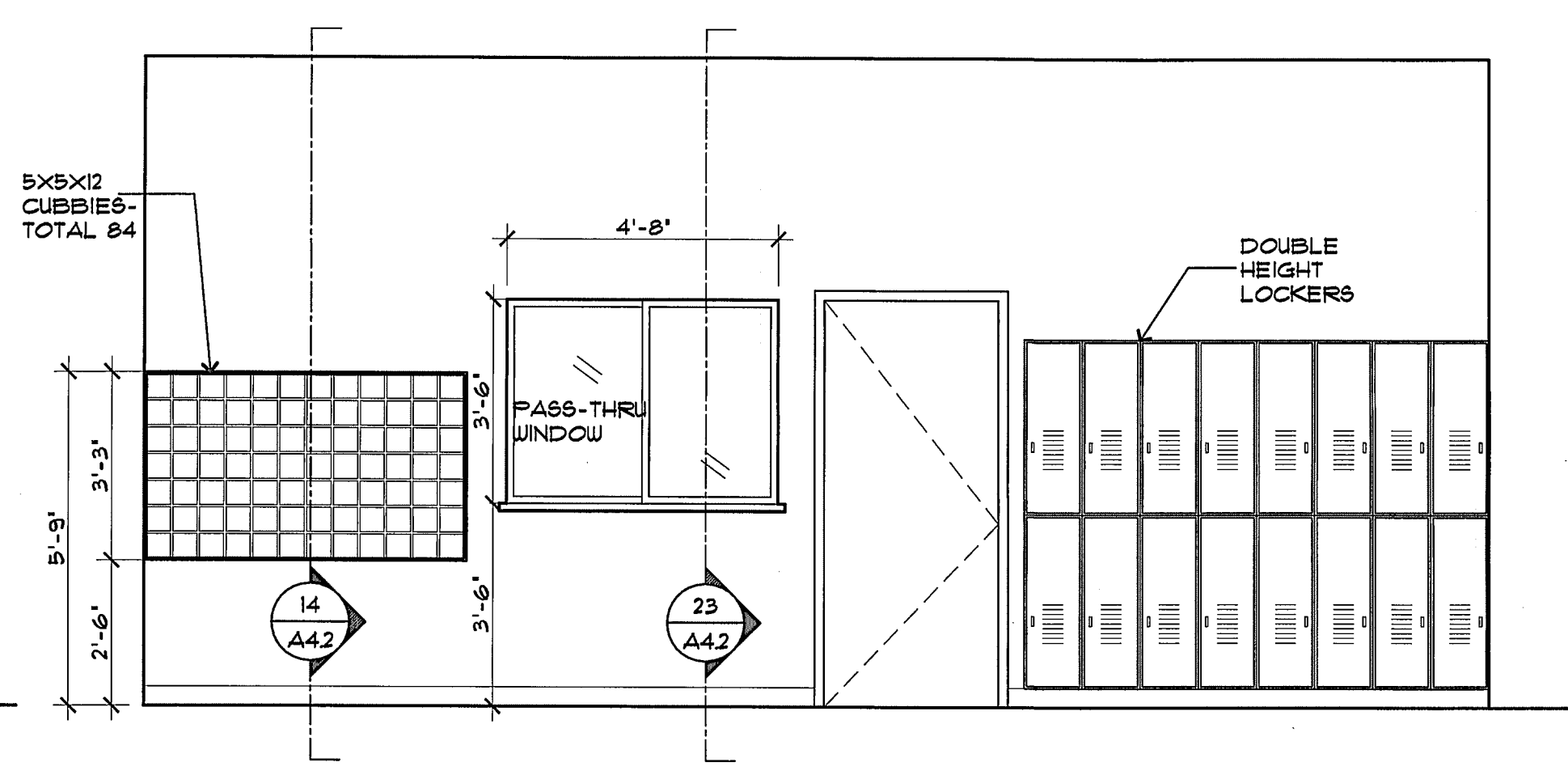
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RBD PLAN REVIEW 10/28/2010  
CHANGES  
PROJECT NO. 9016  
DRAWN BY:  
CHECKED BY: SGT  
DATE: 10/28/2010  
SHEET TITLE:  
WALL SECTIONS  
SHEET NO.

A4.2

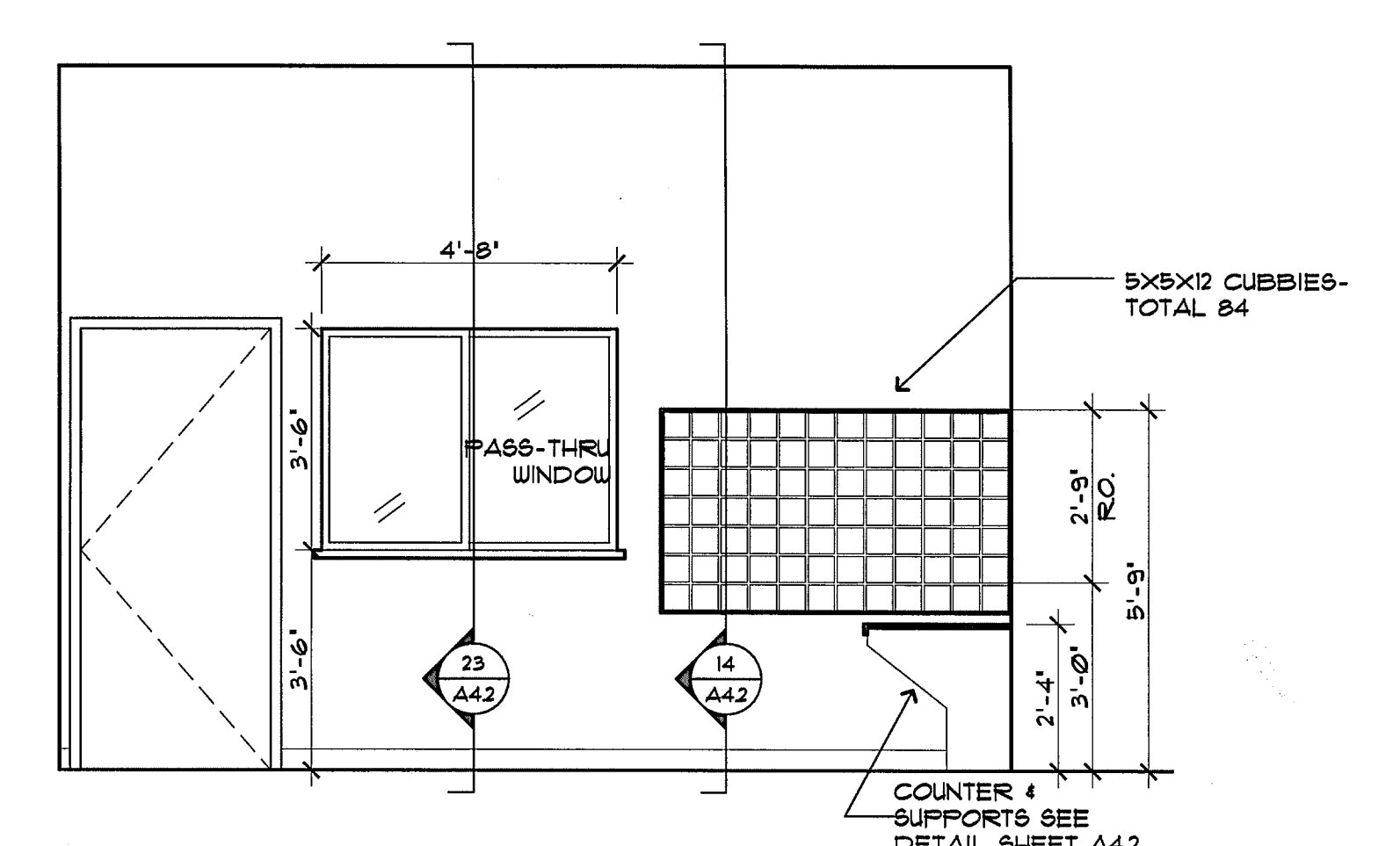




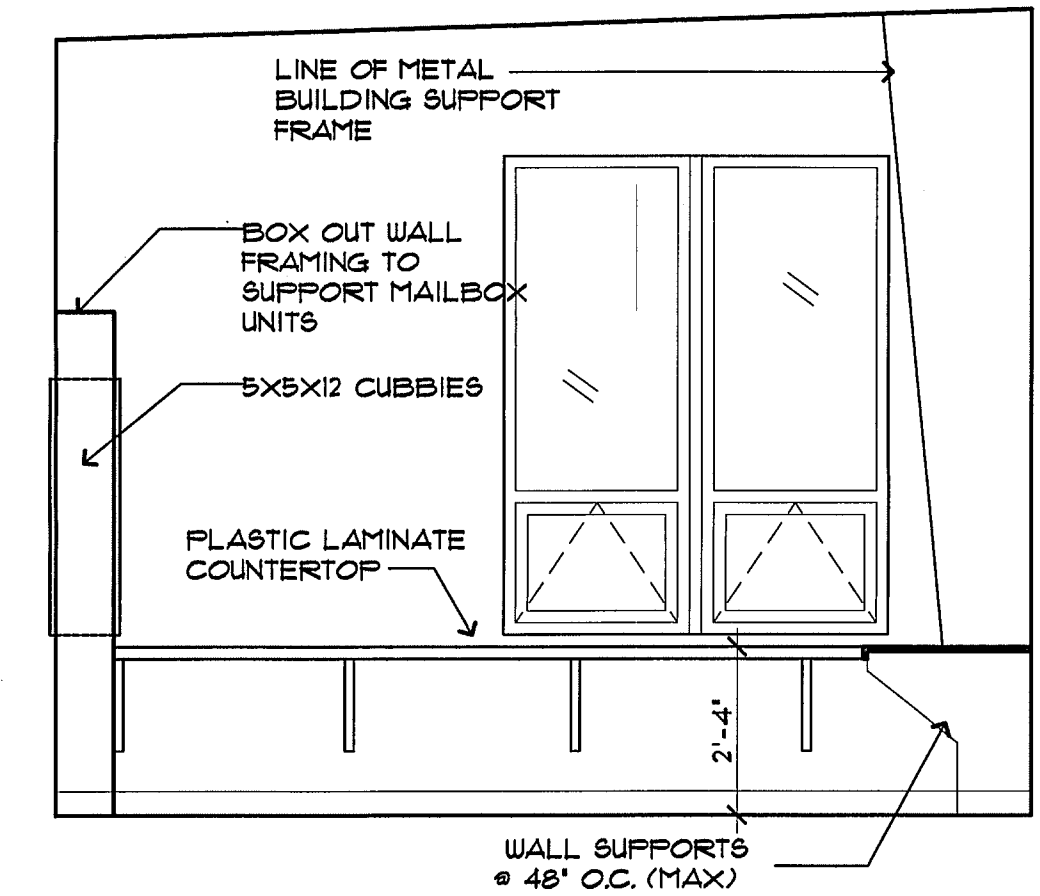
**1 ELEV OF BREAK AREA**  
 SCALE: 3/8" = 1'-0"



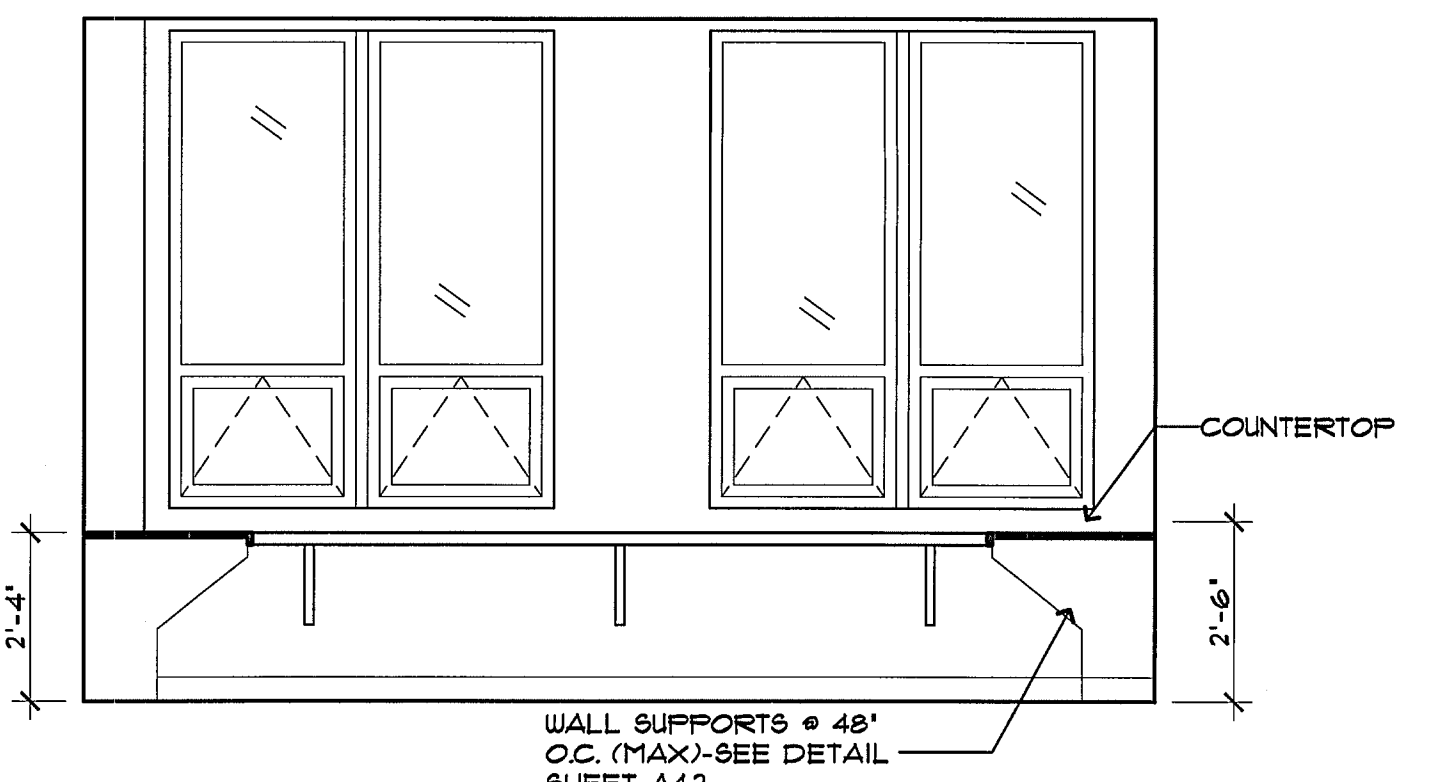
**2 DRIVERS ROOM WALL ELEV**  
 SCALE: 3/8" = 1'-0"



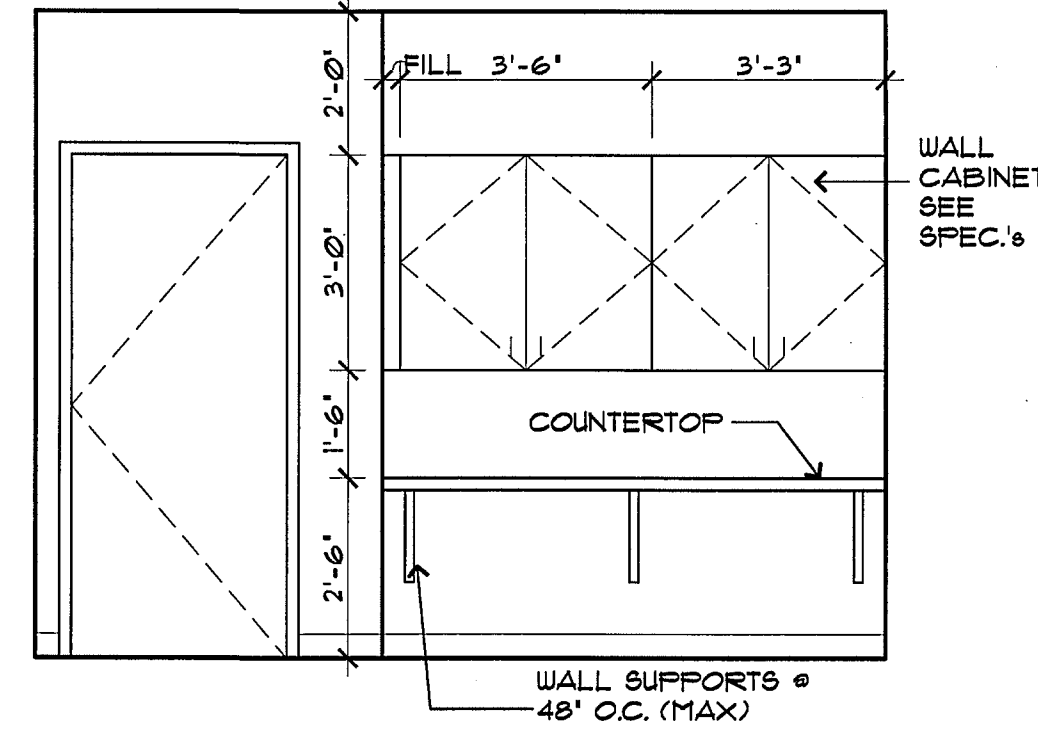
**3 DISPATCH ROOM WALL ELEV**  
 SCALE: 3/8" = 1'-0"



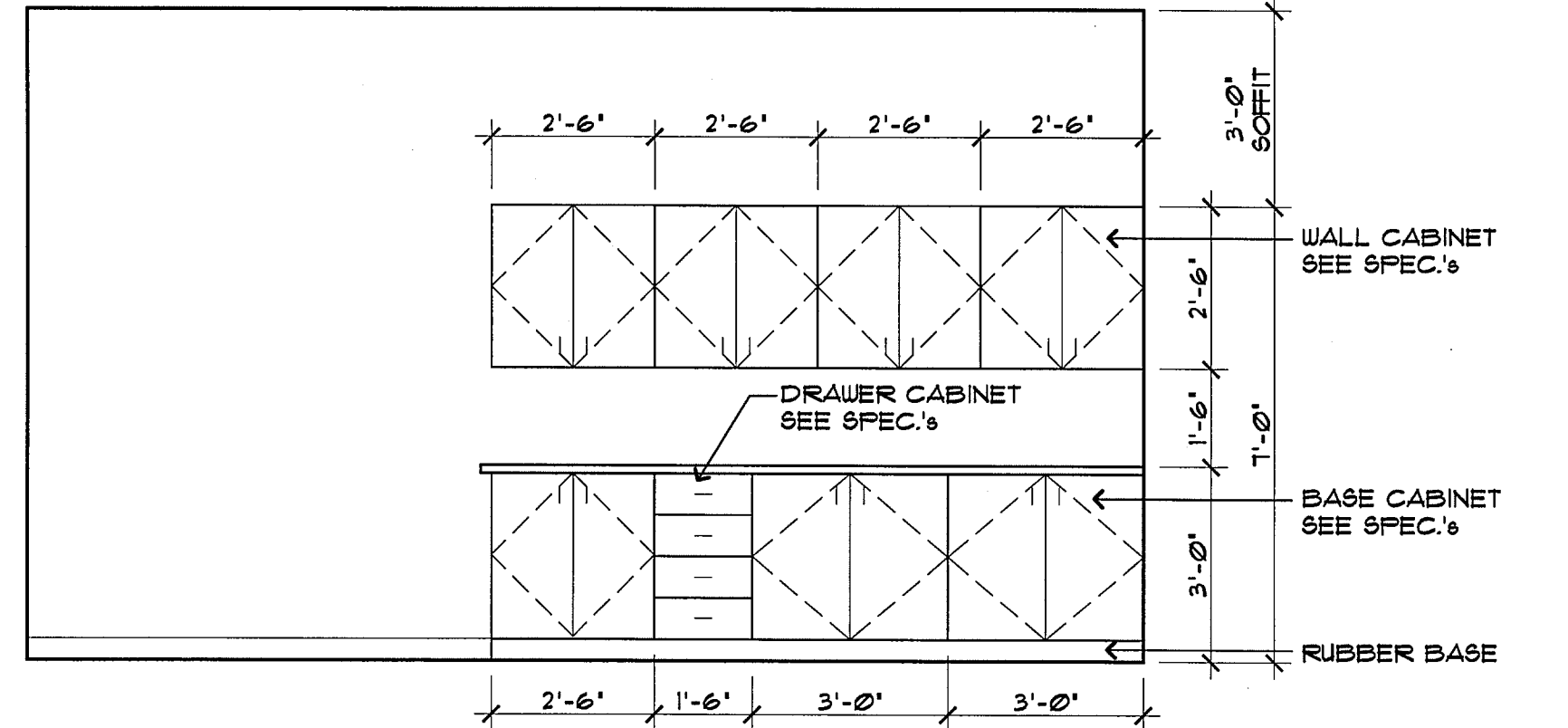
**4 DISPATCH ROOM WALL ELEV**  
 SCALE: 3/8" = 1'-0"



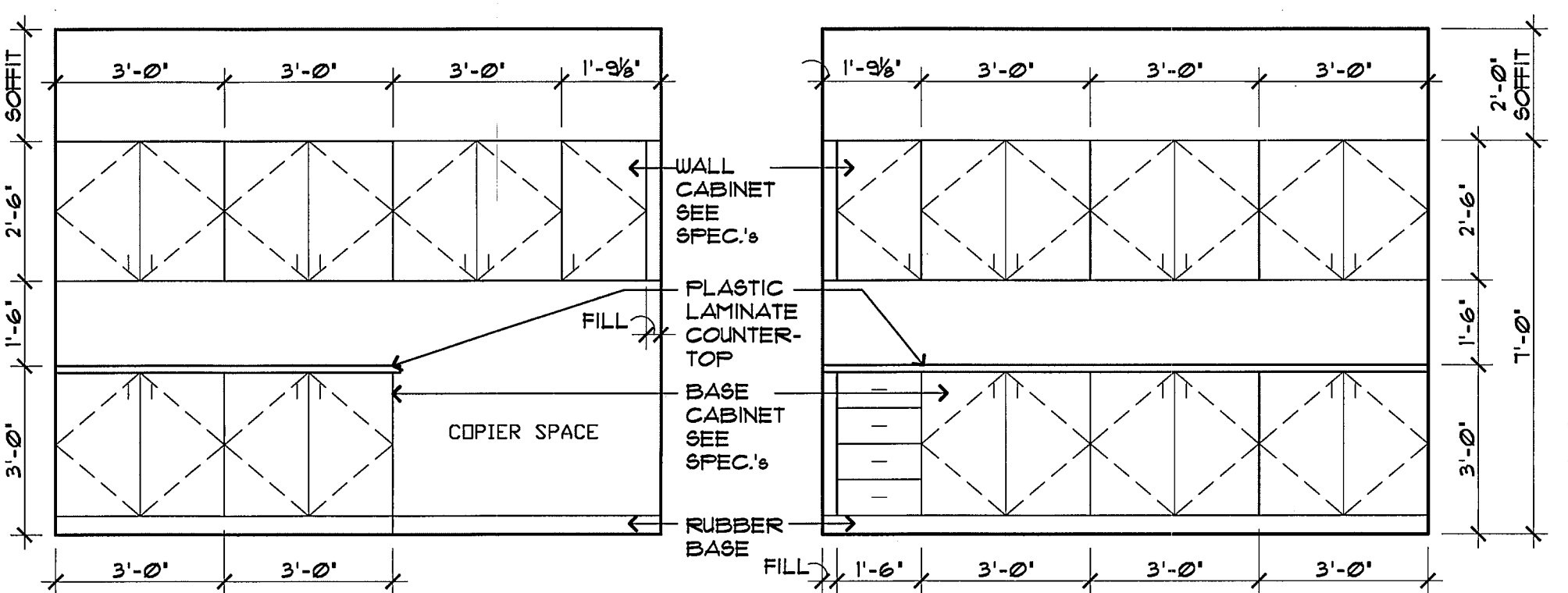
**5 DISPATCH ROOM WALL ELEV**  
 SCALE: 3/8" = 1'-0"



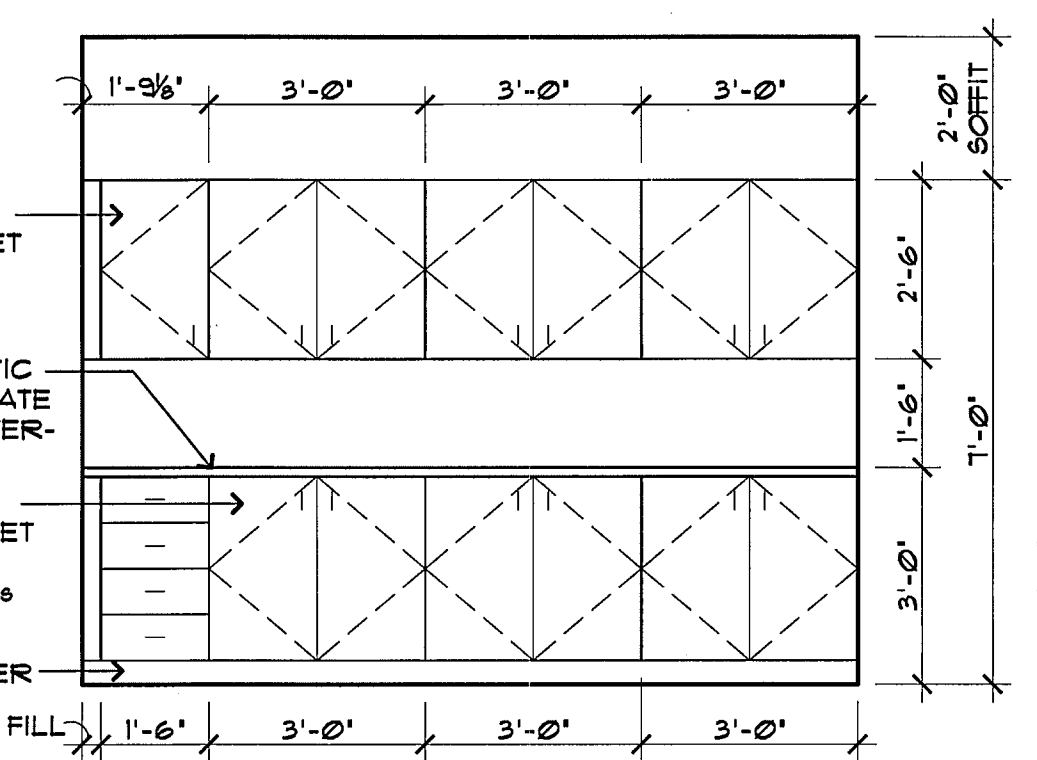
**6 PAYROLL ROOM WALL ELEV**  
 SCALE: 3/8" = 1'-0"



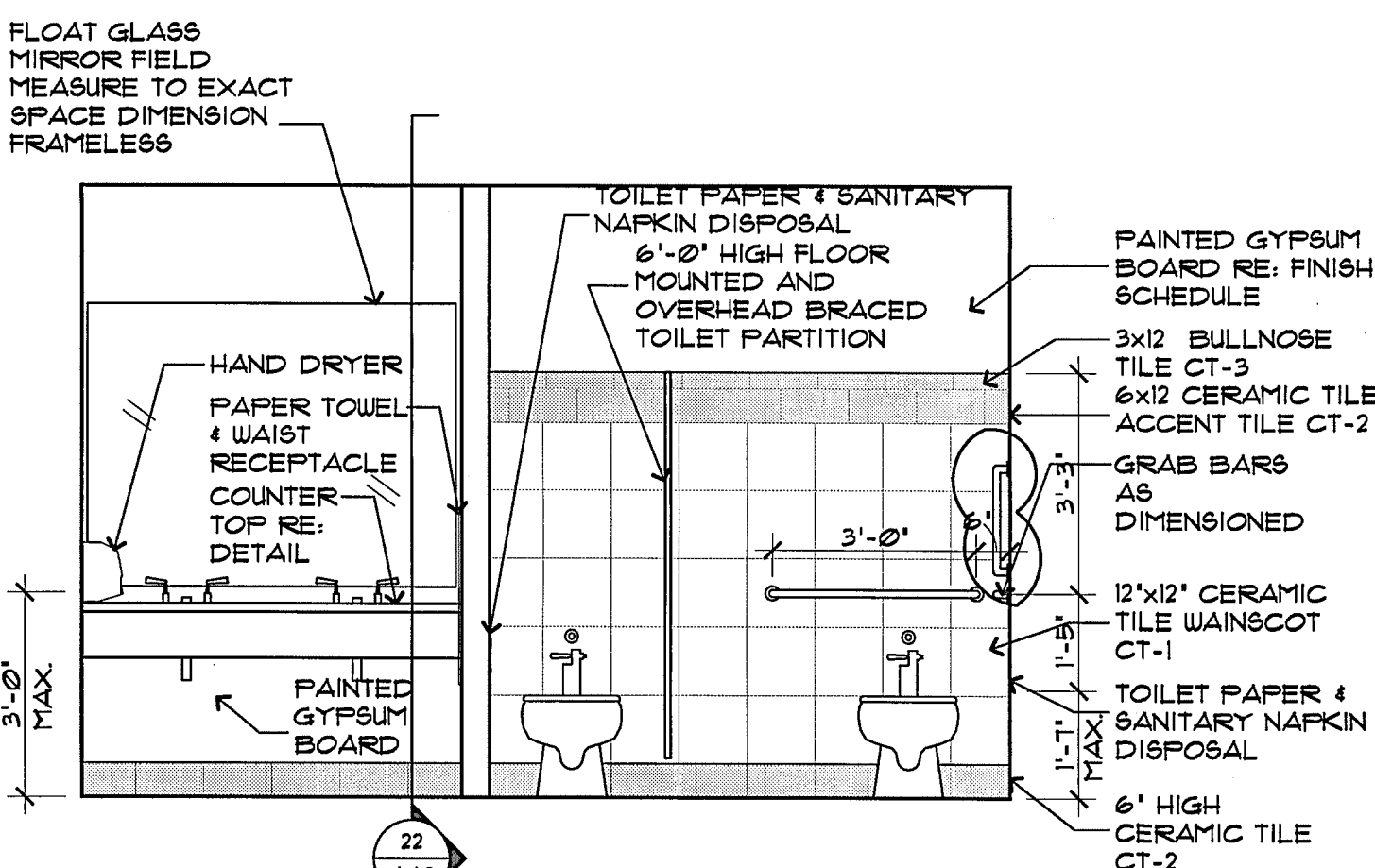
**7 SAFETY ROOM WALL ELEV**  
 SCALE: 3/8" = 1'-0"



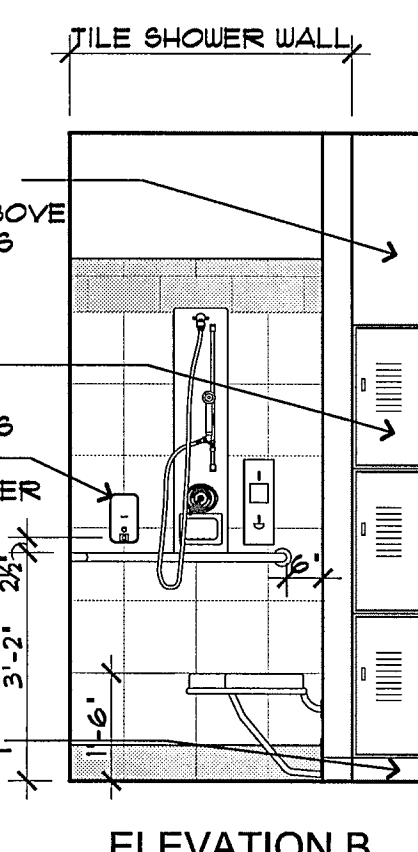
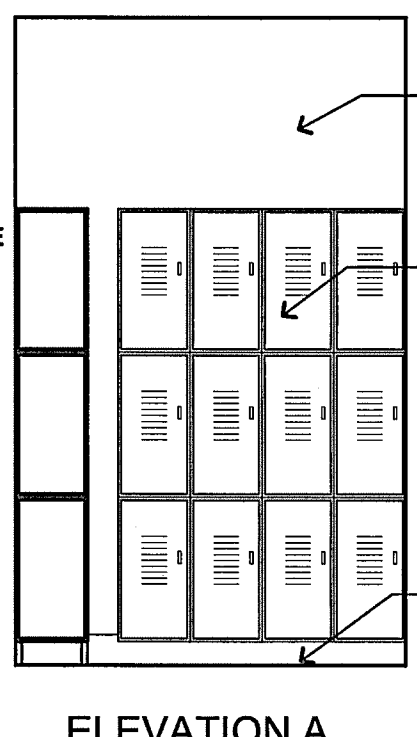
**8 WORK ROOM WALL ELEV**  
 SCALE: 3/8" = 1'-0"



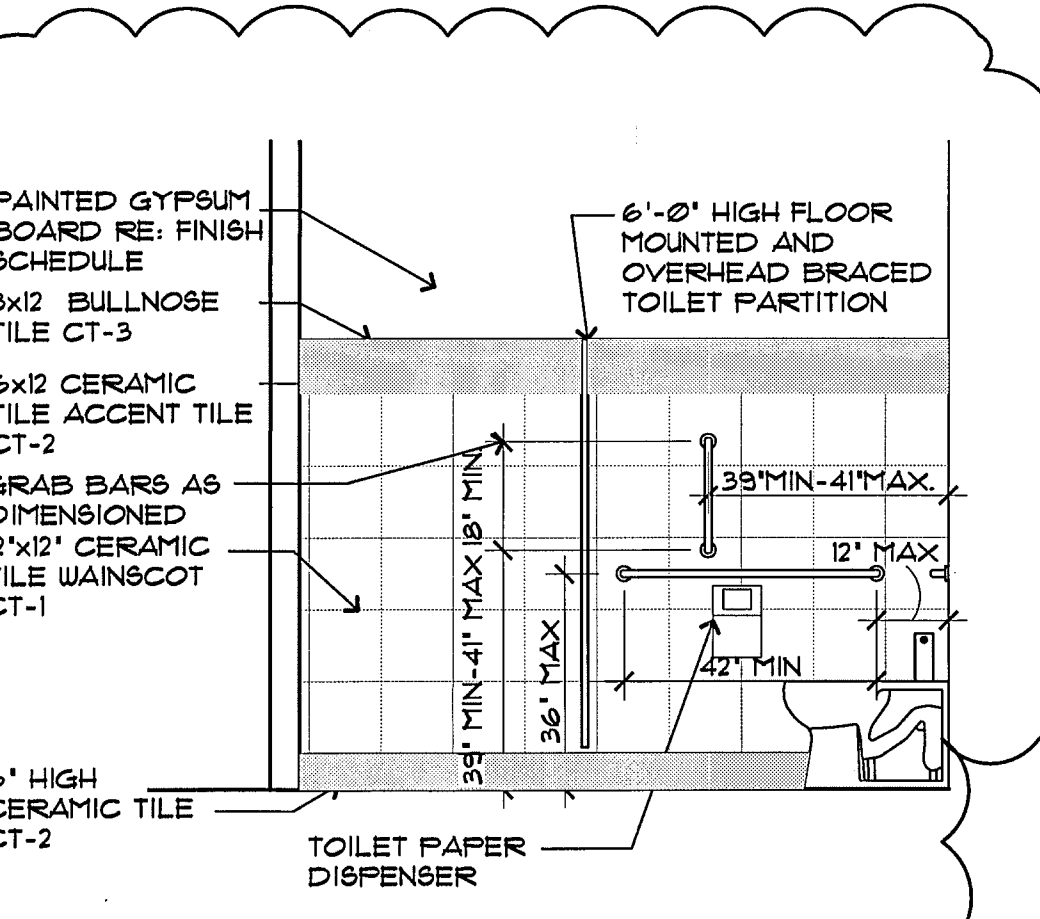
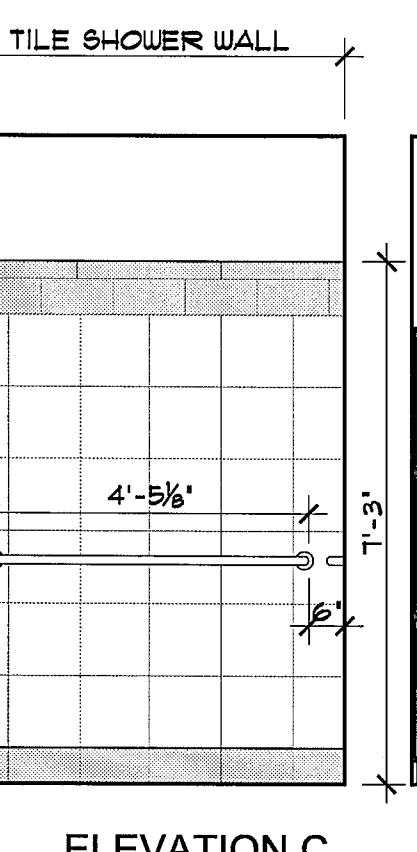
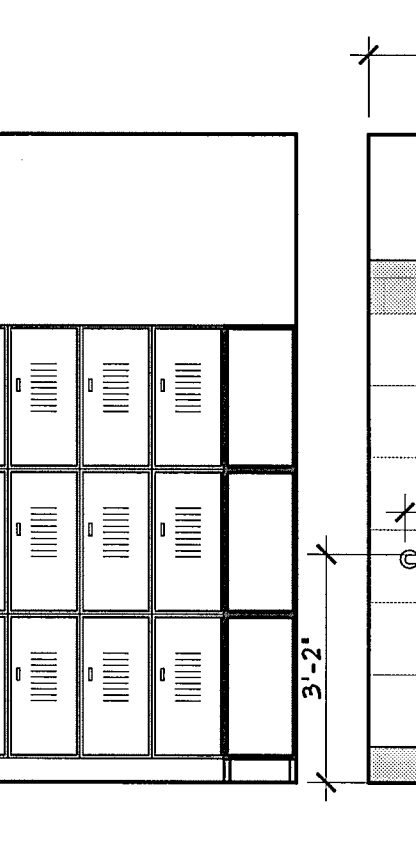
**9 WORK ROOM WALL ELEV**  
 SCALE: 3/8" = 1'-0"



**10 WOMEN'S RESTROOM WALL ELEV**  
 SCALE: 3/8" = 1'-0"

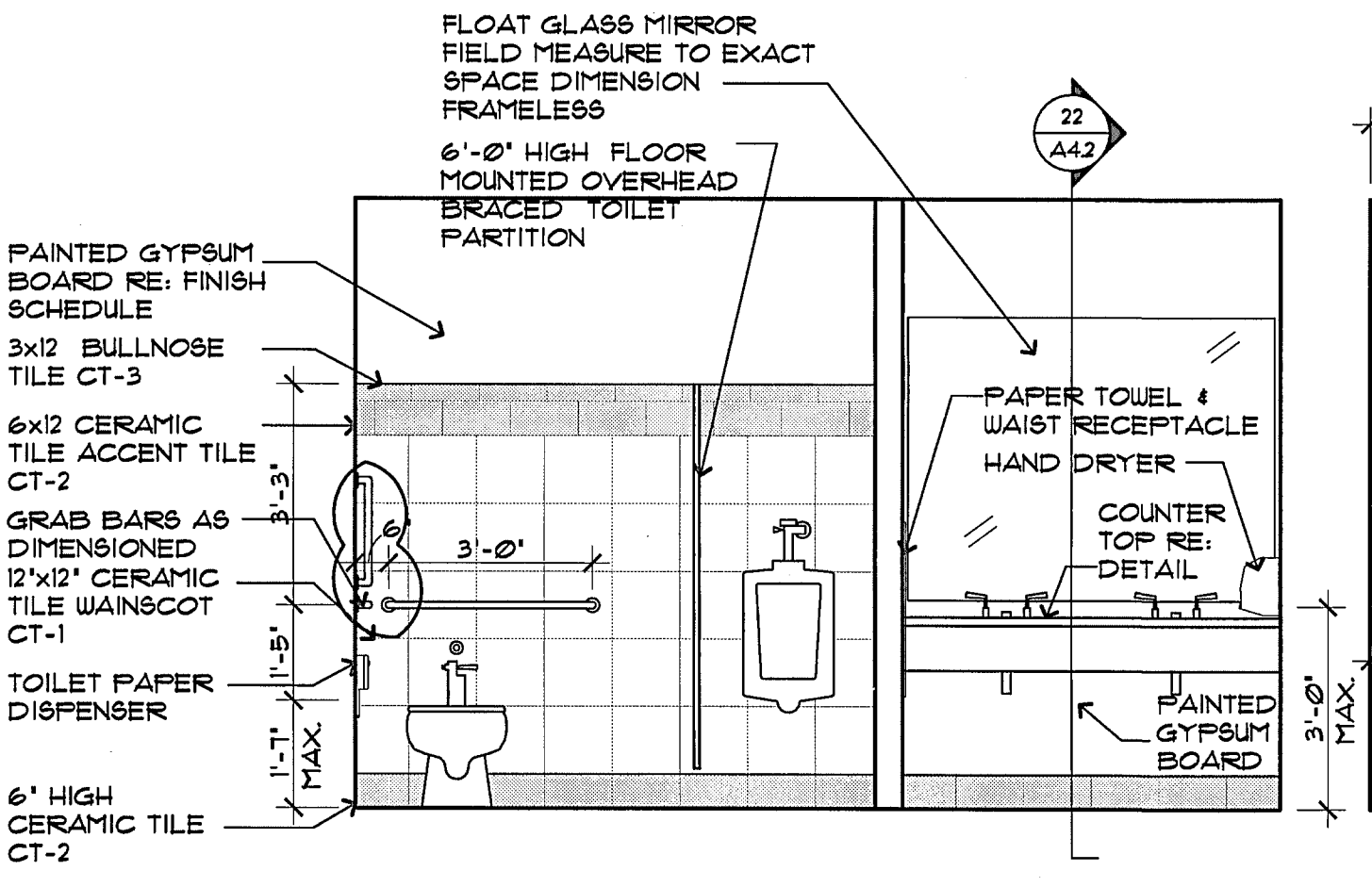


**11 WOMEN'S SHOWER ROOM WALL ELEV**  
 SCALE: 3/8" = 1'-0"

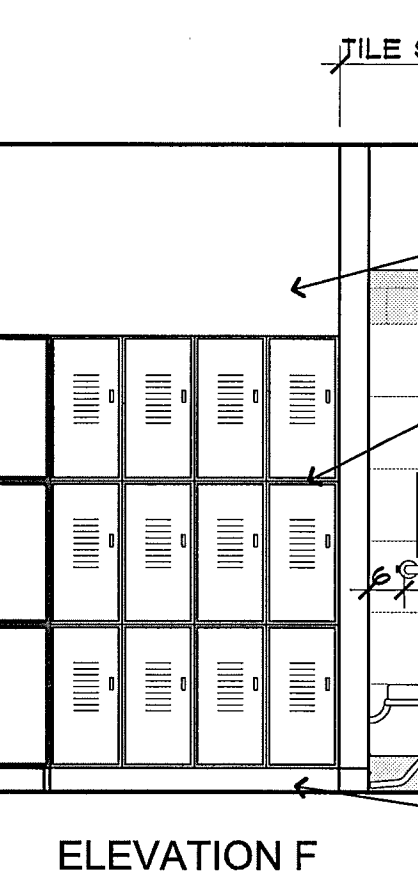
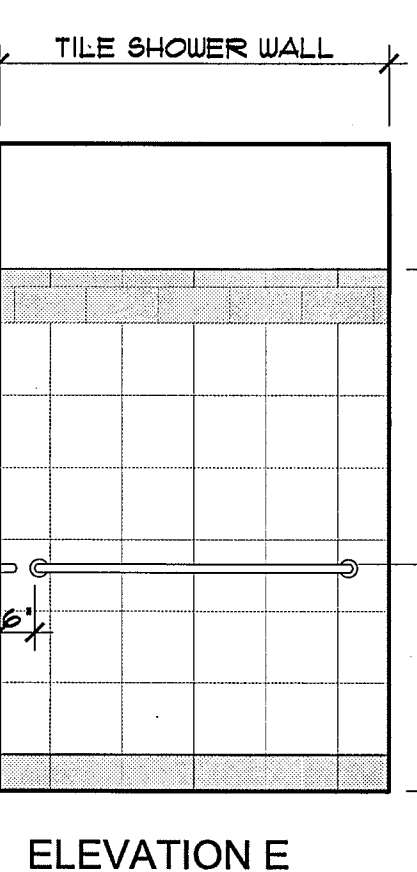


NO.	TILE COLOR	TILE NO.	TILE SIZE
CT-1	BISCUIT	B903	12X12
CT-2	DESSERT GRAY	B905	6X12
CT-3	DESSERT GRAY	B905	3X12
CT-4	DESSERT GRAY	B905	12X12
CT-5	GRAFFLE	B952	12X12

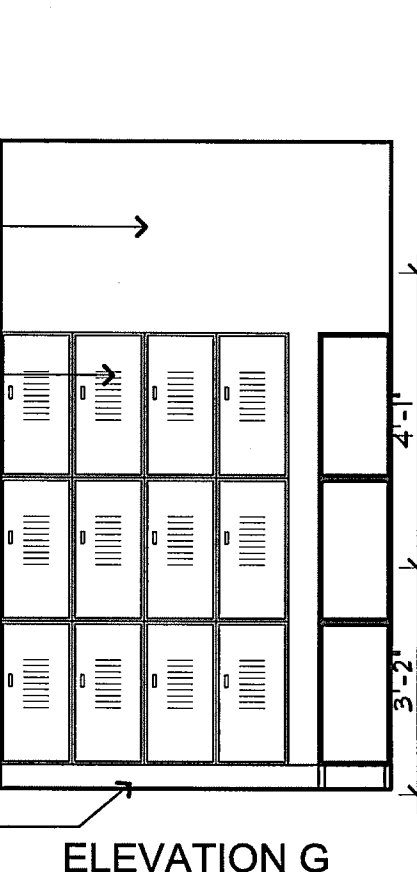
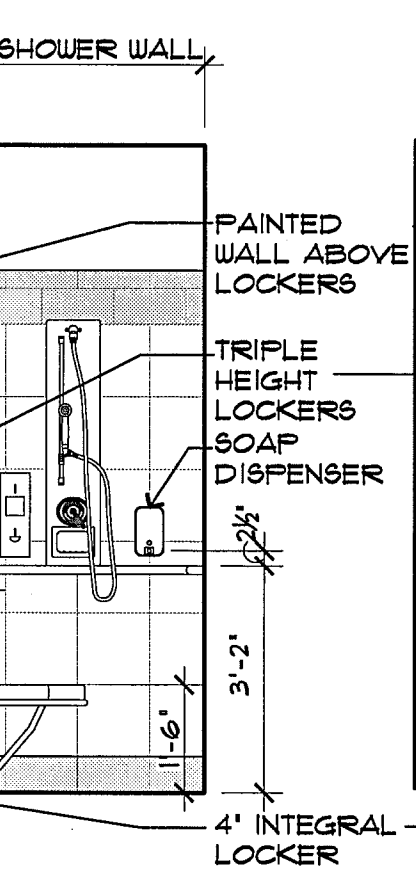
NOTE  
 TILES BY DALTILE - "COLOUR SCHEME"



**14 MEN'S RESTROOM WALL ELEV**  
 SCALE: 3/8" = 1'-0"



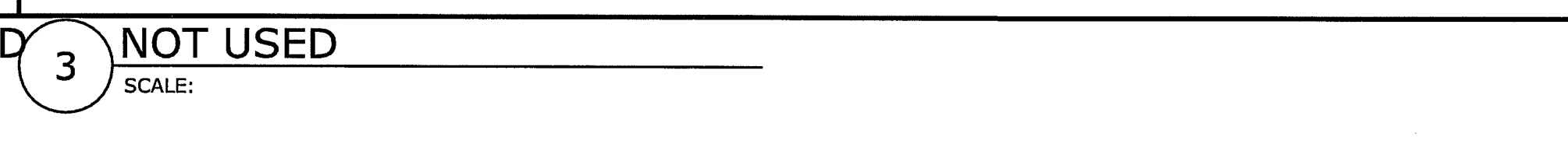
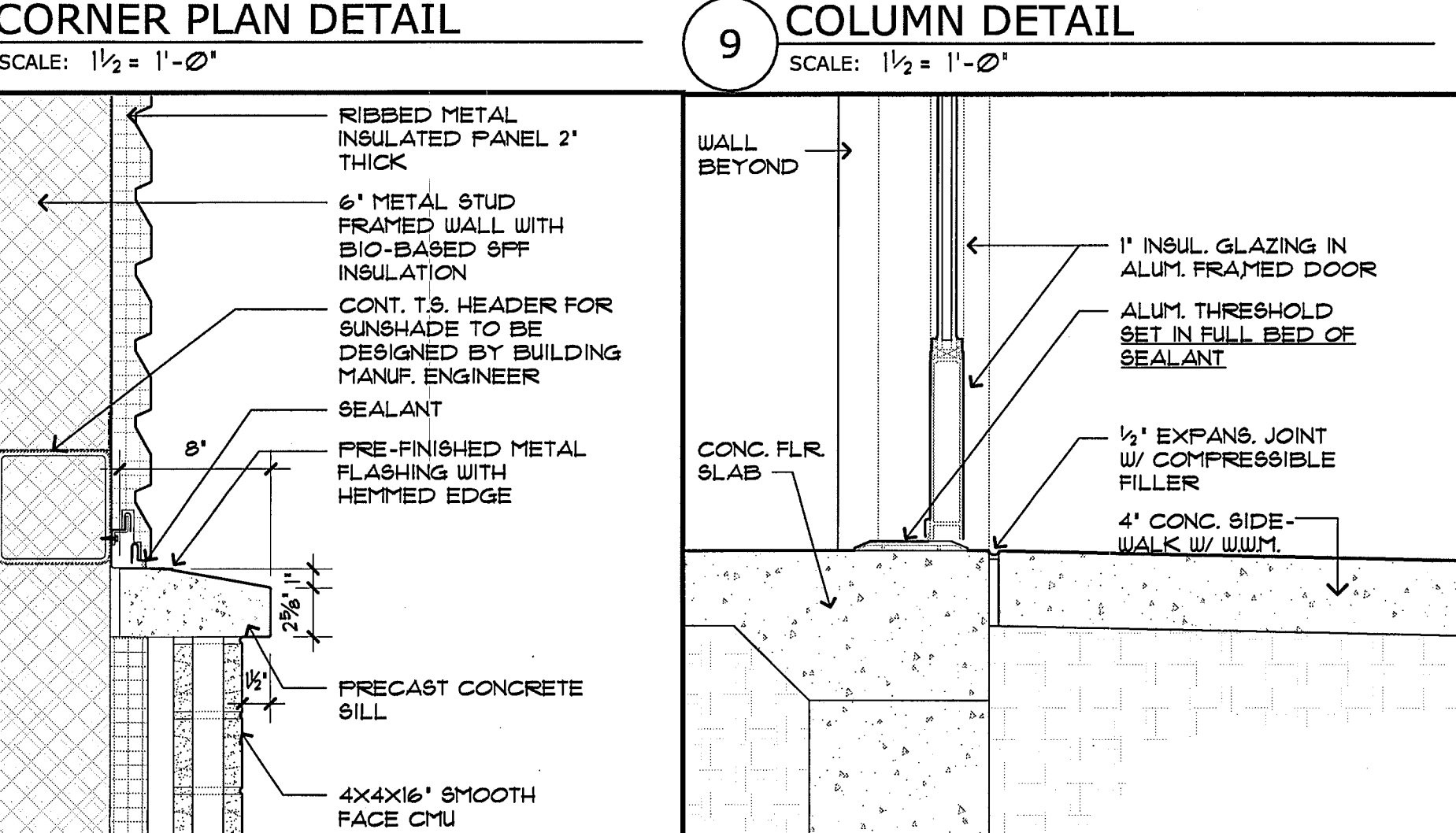
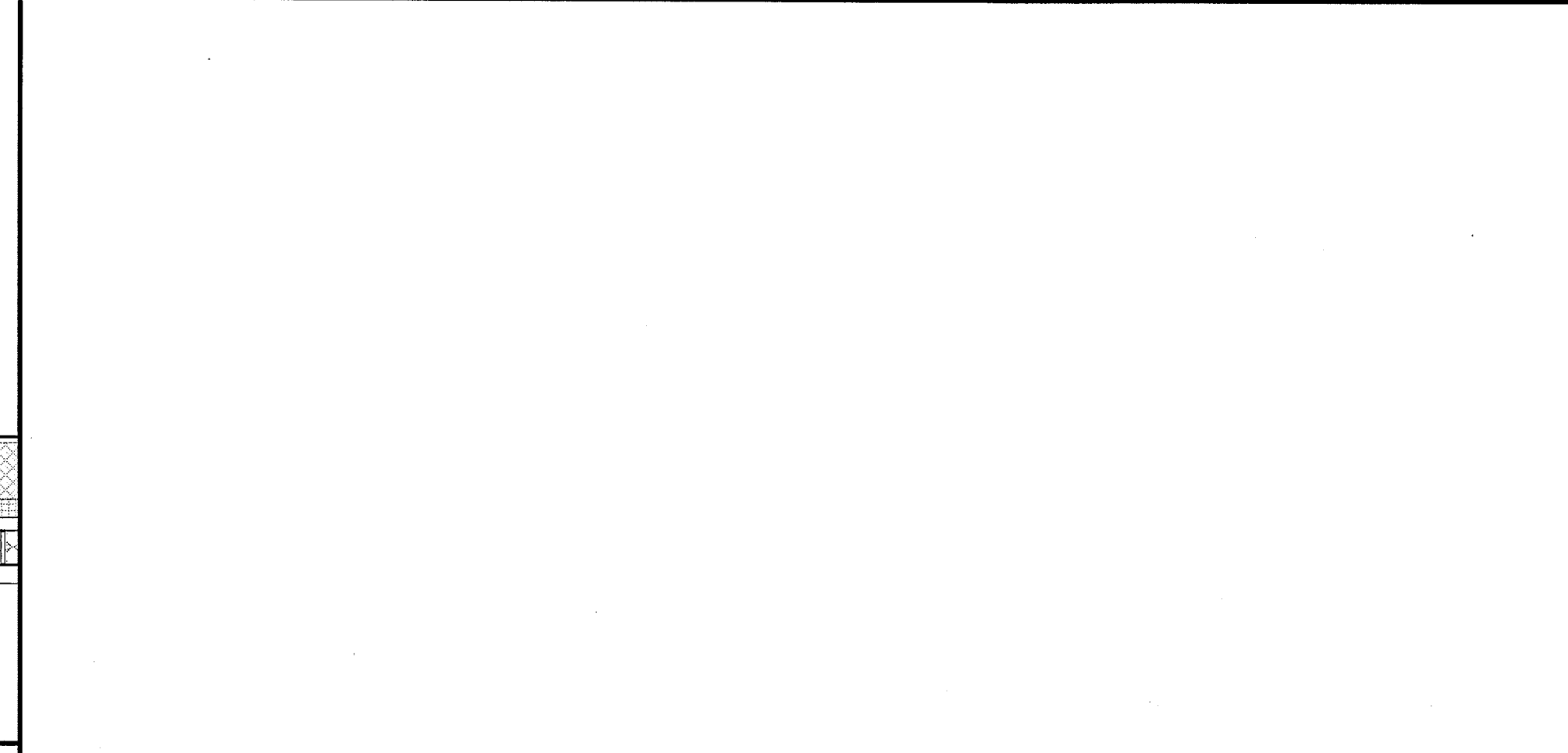
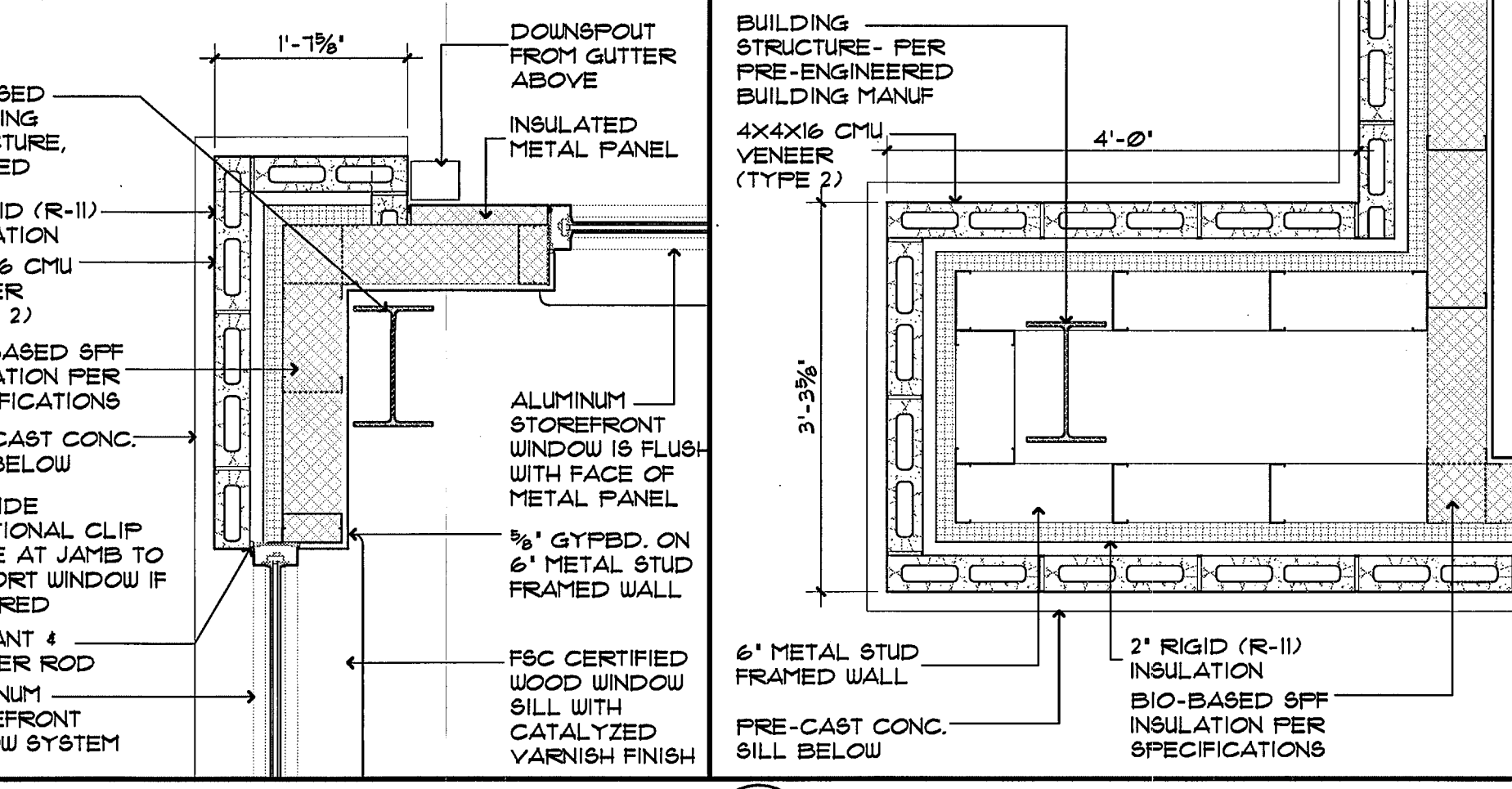
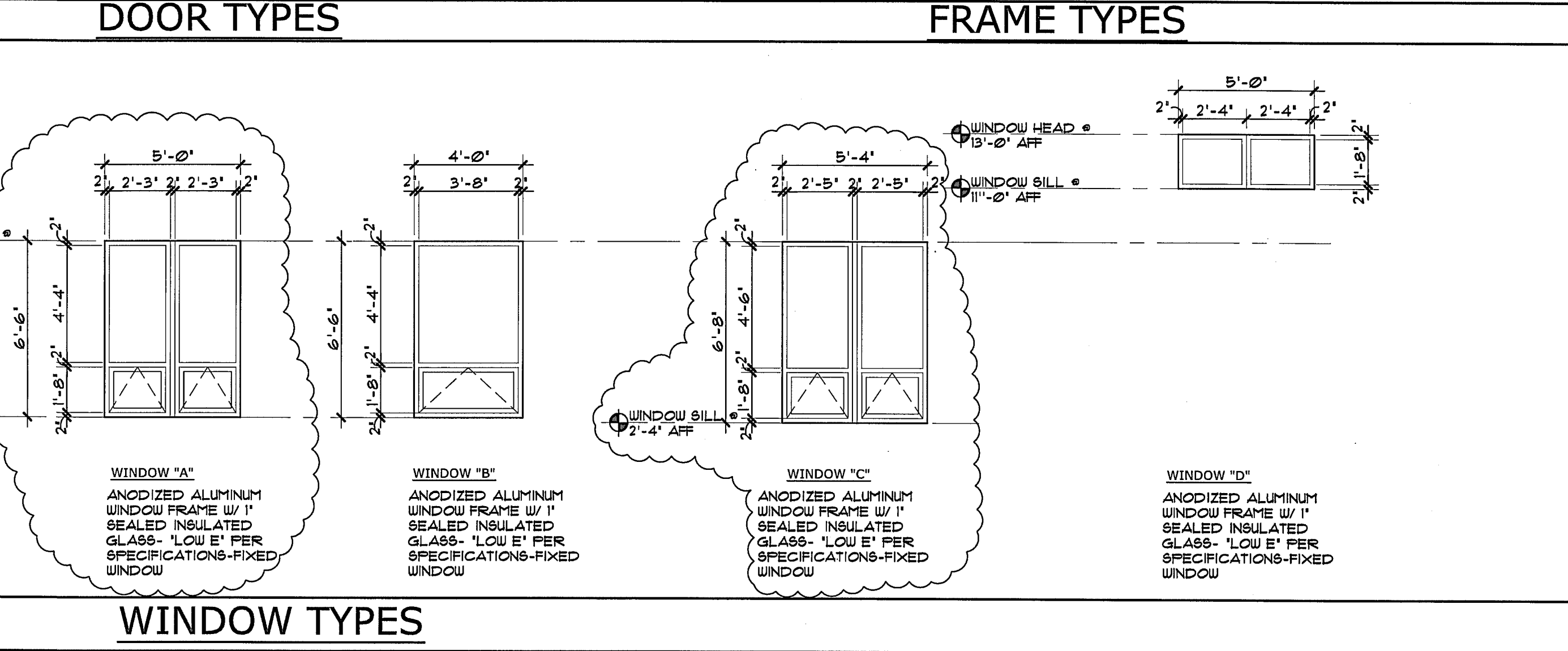
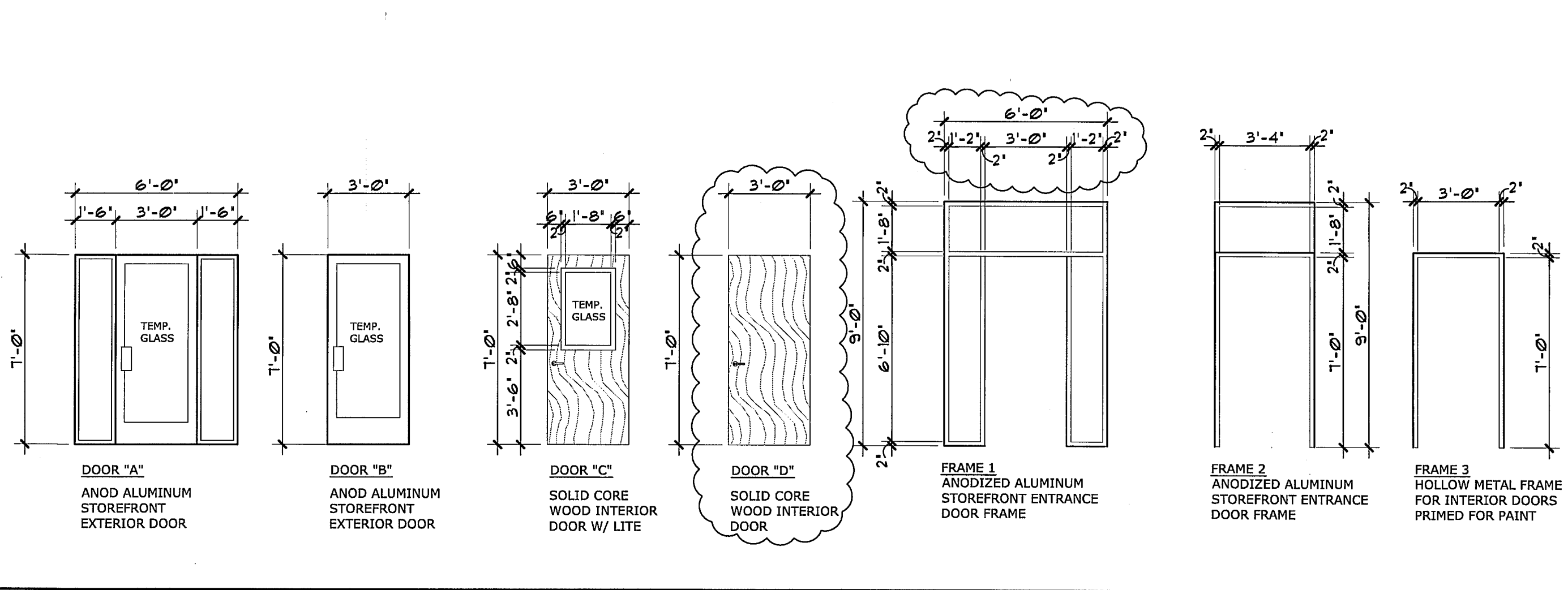
**15 MEN'S SHOWER ROOM WALL ELEV**  
 SCALE: 3/8" = 1'-0"





DOOR SCHEDULE											
NO.	SIZE	DOOR TYPE	MAT'L FINISH	FRAME TYPE	MAT'L FINISH	HDWR	RAT'G	GLZ'G	REMARKS	NO.	
100A	3'-0" X 7'-0" X 2"	A	ALUM ANOD	1	ALUM ANOD	001		GL-1		100A	
100B	3'-0" X 7'-0" X 2"	A	ALUM ANOD	1	ALUM ANOD	002		GL-2		100B	
101	3'-0" X 7'-0" X 2"	B	ALUM ANOD	2	ALUM ANOD	003		GL-1		101	
102	3'-0" X 7'-0" X 1/4"	C	WD STAIN	3	HM PAINT	101		TEMP		102	
103	3'-0" X 7'-0" X 1/4"	D	WD STAIN	3	HM PAINT	103		TEMP		103	
104	3'-0" X 7'-0" X 1/4"	D	WD STAIN	3	HM PAINT	102		TEMP		104	
105	3'-0" X 7'-0" X 1/4"	D	WD STAIN	3	HM PAINT	104		TEMP		105	
106	3'-0" X 7'-0" X 1/4"	D	WD STAIN	3	HM PAINT	106		TEMP		106	
110	3'-0" X 7'-0" X 1/4"	D	WD STAIN	3	HM PAINT	102		TEMP		110	
111	3'-0" X 7'-0" X 1/4"	C	WD STAIN	3	HM PAINT	101		TEMP		111	
112	3'-0" X 7'-0" X 1/4"	C	WD STAIN	3	HM PAINT	105		TEMP		112	
113	3'-0" X 7'-0" X 1/4"	C	WD STAIN	3	HM PAINT	101		TEMP		113	
114	3'-0" X 7'-0" X 1/4"	C	WD STAIN	3	HM PAINT	101		TEMP		114	
115	3'-0" X 7'-0" X 1/4"	C	WD STAIN	3	HM PAINT	101		TEMP		115	
116	3'-0" X 7'-0" X 1/4"	C	WD STAIN	3	HM PAINT	101		TEMP		116	
119	3'-0" X 7'-0" X 2"	B	ALUM ANOD	2	ALUM ANOD	001		GL-1		119	
120	3'-0" X 7'-0" X 1/4"	C	WD STAIN	3	HM PAINT	101		TEMP		120	

ROOM FINISH SCHEDULE									
ROOM NO.	ROOM NAME	FLOOR	BASE	NORTH WALL	EAST WALL	SOUTH WALL	WEST WALL	CEILING	REMARKS
100	VESTIBULE	MT/MAT	RB	GWB	GWB	GWB	GWB	GBD	WALK OFF MAT RECESSED IN CONC.
101	DRIVERS ROOM	MT	RB	GWB	GWB	GWB	GWB	OPEN TO STR.	PAINT EXPOSED STRUCTURE AT WALLS & CEIL.
102	DISPATCH	BBT	RB	GWB	GWB	GWB	GWB	OPEN TO STR.	PAINT EXPOSED STRUCTURE AT WALLS & CEIL.
103	QUIET ROOM	CARPET	RB	GWB	GWB	GWB	GWB	ACT-1	PAINT EXPOSED STRUCTURE
104	IT/PHONE	BBT	RB	GWB	GWB	GWB	GWB	OPEN TO STR.	PAINT EXPOSED STRUCTURE AT WALLS & CEIL.
105	WOMEN'S RESTROOM	TILE	TILE	GWB/TILE	GWB/TILE	GWB/TILE	GWB/TILE	GBD	SEE INTERIOR ELEVATIONS FOR TILE DETAIL
106	WOMEN'S SHOWER	TILE	TILE	GWB/TILE	GWB/TILE	GWB/TILE	GWB/TILE	GBD	SEE INTERIOR ELEVATIONS FOR TILE DETAIL
107	MEN'S SHOWER	TILE	TILE	GWB/TILE	GWB/TILE	GWB/TILE	GWB/TILE	GBD	SEE INTERIOR ELEVATIONS FOR TILE DETAIL
108	MEN'S RESTROOM	TILE	TILE	GWB/TILE	GWB/TILE	GWB/TILE	GWB/TILE	GBD	SEE INTERIOR ELEVATIONS FOR TILE DETAIL
109	JANITOR CLOSET	SEAL	RB	GWB/FBG	GWB	GWB	GWB/FBG	GBD	FIBERGLASS WAINSCOT - SEE INTERIOR ELEV.
110	MECH	SEAL	-	GWB	GWB	GWB	GWB	GBD.	PAINT ALL WALLS & CEIL.
111	SAFETY	CARPET	RB	GWB	GWB	GWB	GWB	ACT-1	PAINT ALL WALLS & EXPOSED STRUCTURE
112	WORK ROOM	BBT	RB	GWB	GWB	GWB	GWB	ACT-2	PAINT ALL WALLS
113	OPS/AGM	CPT	RB	GWB	GWB	GWB	GWB	ACT-1	FLOOR TRANSITION STRIP - SEE DETAIL
114	MANAGER	CARPET	RB	GWB	GWB	GWB	GWB	ACT-1	FLOOR TRANSITION STRIP - SEE DETAIL
115	PAYROLL	CARPET	RB	GWB	GWB	GWB	GWB	ACT-1	FLOOR TRANSITION STRIP - SEE DETAIL
116	STORAGE	BBT	RB	GWB	GWB	GWB	GWB	ACT-1	
117	HALLWAY	MT	RB	GWB	GWB	GWB	GWB	ACT-2	FLOOR TRANSITION STRIP AT DOORWAYS - SEE DETAIL
118	HALLWAY	MT	RB	GWB	GWB	GWB	GWB	ACT-2	FLOOR TRANSITION STRIP AT DOORWAYS - SEE DETAIL
119	HALLWAY	MT	RB	GWB	GWB	GWB	GWB	ACT-2	FLOOR TRANSITION STRIP AT DOORWAYS - SEE DETAIL
120	SAFETY MANAGER	CARPET	RB	GWB	GWB	GWB	GWB	ACT-1	PAINT EXPOSED STRUCTURE



**DESIGN EDGE**  
architecture interior design  
711 N. CASCADE AVE. SUITE 100  
COLORADO SPRINGS, CO 80903  
TELEPHONE: (719) 667-1972  
482 S. BROADWAY  
DENVER, COLORADO 80209  
TELEPHONE: (303) 260-7277

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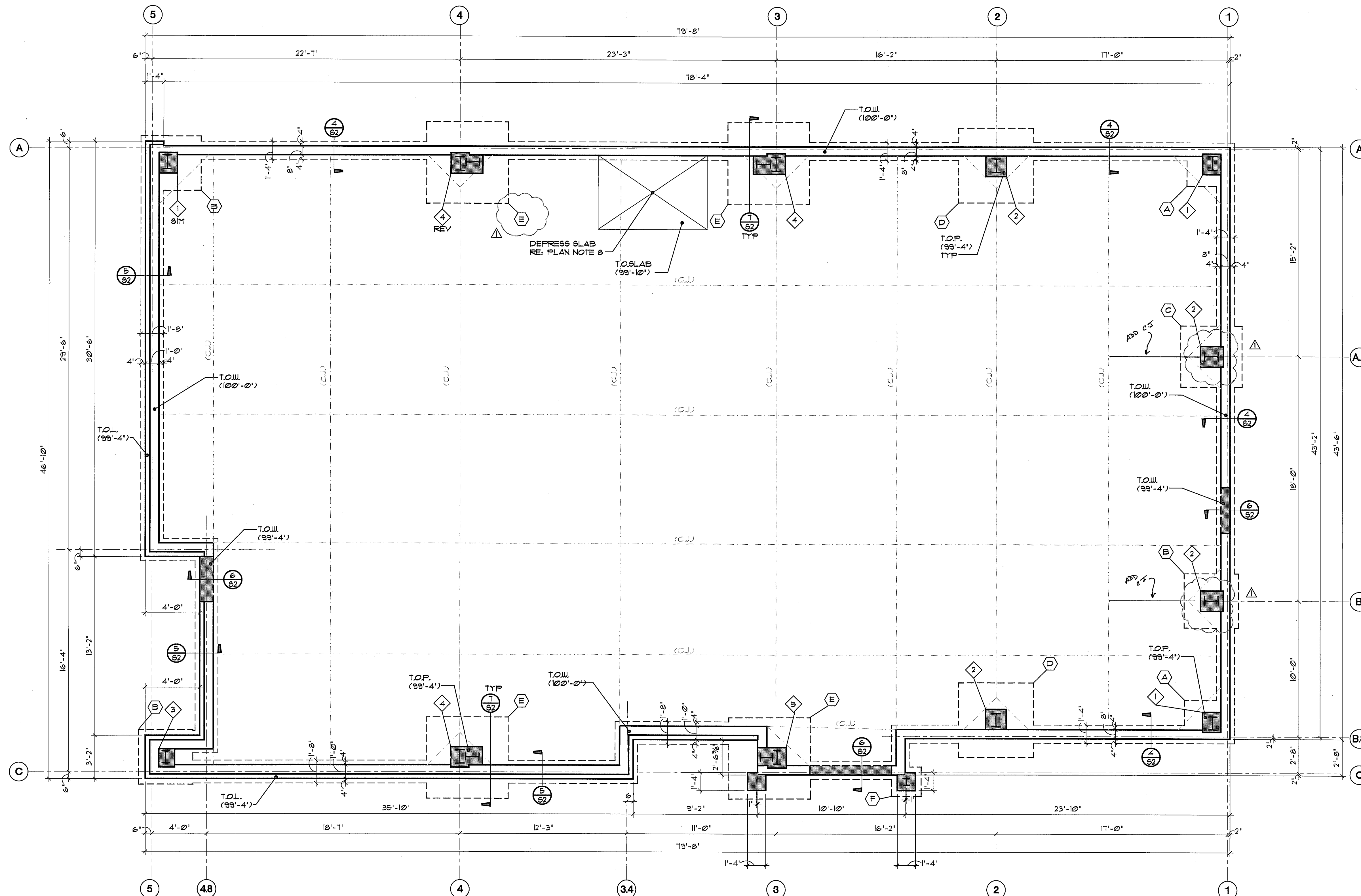
ISSUE DATES:  
ISSUED FOR BID 03/24/2010  
RBD PLAN REVIEW 10/08/2010  
RBD PLAN REVIEW CHANGES 10/28/2010

PROJECT NO. 9016  
DRAWN BY:  
CHECKED BY: SGT  
DATE: 10/28/2010

SHEET TITLE:  
BUILDING SCHEDULES

SHEET NO.  
**A6.1**





# FOUNDATION PLAN

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

NORTH

PAD FOOTING SCHEDULE		
SYM	SIZE	BOTTOM REINFORCING
(A)	3'-0" x 3'-0" x 1'-0"	(3) #5 x 2'-6" EA WAY
(B)	4'-0" x 4'-0" x 1'-0"	(4) #5 x 3'-6" EA WAY
(C)	4'-6" x 4'-6" x 1'-0"	(5) #5 x 4'-0" EA WAY
(D)	5'-6" x 5'-6" x 1'-2"	(6) #5 x 5'-0" EA WAY
(E)	6'-0" x 6'-0" x 1'-2"	(7) #5 x 5'-6" EA WAY
(F)	2'-2" x 2'-2" x 1'-0"	(3) #5 x 1'-8" EA WAY

- ### FOUNDATION PLAN NOTES
1. FLOOR IS 4" CONCRETE SLAB ON GRADE REINFORCED WITH CELLULOSE FIBER MESH REINFORCING
  2. ELEVATION TOP OF SLAB = 100'-0", EXCEPT AS NOTED THIS: T.O.SLAB REFER TO CIVIL DRAWINGS FOR ACTUAL ELEVATION
  3. ELEVATION TOP OF CONCRETE FOUNDATION WALLS = 100'-0" EXCEPT AS NOTED THIS: T.O.W. (XX'-X")
  4. ELEVATION TOP OF EXTERIOR FOOTINGS = 99'-0" EXCEPT AS NOTED THIS: T.O.F. (XX'-X")
  5. ALL FOOTINGS ARE CENTERED BELOW PIERS COLUMNS OR WALLS UNO
  6. ALL CONTINUOUS FOOTINGS ARE 1'-0" DEEP AND 1'-4" WIDE UNO
  7. FOR TYPICAL SLAB CONTROL JOINT DETAIL RE: 1/82 ALL CONTROL JOINTS (C.J.) TO BE VERIFIED BY CONTRACTOR
  8. CONTRACTOR SHALL VERIFY W/ ARCHITECTURAL PLANS OR OTHERS FOR ALL DEPRESSED SLABS, FOUR THROUGH'S & DOOR OPENINGS, BLOCKOUTS, SLOPES, AND CURBS PRIOR TO POURING CONCRETE
  9. VERIFY ALL DIMENSIONS W/ ARCHITECTURAL PLANS PRIOR TO CONSTRUCTION
  10. COLUMN FOOTING TYPES DESIGNATED THIS: (X) RE: SCHEDULE THIS SHEET
  11. FILASTER AND PIER TYPES ARE DESIGNATED THIS: (X) RE: 8/82
  12. [SHADE] SHADE INDICATES DROP WALL 8" AT DOORS AND FOUR THICKENED SLAB THROUGH OPENING
  13. FOR CORNER REINFORCING IN STEM WALLS RE: 2/82
  14. FOR TOP OF WALL STEPS RE: 3/82
  15. TOP OF BRICK LEDGE NOTED THIS: T.O.L. (XX'-X")

**DESIGN EDGE**  
 architecture interior design  
 711 N. CASCADE AVE. SUITE 100  
 COLORADO SPRINGS, CO 80903  
 TELEPHONE: (719) 667-1972  
 482 S. BROADWAY  
 DENVER, COLORADO 80209  
 TELEPHONE: (303) 260-7277

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**SERVICE CONTRACTOR FACILITY 1**  
 CITY OF COLORADO SPRINGS METRO TRANSIT  
 1070 TRANSIT DRIVE

ISSUE DATES:  
 CD's 10-08-10  
 GENERAL REV 10-12-10

RMG PROJECT NO. 123542  
 ENGINEER: EJ  
 DRAWN BY: CL  
 CHECKED BY: MW  
 DATE: 10-08-10

SHEET TITLE:  
 FOUNDATION PLAN,  
 PAD SCHEDULE AND  
 NOTES

SHEET NO.  
S1

**GENERAL STRUCTURAL NOTES**

**1. APPLICABLE CODES:**

A. These apply to all structural drawings. This project is designed in accordance with the International Building Code (IBC), 2003 Edition, and the Minimum Design Loads for Buildings and Other Structures (ASCE 7-02) and The Pikes Peak Regional Building Code (2005 Edition).  
 B. All material and workmanship shall be in accordance with applicable provisions of the codes specified above.

**2. LOADS USED IN DESIGN:**

- A. Roof Live Load: F<sub>r</sub> (Balanced) ..... 30 psf
- F<sub>r</sub> (Unbalanced) ..... 20 psf
- (And/or drift provisions ASCE 7-02, section 7.1)
- Snow Load Importance Factor, I<sub>s</sub> ..... 1.0
- Snow Thermal Factor, C<sub>t</sub> ..... 1.0
- Snow Exposure Factor, C<sub>e</sub> ..... 1.0
- B. Wind: Basic Wind Speed, V<sub>b</sub> ..... 100 mph
- Exposure ..... C
- Wind Importance Factor, I ..... 1.0
- Building Category: ..... I
- C. Internal Pressure Coefficient, G<sub>Cp</sub> ..... ±0.18 psf
- D. Seismic: Use Group: ..... I
- 1 - Other
- Spectral Response Coefficients:
- S<sub>1</sub> ..... 1.5% g
- S<sub>2</sub> ..... 5.5% g
- Soil Site Class: ..... D (Assumed)
- Seismic Design Category: ..... B

**3. COORDINATION:**

A. **DO NOT SCALE.** The layout shown is based solely on architectural plans and other written documentation by Design Edge, for Service Coordination Facility 1, last dated November 29, 2023 last received January 14, 2024 from contractor and/or client. Changes affecting the layout shown must be specific and clearly conveyed to RMG Engineers Group in written form as a change for inclusion into these plans. Contractor and/or client shall verify all dimensions and layout prior to construction. All dimensions on structural drawings shall be checked against architectural drawings and any discrepancies shall be brought to the attention of the Architect and Engineer immediately. Refer to mechanical, electrical and architectural drawings for openings not shown on structural drawings.  
 B. Shop drawings shall be prepared by the fabricator. Copying of these construction documents for use as shop drawings will not be permitted.  
 C. All temporary shoring shall be the responsibility of the contractor.  
 D. Design is void after two years from original date of issue, unless updated to acceptable codes and practices at that time.  
 E. A preconstruction meeting with personnel of RMG Engineers Group, the architect, contractor and appropriate subcontractors is strongly recommended prior to construction to discuss structural plans.

**4. CONCRETE:**

A. Concrete has been designed and shall be constructed in accordance with the American Concrete Institute 'Building Code Requirement Reinforced Concrete' and Specifications for Structural Concrete for Buildings (ACI 318 and ACI 301) latest editions. Section 13 'Inspection' of ACI 318 is deleted in its entirety, see 'Field Observations' paragraph. All concrete shall be of stone aggregate, unless noted otherwise.

**B. Concrete mixes:**

- See specifications for any additional durability requirements.
- Mix 'A' For interior slabs on grade:
- 4000 psi minimum compressive strength at age of 28 days.
- Type I/II Cement, minimum of 540 pounds per cubic yard.
- Fly ash not allowed.
- 3/4" maximum aggregate size.
- 3% Maximum air.
- 4" (8" with superplasticizer) maximum slump.
- Water reducing agent.
- Use in accordance with manufacturer's recommendations.
- Mix 'B' For footings, grade beams, and miscellaneous concrete:
- 3000 psi minimum compressive strength at age of 28 days.
- Type I/II Cement, minimum of 410 pounds per cubic yard.
- 3/4" maximum aggregate size.
- 6 1/2% entrained air.
- 4" (8" with superplasticizer) maximum slump.
- C. Reinforcing is to be new billet steel ASTM A615, Grade-60, except ties and bars to be welded shall be Grade-40. Provide not less than (2) #5 around all sides of all openings in concrete and extend 2'-0" past edges of openings. No apices of reinforcement are permitted except as detailed or authorized by structural engineer. Where permitted, use contact lap apices, (36) bar diameters minimum. Welded Wire Fabric (WUF) shall be in accordance with ASTM A185. Lap (1) full mesh minimum at apices. No welding of reinforcement permitted unless detailed.
- D. Placing of Reinforcement: Provide chairs, bolsters, additional reinforcement, and accessories necessary to support reinforcement at position shown on drawings. Support of reinforcement on form ties, wood, brick, brickbat or other unacceptable material, will not be permitted.
- E. Grout under base plates and bearing plates shall be non-shrink, non-metallic grout with a minimum compressive strength in 28 days of 7500 psi.
- F. Reinforcement shall be placed so that the following minimum concrete protection is provided, unless noted otherwise:
  - 1) Concrete surfaces poured against ground ..... 3" Clear
  - 2) Formed surfaces exposed to ground or weather:
    - a) Bars #6 and larger ..... 2" Clear
    - b) Bars #5 and smaller ..... 1 1/2" Clear
  - 3) Slabs ..... at center (unc.)
  - 4) Concrete not exposed to earth or weather ..... 3/4"
  - 5) Beams, Columns, Ties, Stirrups or spirals around primary reinforcement, or primary reinforcement with no ties, stirrups or spirals ..... 1 1/2"
- G. Foundation elements below grade shall have backfill placed equally on both sides until the required levels are reached. Walls shall be appropriately shored when backfill is placed on one side only.
- H. Additional (2) #5 bars (one each face) with a 2'-0" projection shall be placed diagonally across the corners of all openings and vertical steps in walls unless otherwise detailed on plans.
- I. The contractor is responsible for determining when it is safe to remove forms and/or shoring. Forms and shoring must not be removed until the walls are strong enough to carry their own weight and any anticipated superimposed loads. For foundation walls, this typically requires at least 12 hours of cumulative curing time at a temperature of 50°F or more. Concrete must be adequately covered during cold periods to maintain this surface temperature. Due to varying weather conditions, alternative curing processes, and the use of Type I/II cement, RMG Engineers Group suggests forms remain in place a minimum of 3 days to assure this performance specification has been met. When forms are stripped there must be no excessive deflection or distortion or discoloration and no evidence of damage to the concrete. Adequate thermal protection of the concrete shall be continued after stripping for a cumulative period of 48 hours at 50°F, or more, after the initial pour. See applicable notes for specifications on when to backfill foundation walls.

**4. CONCRETE CONTINUED:**

- J. Field quality control:
  - 1) Reference standard: ACI 301 Chapters 16 and 17, latest edition.
  - 2) Slump tests: The general contractor shall provide necessary equipment and shall make test in conformity with ASTM C143. The contractor shall make slump tests on the first truck of each pour and as often as deemed necessary by the contractor to maintain the required slump tests when directed by the Architect or Engineer.
  - 3) Control tests:
    - a. Control tests of concrete work shall be made on every 50 cubic yards or fraction thereof of concrete placed and, in any case, minimum of once during each day's pour.
    - b. Each test shall consist of four standard 6" test cylinders cast and cured in accordance with ASTM C31 and ASTM C173.
    - c. Sample concrete at point of placement.
    - d. One cylinder shall be broken at end of seven days after placing, two cylinders shall be broken at end of 28 days after placing, and remaining cylinder shall be stored until its disposition is determined by Architect.
    - e. In general, remaining cylinder will be broken only when previous test reports indicated unsatisfactory results.
    - f. Tests on remaining cylinder shall be at expense of the contractor.
    - g. Architect and/or Engineer reserves right to stop future concrete work when seven or 28 day tests indicate unsatisfactory results until, in the opinion of the Architect and/or Engineer of Record, proper corrective measures have been taken to insure quality concrete in future work and corrections deemed necessary have been made.
    - h. Tests shall be made at time control tests are taken and so stated in reports to determine slump, air content, unit weight and temperature of concrete.
    - i. All tests shall be made in accordance with ASTM C138 or ASTM C231.
    - 4) Slab tolerance: Maintain surface flatness with maximum variation of 1/8 inch in 20 feet.

**5. SPREAD FOOTING FOUNDATIONS:**

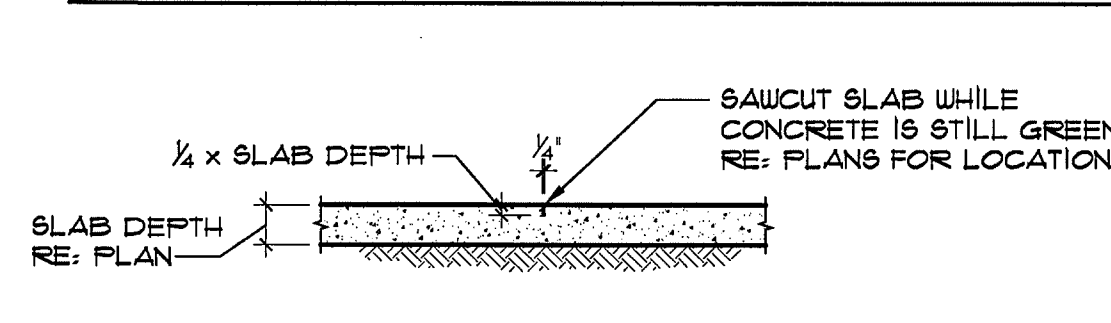
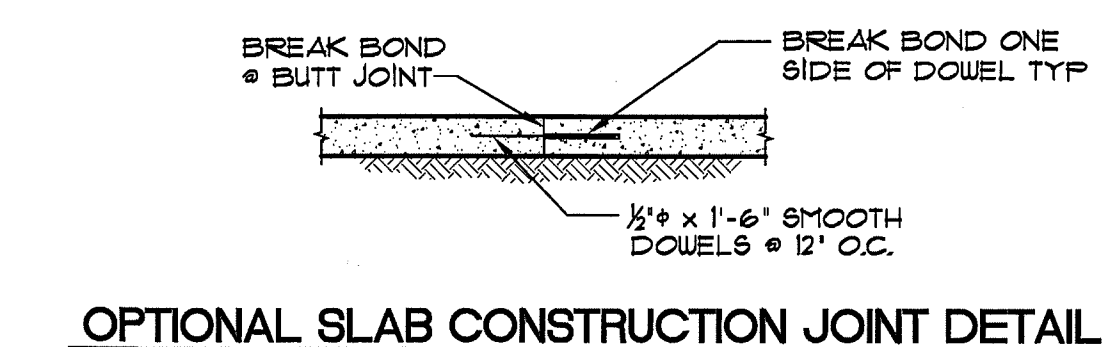
A. The foundation design has been completed in accordance with pertinent standards, recommended design soil parameters, accepted engineering design procedures, and is based on the best information available at the time of completion. The design is intended to minimize differential movement resulting from the heaving of expansive soil or settling of subsurface soils. It must be recognized that foundation components will undergo movement. It shall be the responsibility of the contractor and/or present owner to inform any subsequent owners of the soil condition and advised to maintain good practices in the future with regard to surface and subsurface drainage, framing of partitions above floor slabs, and finish work above the floor slabs, etc.  
 B. Foundation design is based on soil report No. 111023 prepared by Kleinfelder dated 6-18-10. The Contractor shall thoroughly review and understand all pertinent construction aspects of this report before beginning any work.  
 C. Foundation Design parameters include an allowable bearing pressure of 2500 psf with no minimum dead load requirement and with soil preparation per Geotechnical engineer.  
 D. A representative of the Geotechnical engineer shall observe the open excavation to determine that the soil type and conditions are consistent with assumed design criteria. If the soil properties are found to be different from this criteria, the foundation engineer shall be promptly notified so that the foundation design may be reviewed.  
 E. The contractor shall be responsible to coordinate the location of mechanical openings, floor drains, inserts, depressions, buried cables and utilities, etc. with architectural, civil, mechanical and electrical drawings.  
 F. Mechanically compact all interior and exterior backfill per Geotechnical engineers recommendations. It will also be necessary to adjust and maintain the grade immediately against foundations periodically to avoid the creation of a water trap as the backfill settles over time.  
 G. Slope backfill away from the building a minimum of 10% for the first 10 feet (2% at paved areas) unless a more stringent requirement is specified by the Geotechnical engineer. Carry roof drains across the backfilled areas. Do not allow water to stand or pond near the building. Do not flood the backfill.  
 H. Contact Geotechnical engineer for proper preparation of subgrade for placement of floor slabs.  
 I. Floor slabs have a high probability of moving vertically. Floor slabs shall be separated from all structural portions of building with an expansion joint of minimum 1/2" thick styrofoam or other approved joint material. A gap in non-bearing partitions, the non-rigid connections with the stairway construction and non-rigid construction of door jams may be required by the Geotechnical engineer. If required, these items may also require reconstruction over the life of the structure to maintain the independent vertical movement of the floor slabs.

**6. METAL BUILDING COORDINATION:**

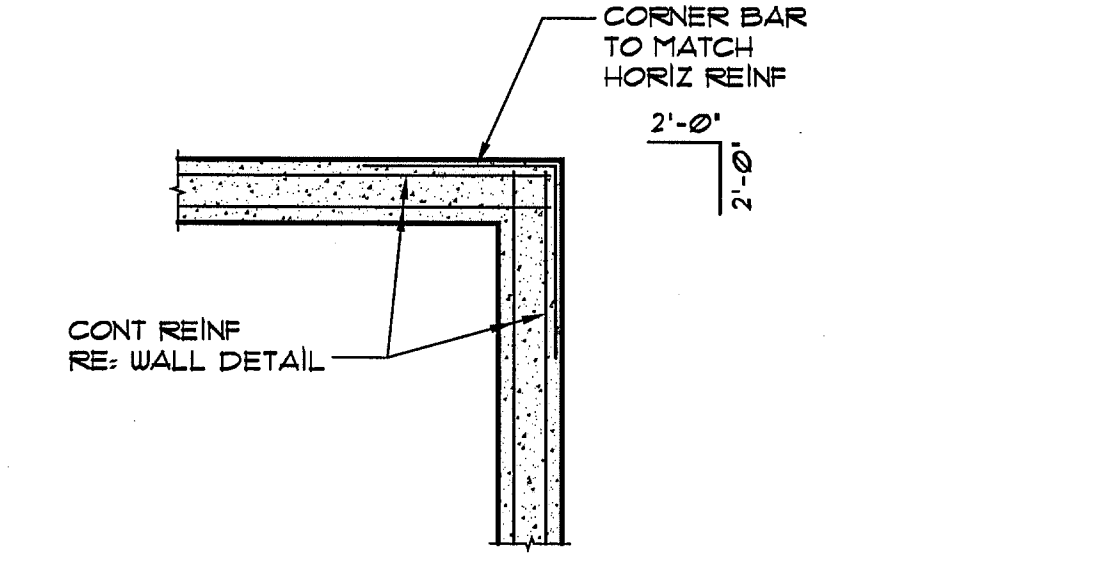
A. Metal building design drawings and load calculations are to be stamped by a Structural Engineer registered in the state of Colorado. Final stamped drawings are to be submitted to RMG Engineers Group prior to foundation placement for final review.  
 B. The foundation design for the metal building is based on assumed loads. RMG Engineers Group must be notified to re-evaluate the foundation design for the specific metal building design. Any structural changes and/or revisions made by RMG Engineers Group due to column locations different metal building column locations shall be at the contractor's expense.  
 C. **DO NOT SCALE.** Schematic layout shown is based solely on architectural plans and other written documentation received from contractor and/or client. Changes affecting the layout and design shown on these plans must be specific and clearly conveyed to RMG Engineers Group in written form as a change for inclusion into these plans. Contractor and/or client shall verify all dimensions and layout prior to construction.

**7. FIELD OBSERVATIONS:**

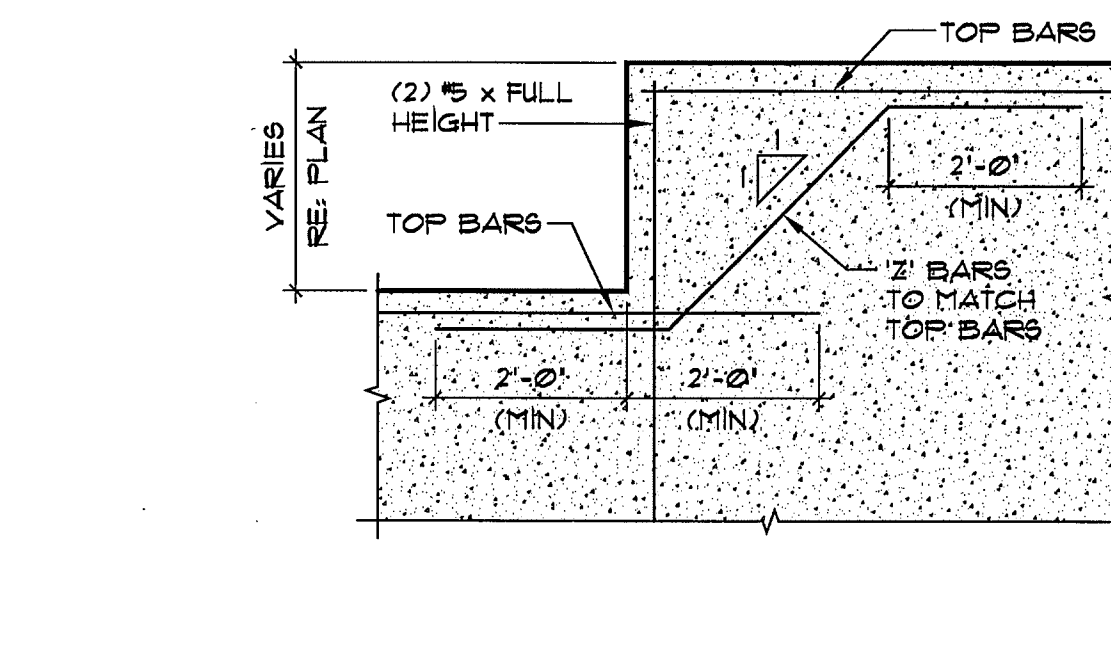
A. The Contractor shall inform the Engineer of Record at least 24 hours prior to casting any concrete so as to allow the Engineer of Record the opportunity to review the placement of reinforcing and/or embedded items. Contact RMG Engineers Group: (719) 548-0600.



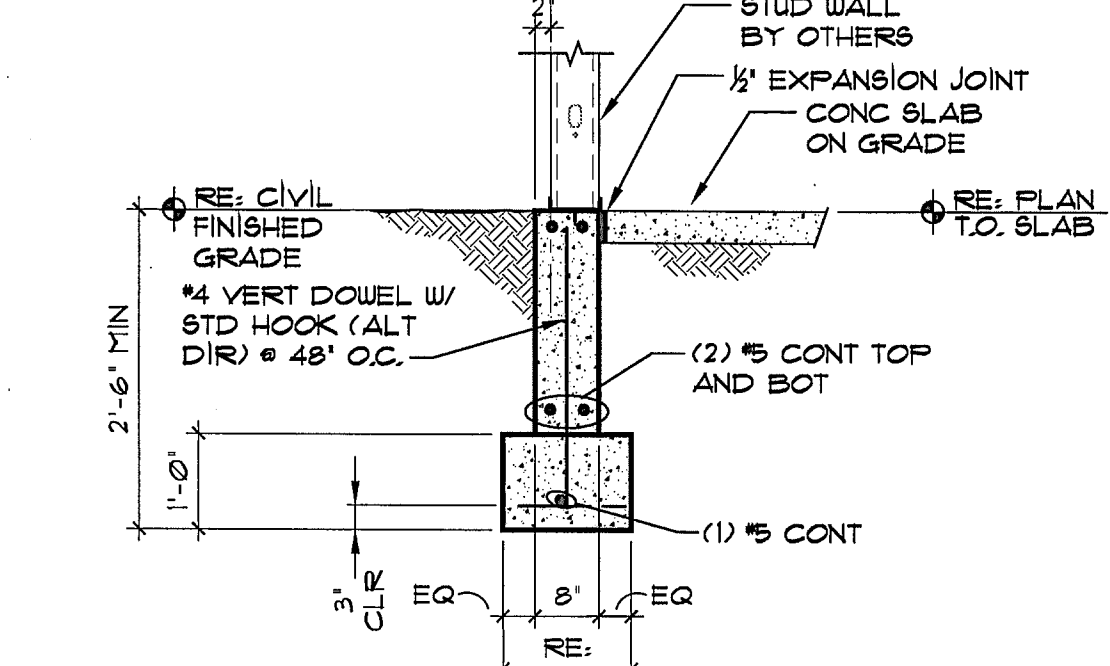
**1 TYPICAL SLAB CONSTRUCTION JOINT DETAIL**  
SCALE: 1/2" = 1'-0"



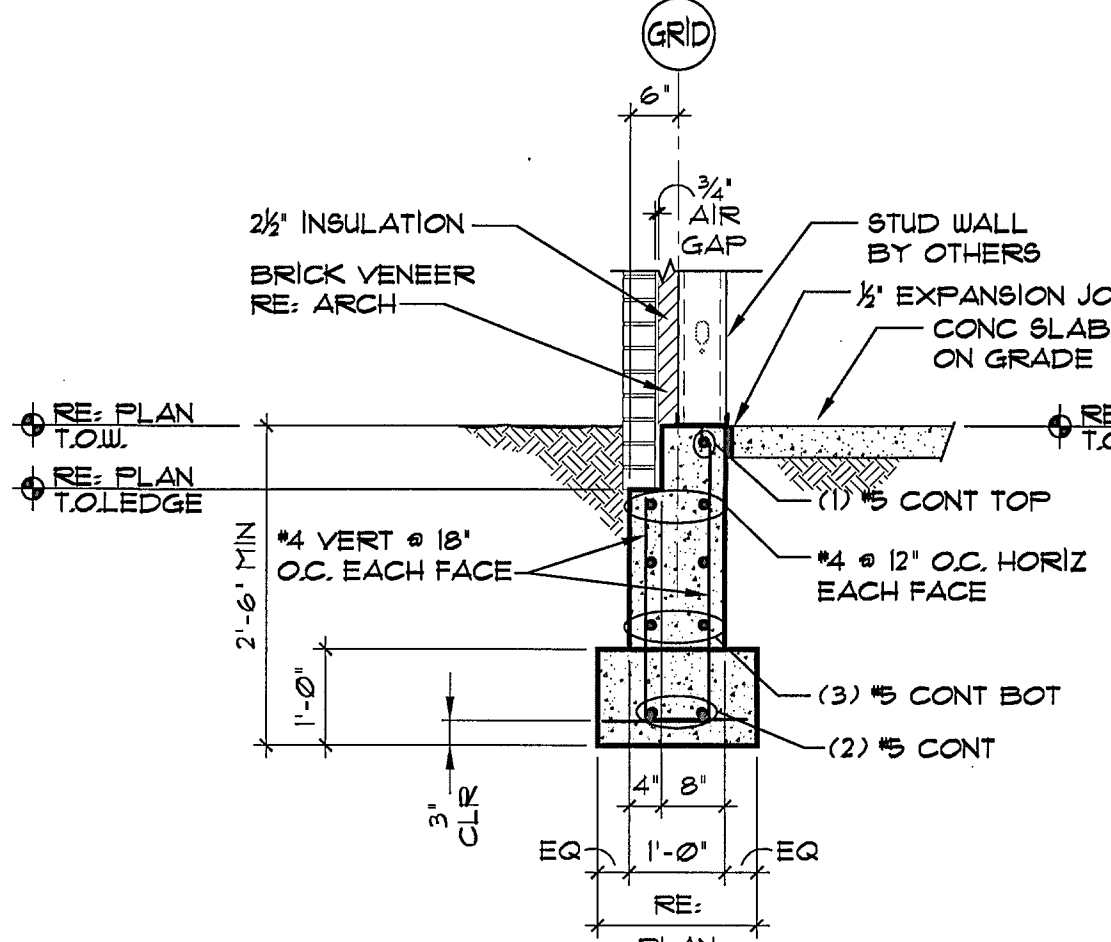
**2 TYPICAL CORNER WALL REINFG DETAIL**  
SCALE: 1/2" = 1'-0"



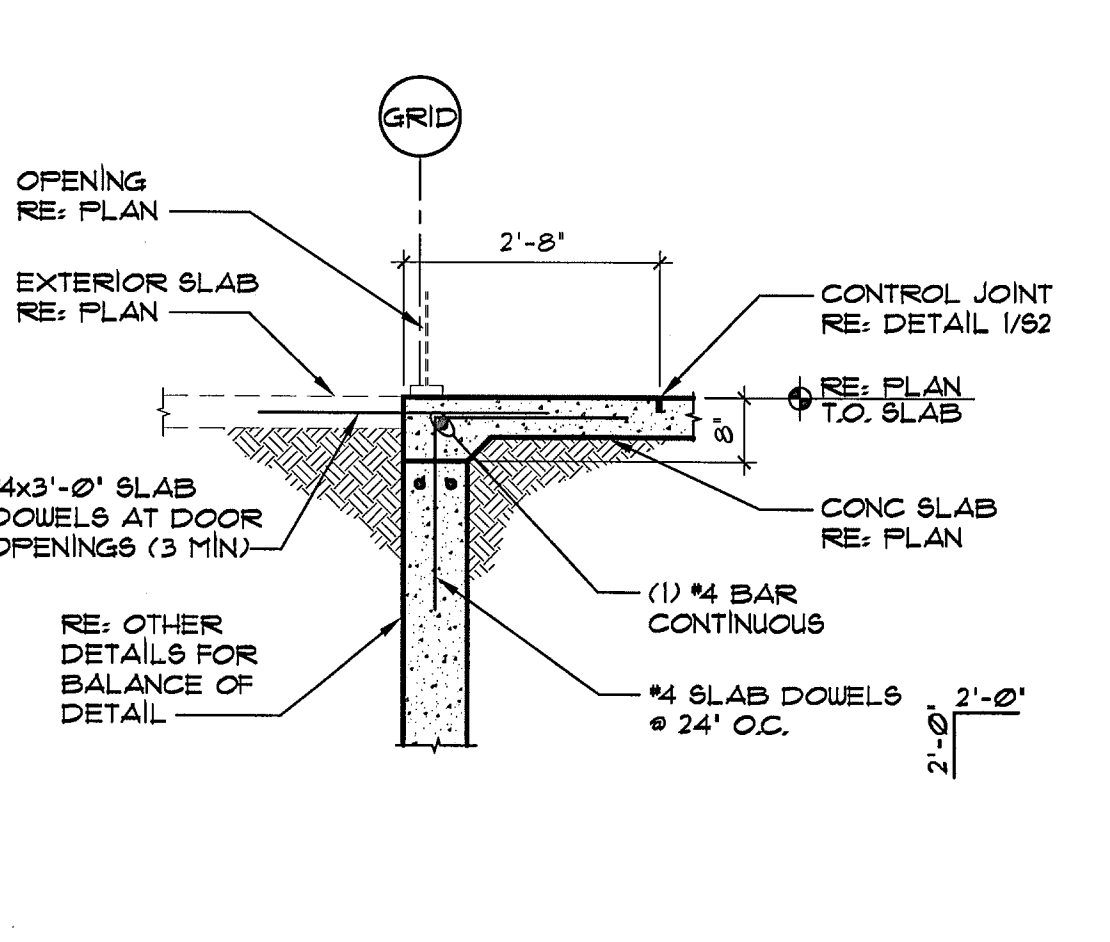
**3 TYPICAL TOP OF WALL STEP**  
SCALE: 1/2" = 1'-0"



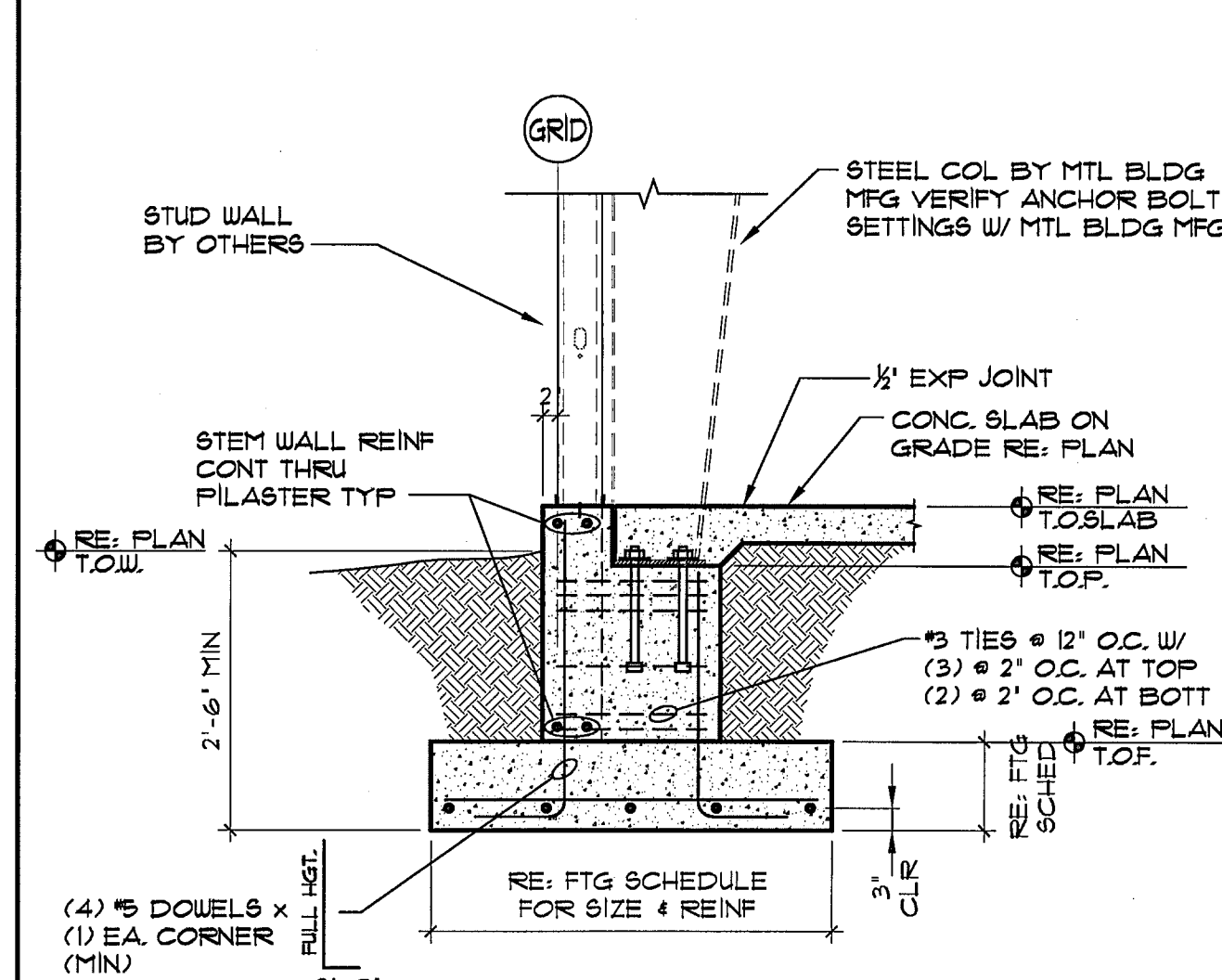
**4 DETAIL**  
SCALE: 1/2" = 1'-0"



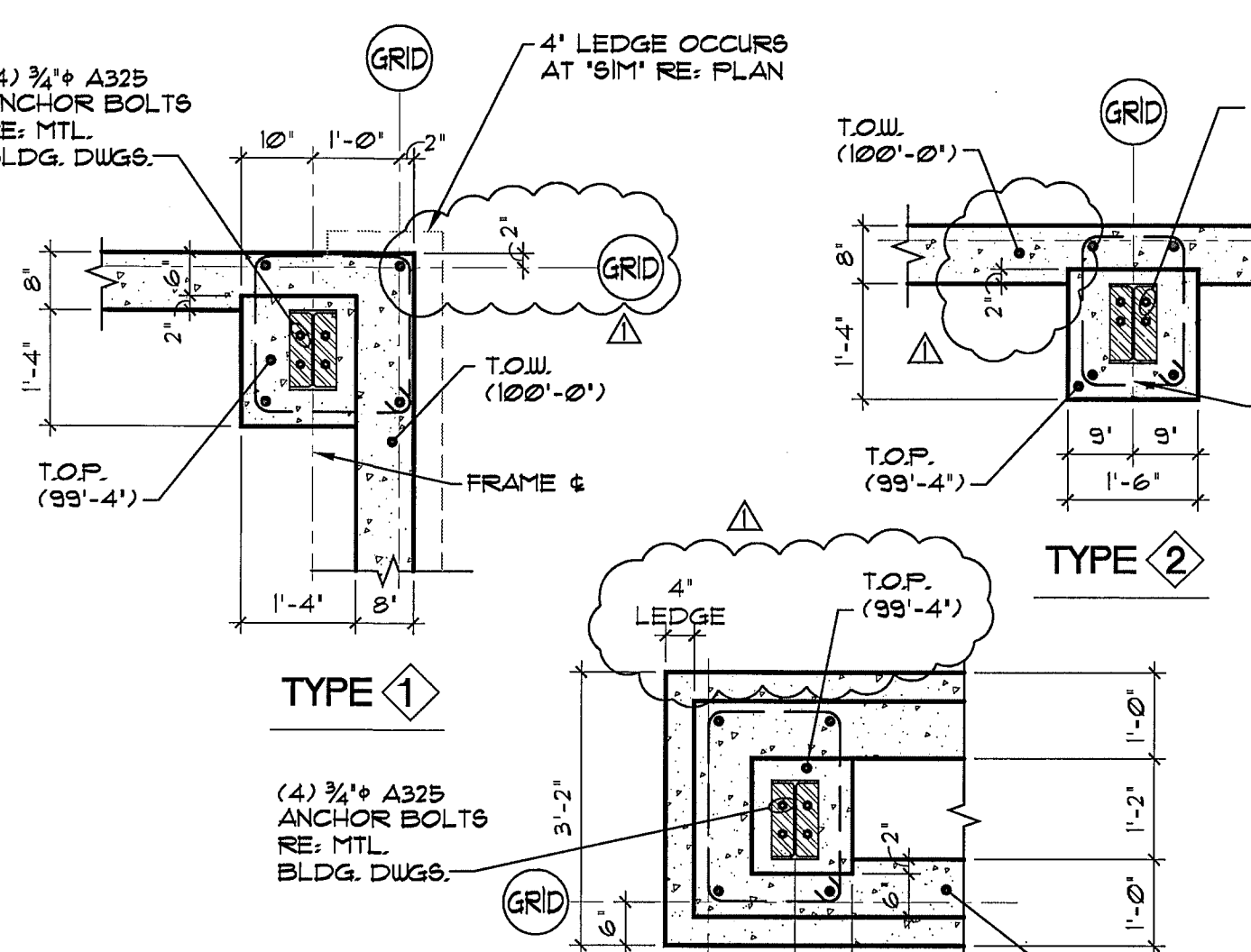
**5 DETAIL**  
SCALE: 1/2" = 1'-0"



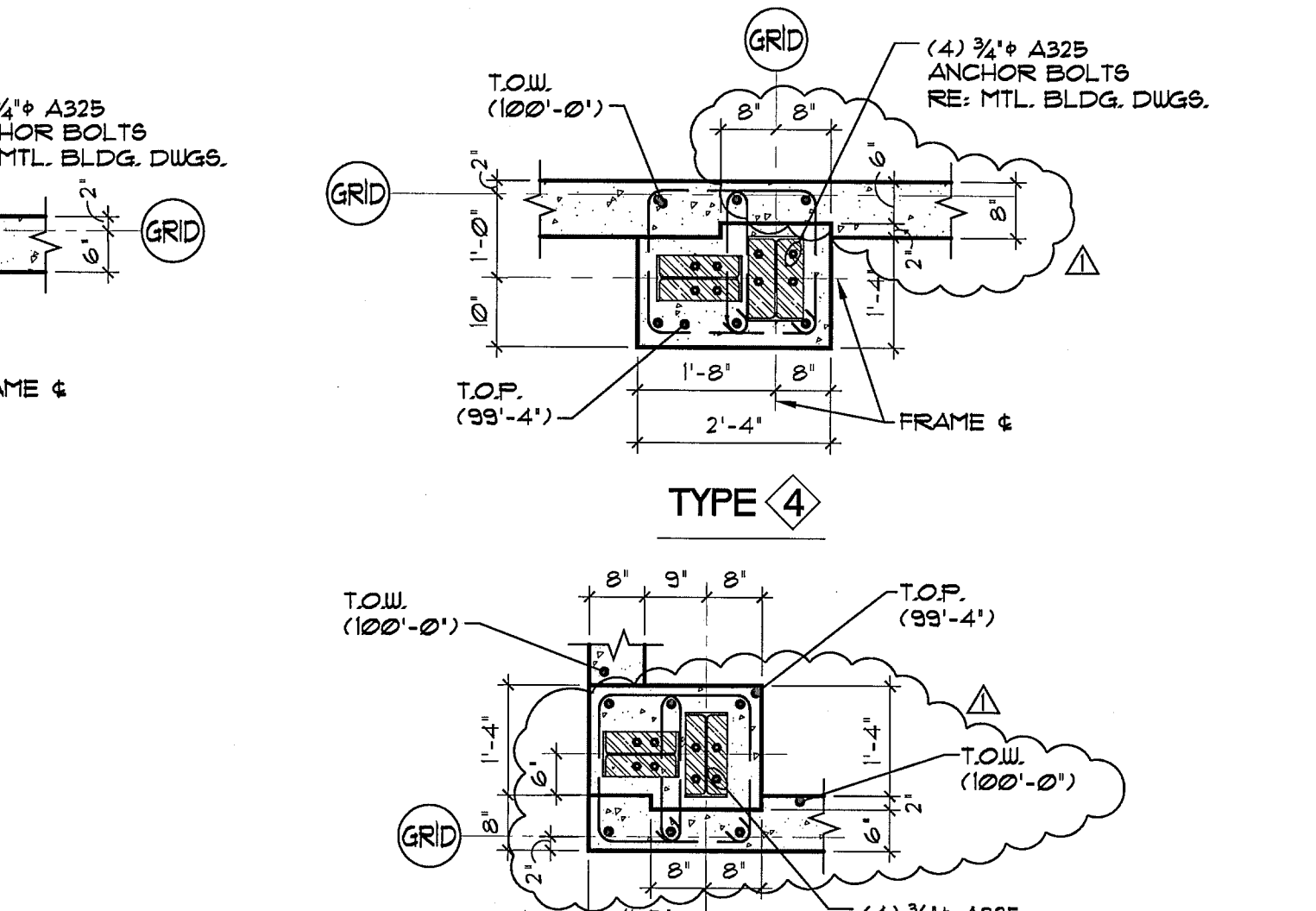
**6 FOUNDATION DETAIL**  
SCALE: 1/2" = 1'-0"



**7 PIER SECTION**  
SCALE: 1/2" = 1'-0"



**8 PILASTER TYPES**  
SCALE: 1/2" = 1'-0"



**FOUNDATION DETAILS AND GENERAL NOTES**

**DESIGN EDGE**  
 architecture interior design  
 711 N. CASCADE AVE. SUITE 100  
 COLORADO SPRINGS, CO. 80903  
 TELEPHONE: (719) 661-1972  
 482 S. BROADWAY  
 DENVER, COLORADO 80209  
 TELEPHONE: (303) 260-7277

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REGISTRATION:

**SERVICE CONTRACTOR FACILITY 1**  
 CITY OF COLORADO SPRINGS METRO TRANSIT  
 1070 TRANSIT DRIVE

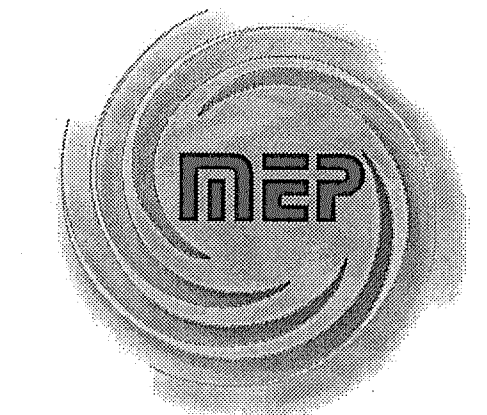
ISSUE DATES:  
 CD's 10-08-10  
 GENERAL REV 10-12-10

RMG PROJECT NO. 123542  
 ENGINEER: EJ  
 DRAWN BY: CL  
 CHECKED BY: MW  
 DATE: 10-08-10

SHEET TITLE:  
 FOUNDATION  
 DETAILS AND  
 GENERAL NOTES

SHEET NO.  
**S2**





**FURNACE SCHEDULE**

SYMBOL	MODEL	SUPPLY FAN DATA					HEAT EXCHANGER DATA		COOLING COIL DATA		ELEC	FLA	MOCP	REMARKS		
		CFM TOTAL @ 5000'	CFM OA @ 5000'	ESP IN WC @ SL	DRIVE TYPE	SPEED SETTING	HP	RPM	MEH INPUT @ SL	MEH OUTPUT @ 5000'					COIL MODEL	MEH TOTAL @ 5000'
FURN-1	TUXIG00A1H4B	1550	250	0.5	DIRECT	MED-HIGH	3/4	100	100	14.4	4TXCCO48	48.0	120-1	12.4	20	1, 2, 3, 4, 5
FURN-2	TUXIG00A1H4B	1500	375	0.5	DIRECT	MED-HIGH	3/4	100	100	14.4	4TXCCO48	48.0	120-1	12.4	20	1, 2, 3, 4, 5
FURN-3	TUXIB040A1H2B	500	100	0.5	DIRECT	LOW	1/2	1080	40	30.4	4TXCB018	24.0	120-1	9.7	15	1, 2, 3, 4, 5
FURN-4	TUXIB060A1H3B	1425	355	0.5	DIRECT	MED-HIGH	3/4	100	100	14.4	4TXCCO48	48.0	120-1	12.4	20	1, 2, 3, 4, 5

1. EQUIPMENT SCHEDULE BASED ON TRANE. ACCEPTABLE MANUFACTURERS: CARRIER, LENOX, AND MCGUAY.  
2. COOLING COIL CAPACITY BASED ON: 45 F AMBIENT AT CONDENSER.  
3. BURNER SHALL BE DESIGNED TO FIRE ON NATURAL GAS, 6" WC, BOT BTU/CF.  
4. PROVIDE WITH CONCENTRIC VENT KIT.  
5. PROVIDE WITH 24HT PROGRAMMABLE THERMOSTAT.

SEQUENCE OF OPERATION:  
A. HEATING-OCCUPIED CYCLE: (BELOW 55 F OUTSIDE AIR TEMPERATURE) ON DEMAND FOR HEATING, THE T-STAT SHALL CYCLE FAN AND HEATING SYSTEM TO MAINTAIN SPACE TEMPERATURE.  
B. COOLING-OCCUPIED CYCLE: (ABOVE 55 F OUTSIDE AIR TEMPERATURE) ON DEMAND FOR COOLING, THE T-STAT SHALL CYCLE FAN AND REFRIGERATION SYSTEM TO MAINTAIN SPACE TEMPERATURE.

**AIR COOLED CONDENSING UNIT SCHEDULE**

SYMBOL	MATCHED SYSTEM COMPONENT	MODEL	AMB TEMP F	MEH @ SL	MIN CIRCUIT AMP	ELEC	NO COPR	STEPS CAPACITY CONTROL	SEER	MIN AMB OPERATION F	REMARKS
CU-1	FURN-1	4T1Z9048A1	95	48.0	26	208-1	2	2	19	0	1, 3, 4
CU-2	FURN-2	4T1Z9048A1	95	48.0	26	208-1	2	2	19	0	1, 3, 4
CU-3	FURN-3	24A1A2124	95	24.0	19	208-1	2	2	21	0	2, 3, 4
CU-4	FURN-4	4T1Z9048A1	95	48.0	26	208-1	2	2	19	0	1, 3, 4

1. EQUIPMENT SCHEDULE BASED ON CARRIER. ACCEPTABLE MANUFACTURERS: TRANE, LENOX, AND RHEEM.  
2. EQUIPMENT SCHEDULE BASED ON TRANE. ACCEPTABLE MANUFACTURERS: RHEEM, LENOX, AND CARRIER.  
3. EQUIPMENT PROVIDED WITH LOW AMBIENT CONTROLS.  
4. EQUIPMENT SHALL OPERATE ON R-410A REFRIGERANT.

**EXHAUST FAN SCHEDULE**

SYMBOL	MODEL	FAN TYPE	SERVICE	CFM @ 5000'	S.P. IN. W.C. @ SL	APPROX. RPM	HP/ WATTS	ELEC	DRIVE TYPE	DAMPER TYPE	SONES	REMARKS
EF-1	6B-081-6	CENTRIFUGAL ROOF	RESTROOMS	575	0.5	1725	1/6	120-1	BELT	GRAVITY B.D.	4.3	1, 2
EF-2	SP-B150	CEILING EXHAUST	WORK ROOM	150	0.38	1050	1/4 W	120-1	DIRECT	GRAVITY B.D.	4.4	1, 3

1. EQUIPMENT SCHEDULE BASED ON GREENHECK. ACCEPTABLE MANUFACTURERS: AGME, GARNES, COOK, PENN AND THIN CITY.  
2. UNIT SHALL BE PROVIDED WITH 14" HIGH ROOF CURB.  
3. UNIT SHALL BE PROVIDED WITH INTEGRAL INLET GRILLE.

SEQUENCE OF OPERATION:  
FAN SHALL BE CONTROLLED BY TIME-CLOCK. COORDINATE WITH E.G. FAN SHALL RUN CONTINUOUSLY DURING OCCUPIED HOURS AND SHALL BE SHUT-OFF DURING UNOCCUPIED HOURS.

**FILTER SCHEDULE**

SYMBOL	MODEL NO	SERVICE	EFFICIENCY	SIZE (IN)	MEDIA SQ.FT.	REMARKS
F-1	DP1B-5TD4	FURN-1	MERV-13	16x25x4	18.3	1
F-2	DP1B-5TD4	FURN-2	MERV-13	16x20x4	14.6	1
F-3	DP1B-5TD4	FURN-3	MERV-13	12x24x4	12.4	1
F-4	DP1B-5TD4	FURN-4	MERV-13	16x20x4	14.6	1
F-5	DP1B-5TD4	OA DUCT	MERV-13	16x20x4	14.6	1

1. EQUIPMENT SCHEDULE BASED ON AIRGUARD. ACCEPTABLE MANUFACTURERS: AAF INTERNATIONAL, GAMFIL FAR, FILTRATION GROUP, FLANDERS-PRECISIONAIRE, KOCH FILTER CORPORATION, FURAFIL INC.

**CONTRACTOR PRICING NOTE (LEED)**

THIS PROJECT IS PURSUING LEED NC 3.0 GOLD CERTIFICATION THROUGH THE USGBC. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY PRICING FOR CREDIT COMPLIANCE AND DOCUMENTATION TO ACHIEVE THIS. CONTRACTOR TO REVIEW CREDIT POINTS TO ENSURE ACCURATE BID. PROJECT WILL BE DESIGNED TO MEET ASHRAE STANDARDS 62.1-2007, 55-2007, AND 90.1-2007 ALONG WITH LOCAL ENERGY CODES. THIS PROJECT WILL HAVE COMMISSIONING DONE ON THE MECHANICAL, SERVICE WATER HEATING, AND LIGHTING CONTROL SYSTEMS.

**AIR DEVICE SCHEDULE**

SYMBOL	TYPE	MODEL	FRAME	MATERIAL	FINISH	DAMPER TYPE	REMARKS
CD-1	CEILING DIFFUSER	SCD	LAY-IN	STEEL	WHITE POWDER COAT	NONE	3-CONE (CONCENTRIC) 4-WAY PATTERN, 24x24 FACE NECK SIZE PER PLANS
CD-2	CEILING DIFFUSER	SCD	SURFACE	STEEL	WHITE POWDER COAT	BUTTERFLY VOLUME DAMPER	3-CONE (CONCENTRIC) 4-WAY PATTERN, 12x12 FACE NECK SIZE PER PLANS
CD-3	CEILING DIFFUSER	SCD	SURFACE	STEEL	WHITE POWDER COAT	BUTTERFLY VOLUME DAMPER	3-CONE (CONCENTRIC) 4-WAY PATTERN, 24x24 FACE NECK SIZE PER PLANS
SG-1	SPIRAL DUCT GRILLE	SDGE	DUCT	ALUMINUM	WHITE POWDER COAT	AIRSCOOP	16x6 FACE, 0° DEFLECTION, ADJUSTABLE BLADES
T6-1	TRANSFER GRILLE	PDDR	LAY-IN	STEEL	WHITE POWDER COAT	NONE	PERFORATED 24x24 FACE NECK SIZE AS SPECIFIED
T6-2	TRANSFER GRILLE	530	SURFACE	STEEL	WHITE POWDER COAT	NONE	3/4" BLADE SPACINGS, 45° FIXED DEFLECTION, SIZE PER PLANS
R6-1	RETURN GRILLE	PDDR	LAY-IN	STEEL	WHITE POWDER COAT	NONE	PERFORATED 24x24 FACE NECK SIZE AS SPECIFIED
R6-2	RETURN GRILLE	510Z	SURFACE	STEEL	WHITE POWDER COAT	OPPOSED BLADE	3/4" BLADE SPACINGS, 0° FIXED DEFLECTION, 24x20 NECK SIZE
EG-1	EXHAUST GRILLE	510Z	SURFACE	STEEL	WHITE POWDER COAT	OPPOSED BLADE	3/4" BLADE SPACINGS, 0° FIXED DEFLECTION, 6x6 NECK SIZE

1. EQUIPMENT SCHEDULE BASED ON PRICE. ACCEPTABLE MANUFACTURERS: CARNES, KRUGER, METAL-AIRE AND TITUS.  
2. MAX NC RATING 30.

**ELECTRIC WALL HEATER SCHEDULE**

SYMBOL	MODEL	ARRANGEMENT	RECESS DEPTH	KN	AMPS	ELEC	REMARKS
EHU-1	QF622281F	WALL RECESSED	4-3/8"	2.2	10.6	208-1	1, 2
EHU-2	QF622281F	WALL RECESSED	4-3/8"	2.2	10.6	208-1	1, 2

1. EQUIPMENT SCHEDULE BASED ON BERKO.  
2. ACCEPTABLE MANUFACTURERS INCLUDE: BERKO, BRASCH, CHROMALOX, INDECO, MARKEL, G-MARK, AND RAYNALL.

SEQUENCE OF OPERATION:  
UNIT MOUNTED THERMOSTAT SHALL CYCLE HEATING ELEMENT AND FAN TO MAINTAIN SPACE TEMPERATURE.

**VENTILATION SUMMARY - FURN-1**

OUTSIDE AIR REQUIREMENTS							
AREA	OCCUPANCY CLASSIFICATION*	OCCUPANCY PER 1000 SQ. FT.	CFM REQUIRED PER PERSON	AREA OF OCCUPANCY	NUMBER OF PEOPLE	OUTSIDE AIR REQUIRED (CFM)	NOTES
DISPATCH 102	OFFICE	7	20	202	3	60	1
QUIET ROOM 103	OFFICE	7	20	107	1	20	
WORK ROOM 112	OFFICE	7	20	100	1	20	
MANAGER 114	OFFICE	7	20	178	1	20	1
PAYROLL 115	OFFICE	7	20	114	1	20	
STORAGE 116	STORAGE	N/A	0.15 CFM/SF	132	N/A	20	
* OCCUPANCY CLASSIFICATION PER TABLE 403.3, 2006 IMC. NOTE #1: NUMBER OF PEOPLE BASED ON ACTUAL OCCUPANCY.						TOTAL: 162 CFM	
OUTSIDE AIR SUPPLIED BY EQUIPMENT							
SYMBOL	TOTAL CFM	OUTSIDE AIR	O.A. % OF TOTAL	REMARKS			
FURN-1	1550	250	17%				
TOTAL OUTSIDE AIR SUPPLIED BY EQUIPMENT = 250 CFM > 162 CFM							

**VENTILATION SUMMARY - FURN-2**

OUTSIDE AIR REQUIREMENTS							
AREA	OCCUPANCY CLASSIFICATION*	OCCUPANCY PER 1000 SQ. FT.	CFM REQUIRED PER PERSON	AREA OF OCCUPANCY	NUMBER OF PEOPLE	OUTSIDE AIR REQUIRED (CFM)	NOTES
DRIVERS ROOM 101	LOBBIES	30	15	773	20	300	1
IT/PHONE 110	OFFICE	7	20	103	1	20	
* OCCUPANCY CLASSIFICATION PER TABLE 403.3, 2006 IMC. NOTE #1: NUMBER OF PEOPLE BASED ON ACTUAL OCCUPANCY.						TOTAL: 320 CFM	
OUTSIDE AIR SUPPLIED BY EQUIPMENT							
SYMBOL	TOTAL CFM	OUTSIDE AIR	O.A. % OF TOTAL	REMARKS			
FURN-2	1500	375	25%				
TOTAL OUTSIDE AIR SUPPLIED BY EQUIPMENT = 375 CFM > 320 CFM							

**VENTILATION SUMMARY - FURN-3**

OUTSIDE AIR REQUIREMENTS							
AREA	OCCUPANCY CLASSIFICATION*	OCCUPANCY PER 1000 SQ. FT.	CFM REQUIRED PER PERSON	AREA OF OCCUPANCY	NUMBER OF PEOPLE	OUTSIDE AIR REQUIRED (CFM)	NOTES
SAFETY MGR, 120	OFFICE	7	20	67	1	20	
* OCCUPANCY CLASSIFICATION PER TABLE 403.3, 2006 IMC.						TOTAL: 22 CFM	
OUTSIDE AIR SUPPLIED BY EQUIPMENT							
SYMBOL	TOTAL CFM	OUTSIDE AIR	O.A. % OF TOTAL	REMARKS			
FURN-3	500	100	20%				
TOTAL OUTSIDE AIR SUPPLIED BY EQUIPMENT = 100 CFM > 22 CFM							

**VENTILATION SUMMARY - FURN-4**

OUTSIDE AIR REQUIREMENTS							
AREA	OCCUPANCY CLASSIFICATION*	OCCUPANCY PER 1000 SQ. FT.	CFM REQUIRED PER PERSON	AREA OF OCCUPANCY	NUMBER OF PEOPLE	OUTSIDE AIR REQUIRED (CFM)	NOTES
SAFETY III	CLASSROOM	50	15	308	20	300	1
OPS/ASM 113	OFFICE	7	20	124	1	20	
* OCCUPANCY CLASSIFICATION PER TABLE 403.3, 2006 IMC. NOTE #1: NUMBER OF PEOPLE BASED ON ACTUAL OCCUPANCY.						TOTAL: 320 CFM	
OUTSIDE AIR SUPPLIED BY EQUIPMENT							
SYMBOL	TOTAL CFM	OUTSIDE AIR	O.A. % OF TOTAL	REMARKS			
FURN-4	1425	355	25%				
TOTAL OUTSIDE AIR SUPPLIED BY EQUIPMENT = 355 CFM > 320 CFM							

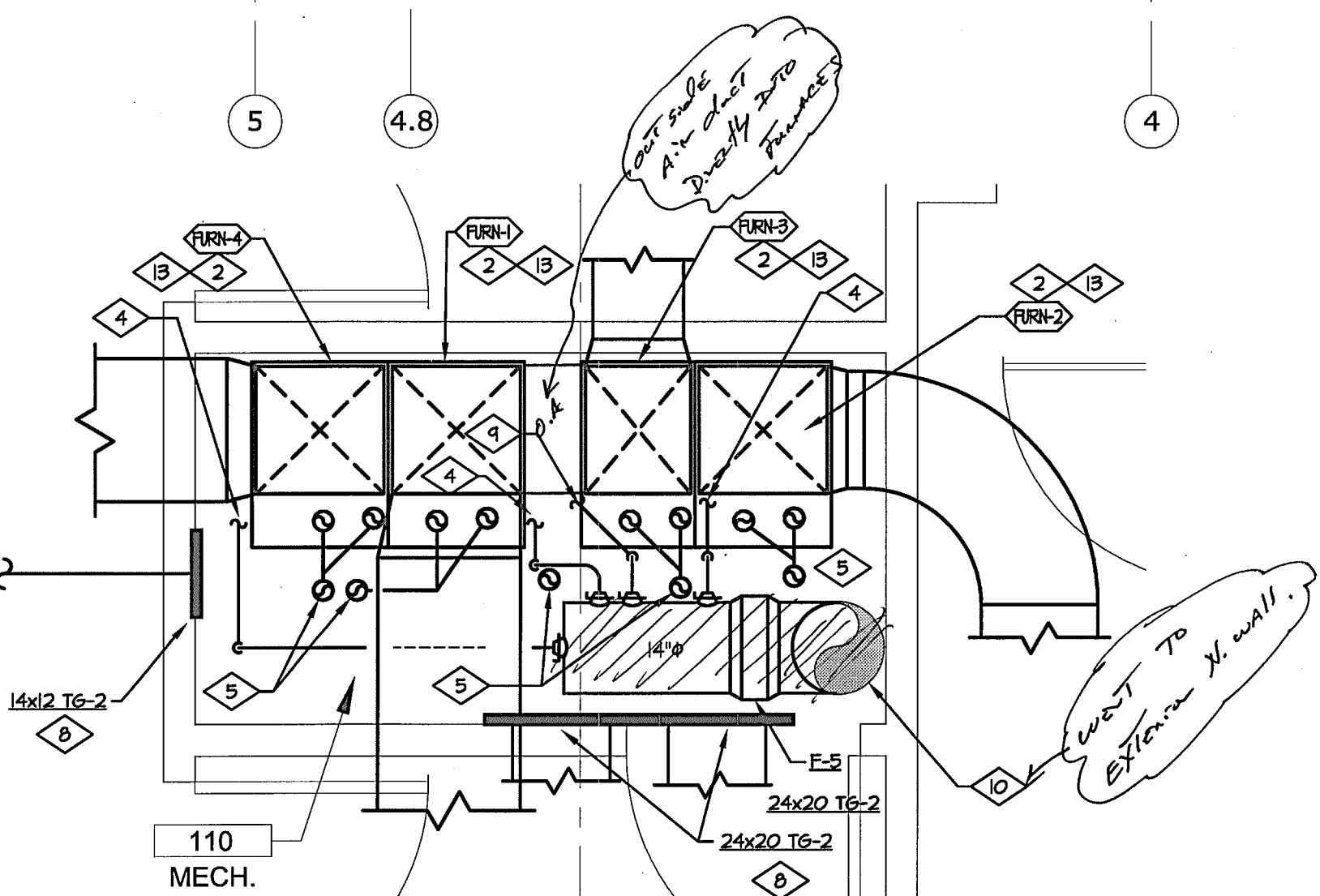
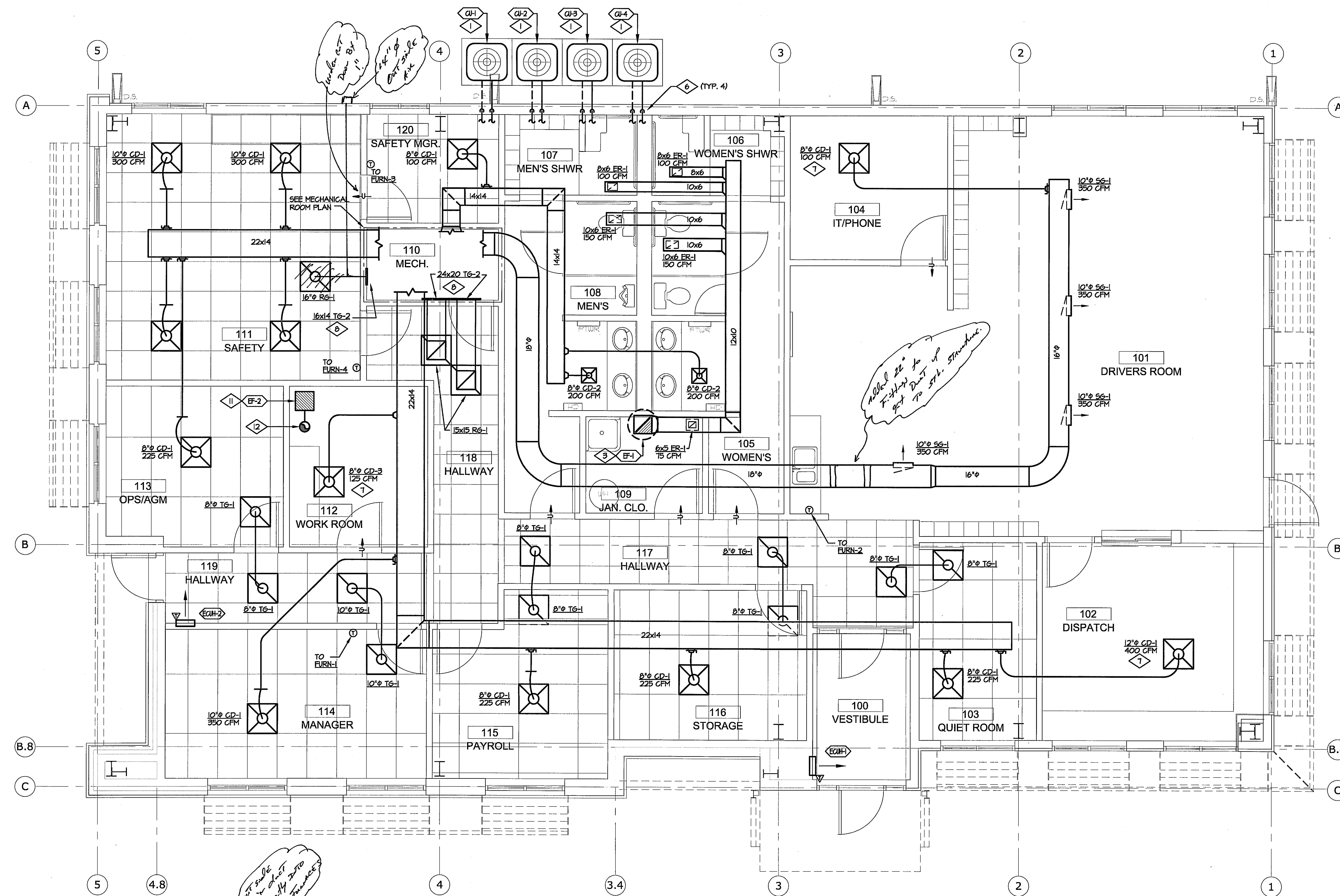


**GENERAL NOTES**

1. THIS PROJECT IS PURSUING LEED NC 3.0 CERTIFICATION THROUGH THE USGBC. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY PRICING FOR CREDIT COMPLIANCE AND DOCUMENTATION TO ACHIEVE THIS. CONTRACTOR TO REVIEW CREDIT POINTS TO ENSURE ACCURATE BID. PROJECT WILL BE DESIGNED TO MEET ASHRAE STANDARDS 62.1-2007, 98-2007, AND 90.1-2007 ALONG WITH LOCAL ENERGY CODES. THE PROJECT WILL HAVE FULL COMMISSIONING DONE ON THE MECHANICAL AND LIGHTING CONTROLS SYSTEMS.

**DRAWING NOTES**

1. MEN CONDENSING UNIT ON GRADE. PROVIDE CONCRETE PAD, RE. DETAIL.
2. MEN GAS FIRED FURNACE. PROVIDE RETURN AIR PEDESTAL. MAINTAIN 24" CLEAR IN FRONT OF UNIT FOR SERVICE ACCESS, RE. DETAIL.
3. MEN EXHAUST FAN ON ROOF. PROVIDE 14" HIGH ROOF CURB, RE. DETAIL. PROVIDE DUCT TRANSITION FROM EXHAUST DUCT TO EQUIPMENT OPENING.
4. PROVIDE 10" OUTSIDE AIR DUCT TO FURNACE. CONNECT DUCT TO SIDE OF PEDESTAL. SEAL CONNECTION AIR TIGHT. BALANCE AIRFLOW AS SHOWN IN FURNACE SCHEDULE.
5. CONCENTRIC TERMINATION THRU ROOF. RE. DETAIL. 3" FLEXIBLE RATED PVC FLUE AND COMBUSTION AIR FLUE PIPING SHALL MAINTAIN MINIMUM 1/4" PER FOOT PITCHED UPWARD TO INSURE THAT CONDENSATE DRAINS BACK TO FURNACE. FLUE TERMINATION TO BE MINIMUM OF 20" ABOVE ANY OUTSIDE AIR INTAKE WITHIN 10'-0" HORIZONTALLY.
6. ROUTE RLRS LINES UP IN WALL FROM CONDENSING UNIT (AT GRADE) TO FURNACE. SIZE PER MANUFACTURER'S RECOMMENDATIONS.
7. SUPPORT SUPPLY DIFFUSER FROM STRUCTURE.
8. MOUNT TRANSFER GRILLE AS HIGH AS POSSIBLE.
9. PROVIDE 8" OUTSIDE AIR DUCT TO FURNACE. CONNECT DUCT TO SIDE OF PEDESTAL. SEAL CONNECTION AIR TIGHT. BALANCE AIRFLOW AS SHOWN IN FURNACE SCHEDULE.
10. PROVIDE 14" OUTSIDE AIR DUCT UP THROUGH ROOF.
11. MEN EXHAUST FAN MOUNTED IN CEILING. SUPPORT FROM STRUCTURE. RE. DETAIL.
12. 8" EXHAUST DUCT UP THRU ROOF. RE. DETAIL.
13. INSTALL FILTER ON FRONT OF PEDESTAL RETURN FOR ASSOCIATED FURNACE.



**HVAC PLAN**

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



**MECHANICAL ROOM PLAN**

SCALE: 1/2" = 1'-0"

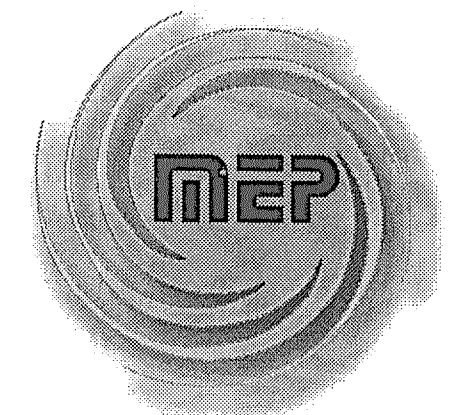
**SERVICE CONTRACTOR FACILITY 1**  
CITY OF COLORADO SPRINGS METRO TRANSIT  
1070 TRANSIT DRIVE, COLORADO SPRINGS CO 80903

ISSUE DATES:

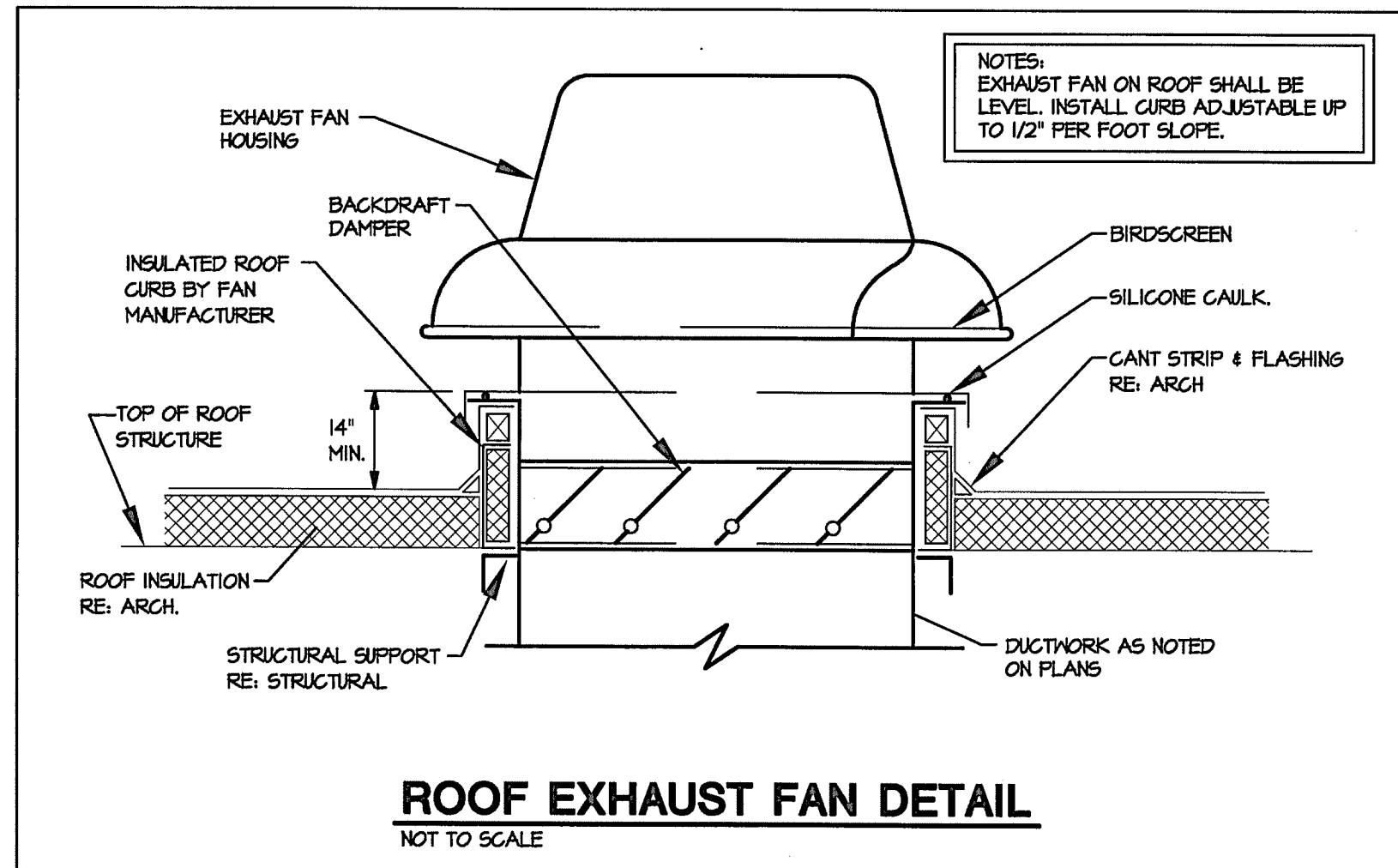
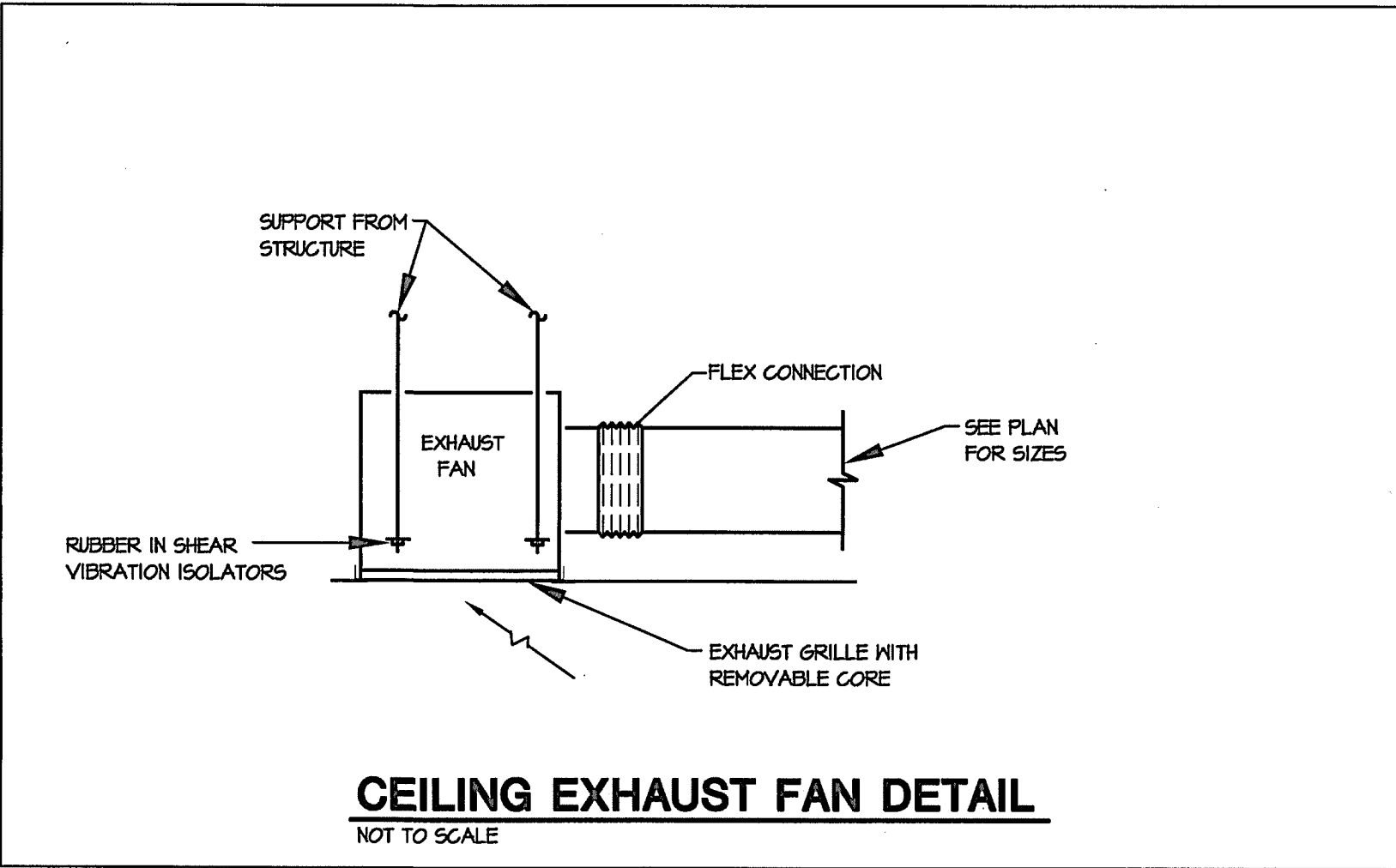
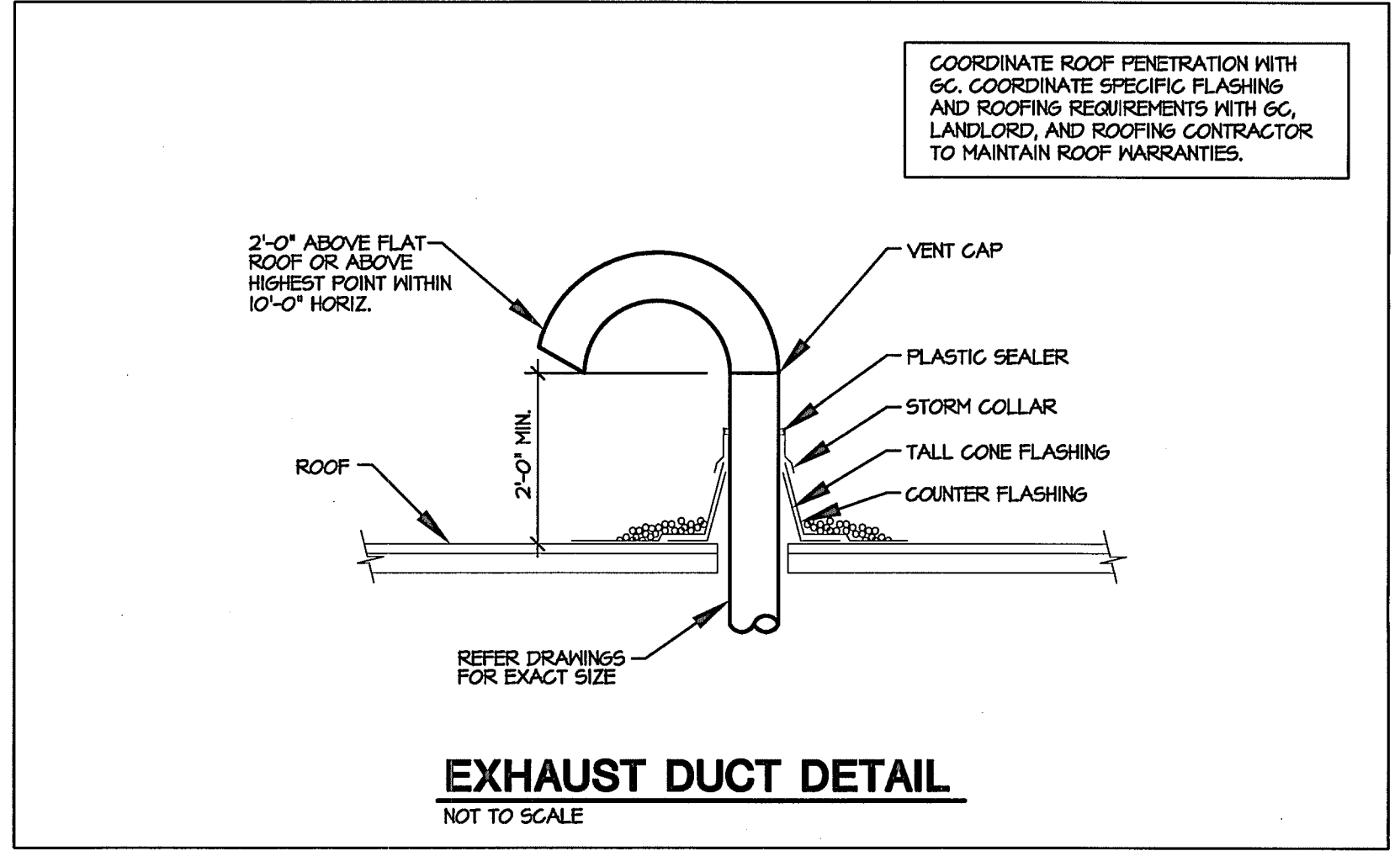
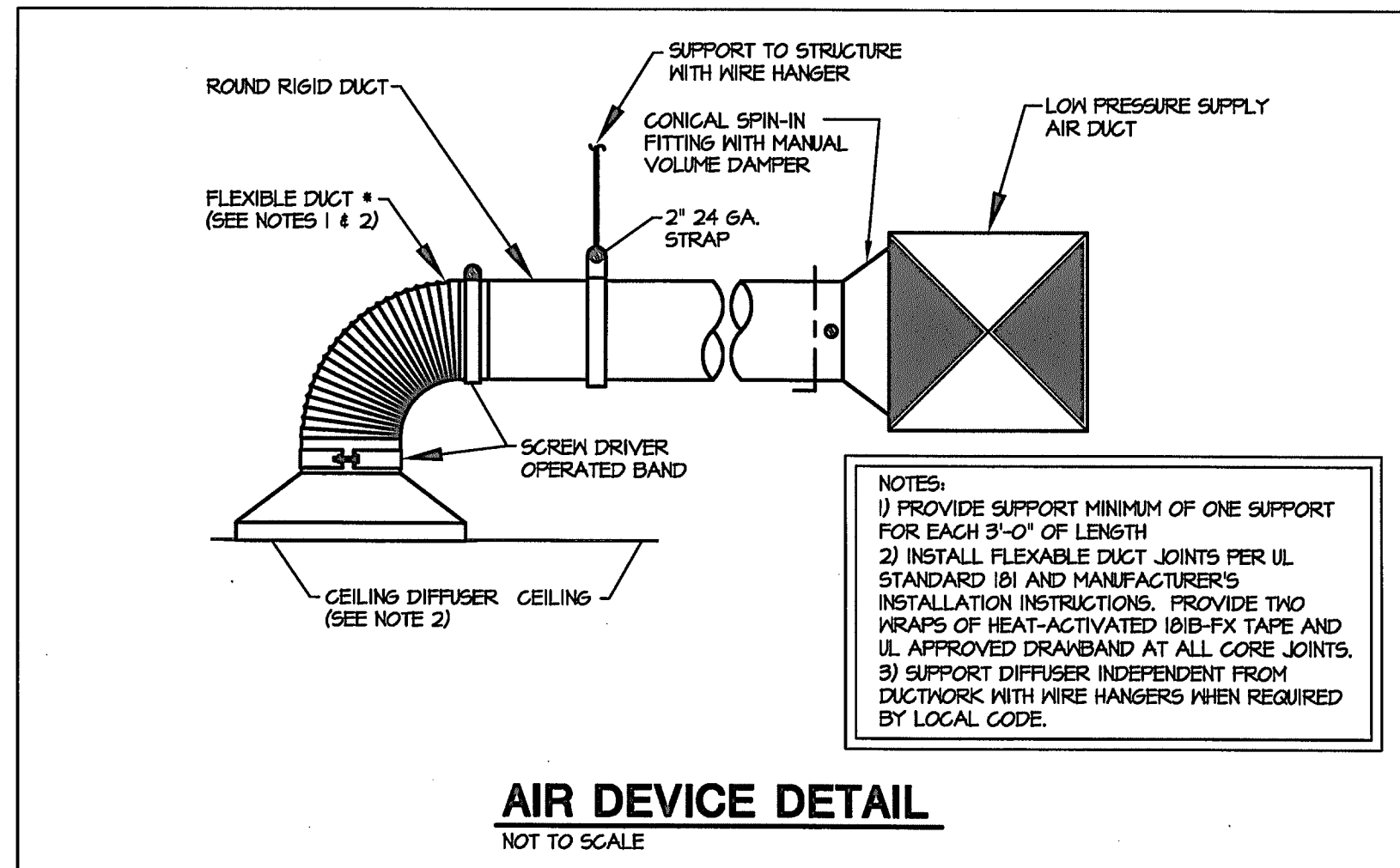
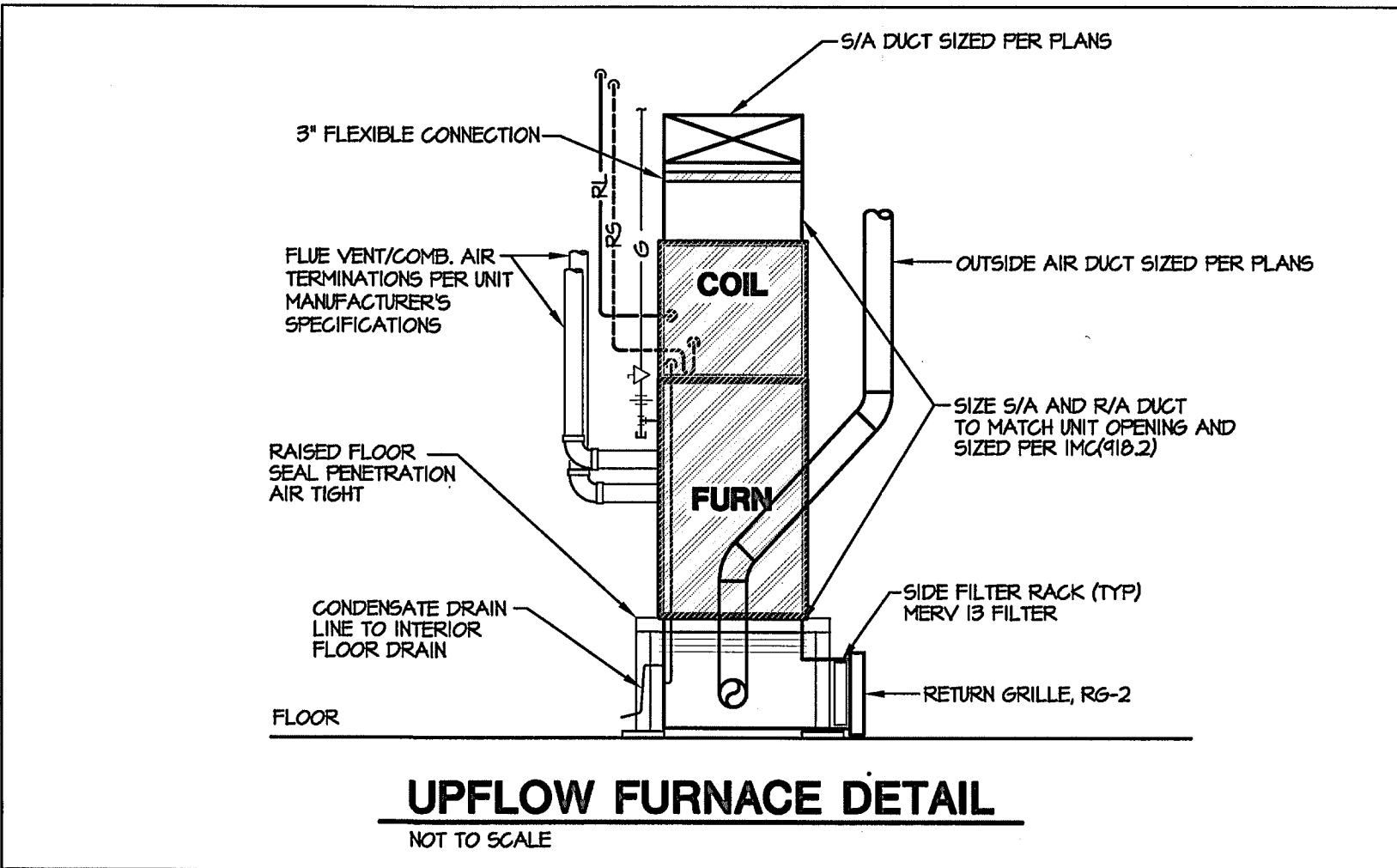
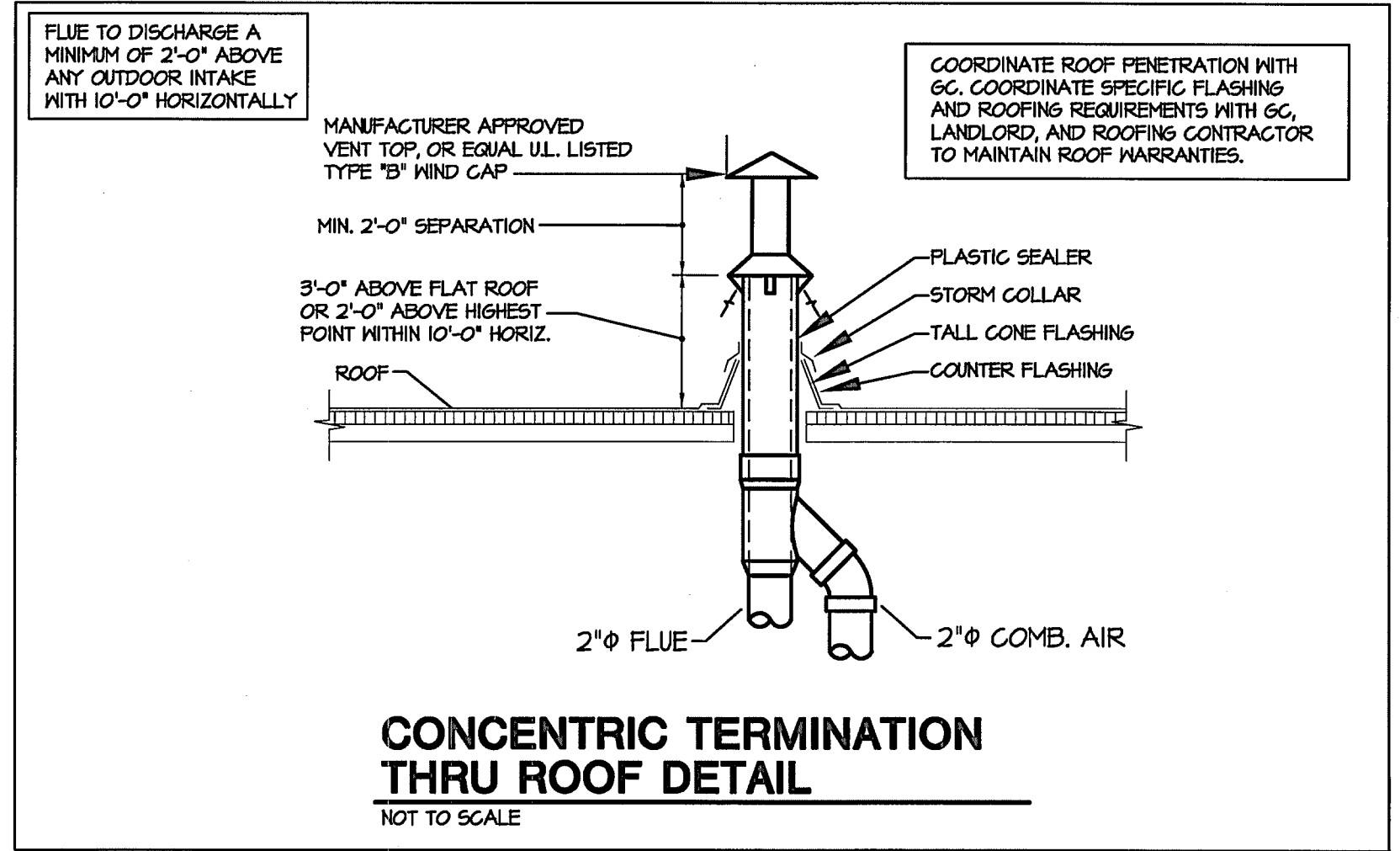
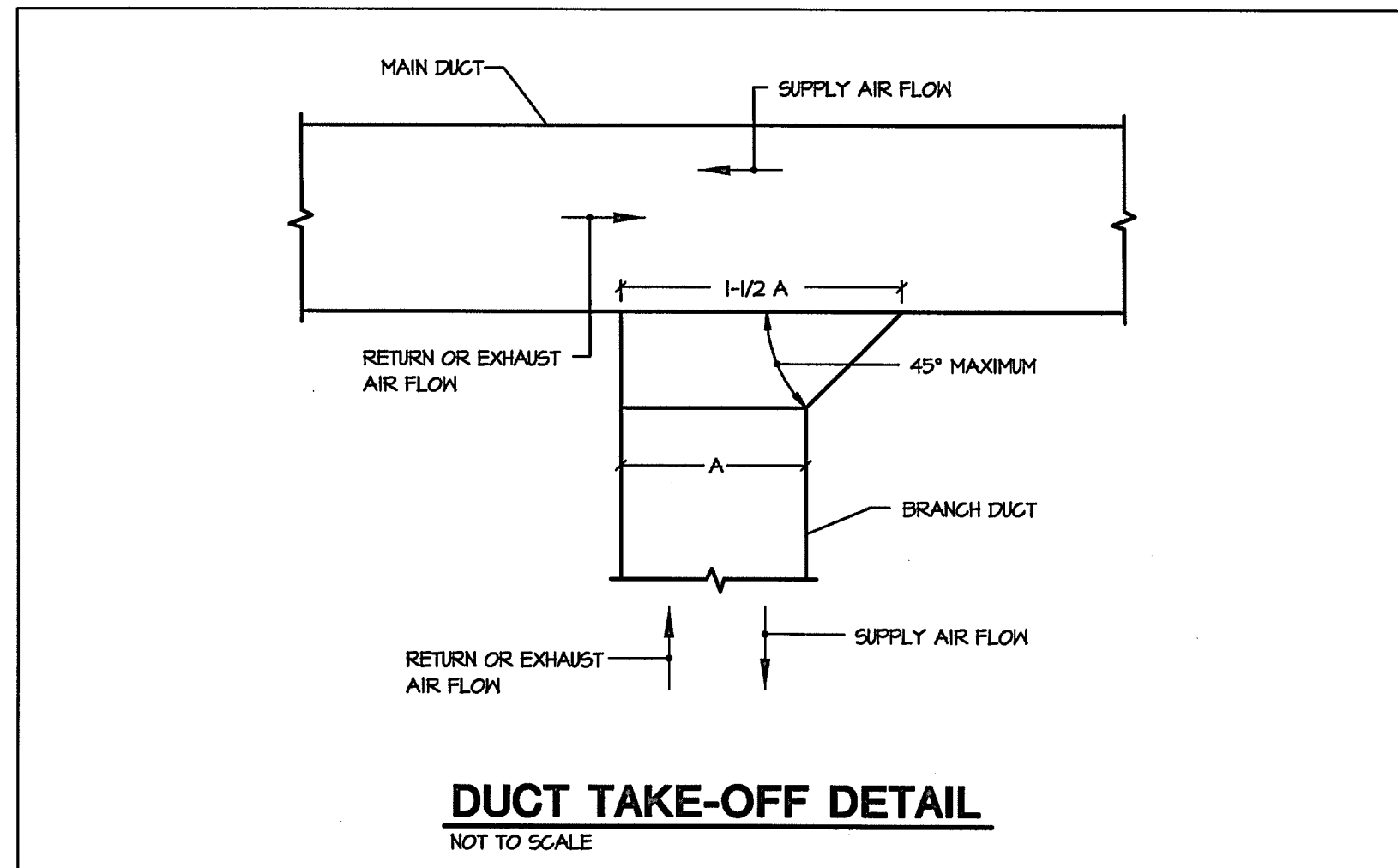
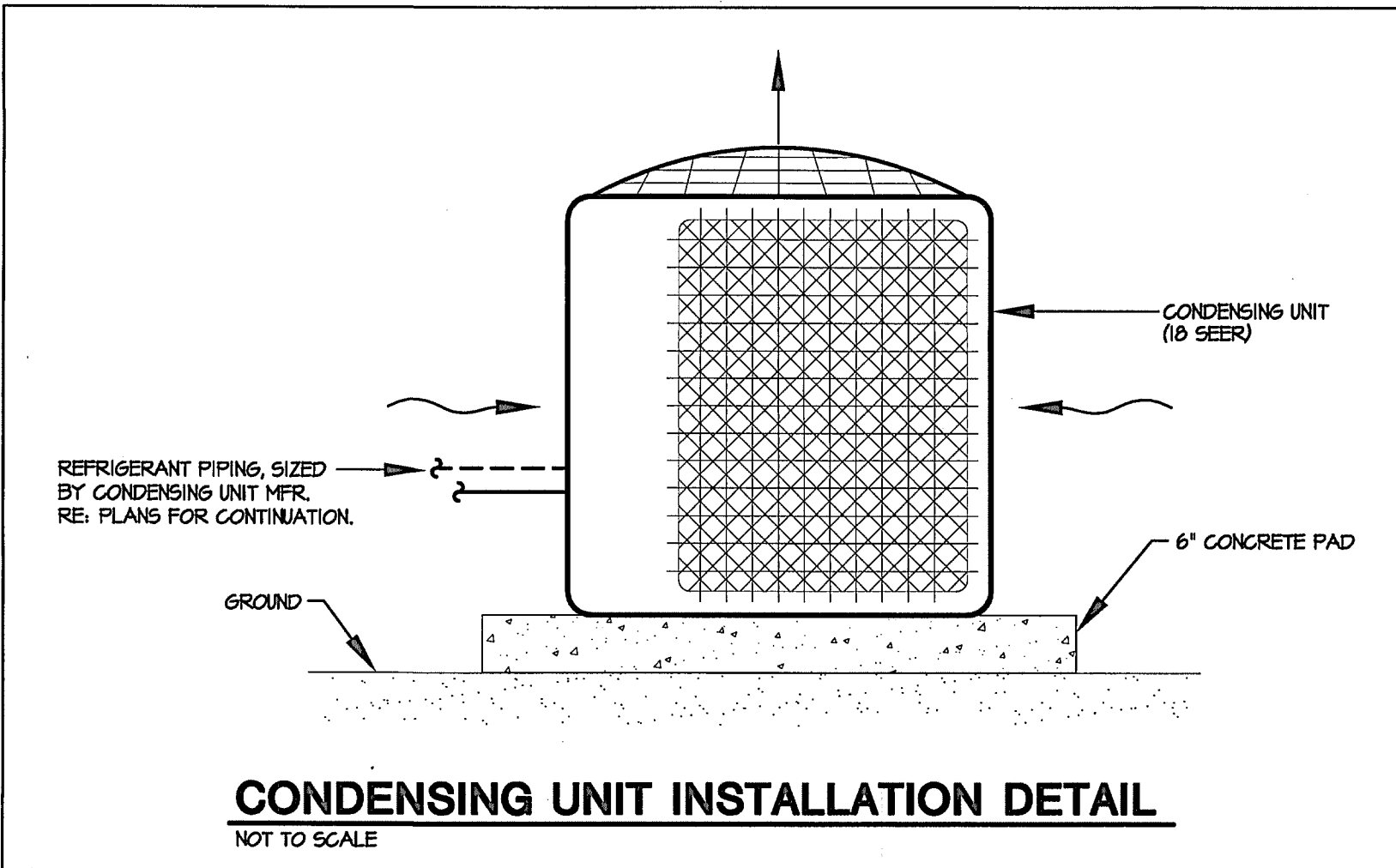
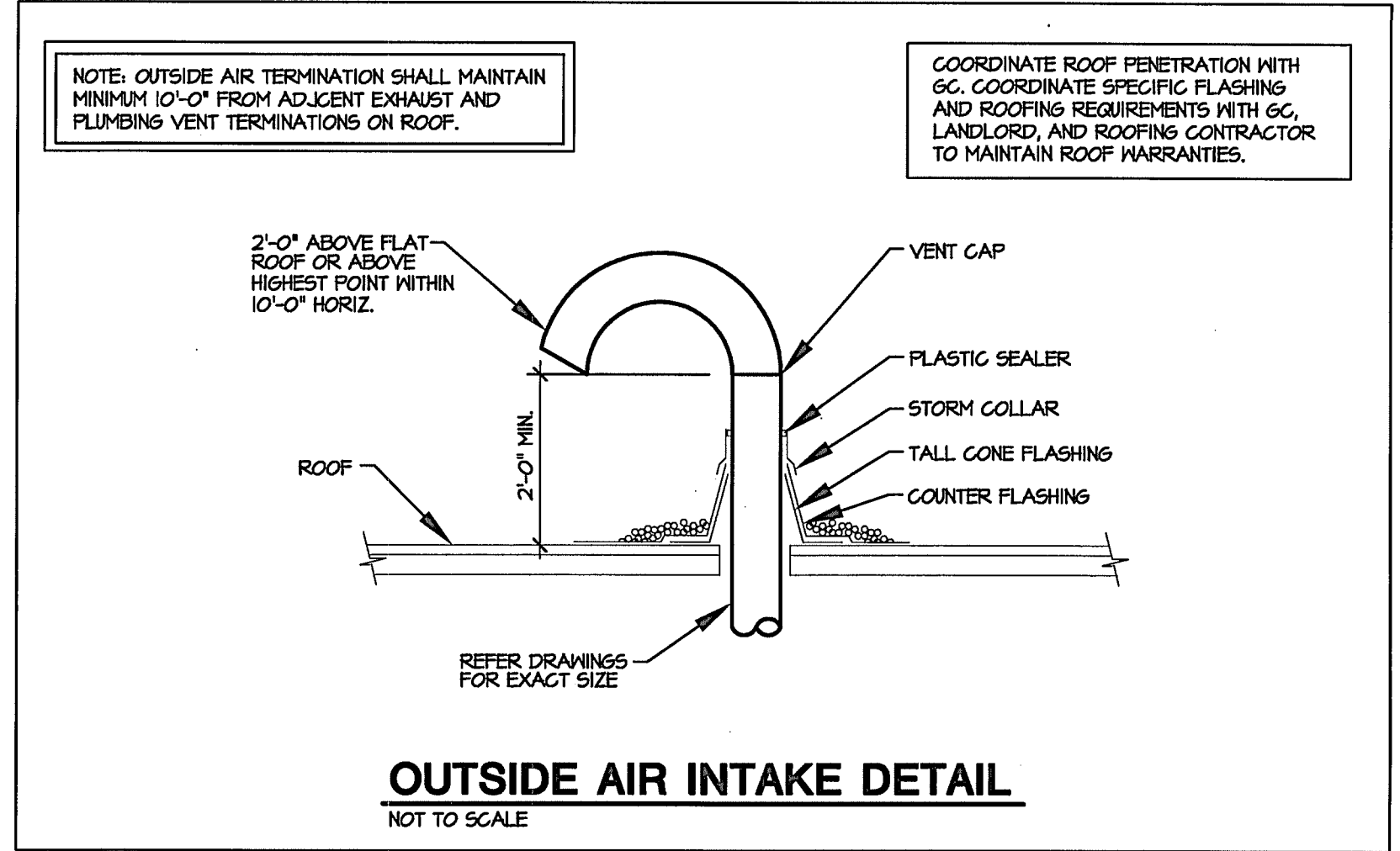
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 DRAWN BY: ASD  
 CHECKED BY: MAW  
 DATE: 3-30-10

SHEET TITLE:  
**HVAC PLAN**

SHEET NO.  
**M-2**







**SERVICE CONTRACTOR FACILITY 1**  
 CITY OF COLORADO SPRINGS METRO TRANSIT  
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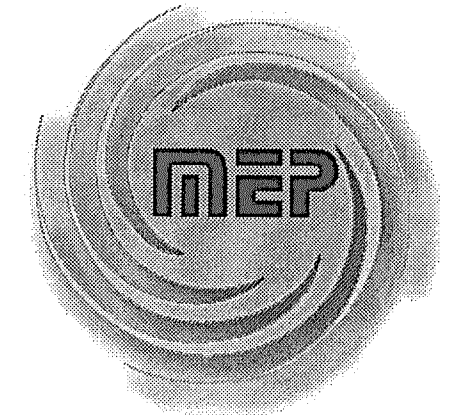
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SHEET NO.

**M-3**



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PLUMBING SHEET INDEX	
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P-7	PLUMBING DETAILS

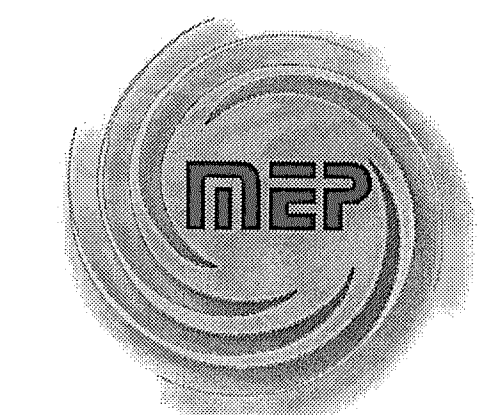
**SERVICE CONTRACTOR FACILITY 1**  
 CITY OF COLORADO SPRINGS METRO TRANSIT  
 1070 TRANSIT DRIVE, COLORADO SPRINGS CO 80903

ISSUE DATES:

PROJECT NO. 10004  
 DRAWN BY: AXH  
 CHECKED BY: PRR  
 DATE: 3-30-10

SHEET TITLE:  
**PLUMBING SPECIFICATIONS AND LEGEND**

SHEET NO. **P-1**





DOMESTIC EXPANSION TANK SCHEDULE								
SYMBOL	MODEL	CAPACITY (GAL)	DIAMETER (IN)	HEIGHT (IN)	OPERATING HEIGHT (LBS)	SYSTEM CONNECTION (IN)	ACCEPTANCE FACTOR	NOTES
DET-1	ST-12	5	12	12	70	3/4	0.51	1, 2
NOTES: 1. EQUIPMENT SCHEDULE BASED ON: AMTROL. 2. ACCEPTABLE MANUFACTURERS INCLUDE TACO AND MATTS.								
SPECIFICATION: HYDRO-PNEUMATIC EXPANSION TANK, CONSTRUCTION IN ACCORDANCE WITH SECTION VII OF THE ASME BOILER AND PRESSURE VESSEL CODE. ALL WELDS SHALL CONFORM TO ASME. MAXIMUM OPERATING PRESSURE OF 150 PSIG. ALL INTERNAL COMPONENTS SHALL COMPLY WITH FDA REGULATIONS, SUITABLE FOR POTABLE WATER.								

DOMESTIC CIRCULATION PUMP SCHEDULE											
SYMBOL	SERVICE	PUMP TYPE	MODEL	GPM	HEAD (FT. H <sub>2</sub> O)	MIN HP	RPM	ELEG	SUCTION SIZE (IN)	DISCH. SIZE (IN)	NOTES
CP-1	WATER HEATER	INLINE	S-25	2	3	1/2	1800	120/1	3/4	3/4	1, 2
NOTES: 1. EQUIPMENT SCHEDULE BASED ON: ARMSTRONG. 2. ACCEPTABLE MANUFACTURERS INCLUDE AURORA, BELL & GOSSET, PACO, AND TACO.											

DOMESTIC WATER CALCULATION			
FIXTURE UNITS	31.65	FLOW TEST DATA	STATIC PSIG
FIXTURE UNITS TO GPM	23.1	(FROM WATER DEPARTMENT)	RESIDUAL PSIG
MAKE-UP WATER GPM			FLOW GPM
LAWN SPRINKLER GPM			TO PSIG
GRAND TOTAL GPM	23.1		
MAIN TO METER			
1" SERVICE SIZE	30 FEET LONG	A 1 INCH PIPE FLOWING AT 6PM LOSSES: 11.5 PSI/100'	
VELOCITY: 6PM FLOWING THROUGH 1 INCH PIPE= 1.5 FT/SEC.			
63 FEET TOTAL EQUIVALENT LENGTH (LENGTH + 25%)			
TOTAL PRESSURE DROP, MAIN TO METER (63' X 11.5 PSI/100')			
AT 6PM, Δ P = 7.15 PSIG			
1" METER SIZE			
METER TO BUILDING			
1.25" SERVICE SIZE	30 FEET LONG	A 1.25 INCH PIPE FLOWING AT 6PM LOSSES: 2 PSI/100'	
VELOCITY: 6PM FLOWING THROUGH 1.25 INCH PIPE= 3.0 FT/SEC.			
38 FEET TOTAL EQUIVALENT LENGTH (LENGTH + 25%)			
TOTAL PRESSURE DROP, METER TO BUILDING (38' X 2 PSI/100')			
AT 6PM, Δ P = 1.56 PSIG			
BUILDING WATER ENTRY			
PRESSURE REGULATING VALVE NOT REQUIRED			
AT 6PM, Δ P = 11 PSIG			
1.25" BACKFLOW PREVENTER SIZE			
BUILDING PRESSURE AT OUTLET OF BFP = 44 PSIG			
BOOSTER PUMP			
BOOSTER PUMP NOT REQUIRED			
BUILDING PIPING			
HEAD LOSS (HEIGHT X 0.434) AT 12 FEET = 5.21 PSIG			
REQUIRED OUTLET PRESSURE AT FIXTURES = 25 PSIG			
EXCESS PRESSURE AVAILABLE FOR FRICTION LOSSES = 14 PSIG			
150 FEET TO MOST DISTANT OUTLET			
225 FEET TOTAL EQUIVALENT LENGTH (LENGTH + 50%)			
ALLOWABLE PRESSURE DROP PER 100' = 0.43 PSI/100' ((14 PSI / 225) X 100')			
DESIGN BUILDING PIPING PRESSURE LOSS AT OR BELOW: 0.43 PSI/100'			
MAXIMUM ALLOWED GPM			
PIPE SIZE	3/4"	1"	1-1/4"
6PM @ 0 FT/SEC.	11.0	24.0	38.0
6PM @ 10 FT/SEC.	13.0	28.0	48.0
			62.0
			105.0
			220.2
			341.5
NOTE: VELOCITY THROUGH PIPE CAN NOT EXCEED 10 FT/SEC.			

*Handwritten note:*  
 RFP ok  
 Delete  
 Allowance 2nd  
 1/2" to 2" 1/2" pipe  
 of pressure drops  
 and 2" x 1/2" pipe

PLUMBING FIXTURE SCHEDULE																	
SYMBOL	TYPE	ADA	ACCESSORIES	FINISH	MANUFACTURER & MODEL NUMBER	FAUCET TRIM MANUFACTURER # MODEL NUMBER	ACCEPTABLE MANUFACTURERS	REMARKS	ROUGH IN CONNECTION SIZING				FIXTURE UNIT COUNT (2006 IPC)				
									WASTE (INCHES)	VENT (INCHES)	HOT (INCHES)	COLD (INCHES)	# OF FIXTURES	MS.F.U. EACH	MS.F.U. TOTAL	D.F.U. EACH	D.F.U. TOTAL
KC-1	FLOOR MOUNTED, PRESSURE ASSISTED TANK TYPE, 15" HIGH, 1.0 GPF, ELONGATED BOWL, 12" ROUGH-IN	NO	HEAVY DUTY SEAT, COLOR SHALL MATCH FIXTURE	VITREOUS CHINA	ZURN ONE Z9511	N/A	AMERICAN STD. KOHLER		4	2	--	1/2	1	2	2	4	4
KC-2	FLOOR MOUNTED, PRESSURE ASSISTED TANK TYPE, 11" HIGH, 1.0 GPF, ELONGATED BOWL, 12" ROUGH-IN	YES	HEAVY DUTY SEAT, COLOR SHALL MATCH FIXTURE	VITREOUS CHINA	ZURN ONE Z9561	N/A	AMERICAN STD. KOHLER		4	2	--	1/2	2	2	4	4	8
UR-1	WALL MOUNTED URINAL, HANDLIT OPERATED FLUSH VALVE, 0.125 GPF, 3/4" TOP INLET SPUD, FLUSHING RIM, 2" OUTLET	YES	FLOOR MOUNTED CARRIER WITH HANGER PLATE AND SUPPORT LEGS	VITREOUS CHINA	ZURN ONE Z9750.045.01	N/A	AMERICAN STD. KOHLER	COORDINATE MOUNTING HEIGHT PER ARCHITECTURAL ELEVATIONS	2	2	--	3/4	1	5	5	4	4
L-1	LAVATORY, SINGLE HOLE METERS FAUCET WITH 4-3/4" SPOUT	YES	METAL DRAIN ASSEMBLY	VITREOUS CHINA CHROME FAUCETS	ZURN ONE Z9111.248.3.01.21.6	ZURN ONE Z9111.248.3.01.21.6	AMERICAN STD. KOHLER	PROVIDE WITH 0.5GPM AERATOR AND MIXING VALVE	2	2	1/2	1/2	4	2	8	1	4
S-1	38" X 22" O.D. DOUBLE COMPARTMENT SINK, DELUXE SINGLE HANDLE FAUCET 1.0 GPM, METAL CONSTRUCTION & 4" SPOUT, 1/8 HP, 120-160	YES	SLIP RESISTANT TERRAZZO FLOOR RECEPTOR, WALLS AND CEILING BY B.C. 2" NO CAULK DRAIN PRESS. BAL. VALVE WITH SERVICE STOPS, ADA HANDLE	TERRAZZO CHROME FAUCETS	FIAT WTR-5003	SYMMONS BP-46-2	ARCO KOHLER	6-1/2" DEEP SINK, 1.0 GPM AERATOR, COORDINATE FAUCET HOLE CONFIGURATION WITH FAUCET	2	2	1/2	1/2	1	1.4	1.4	2	2
D-1	AUTOMATIC REVERSING STAINLESS STEEL ELEMENTS	N/A	MOTOR OVERLOAD PROTECTION, FLUG AND CORD	--	IN SINK ERATOR BADGER	--	NATIONAL WASTE KING	1-YEAR WARRANTY	--	--	--	--	--	--	--	--	--
MSB-1	MOP BASIN WITH 6" DROP FRONT 3" STAINLESS STEEL DRAIN & STRAINER STAINLESS STEEL GUARDS ON SIDES	NO	10" SPOUT WITH WALL BRACE & PAIL HOOK, 3/4" MALE HOSE THREAD OUTLET, VACUUM BREAKER	MOLDED STONE BRASS FAUCETS	FIAT TSB-3010	FIAT B30-AA	ARCO FLORESTONE WILLIAMS	PROVIDE WITH FIAT #832 HEAVY DUTY 30" FLEX HOSE & BRACKET, FIAT #894 STAINLESS STEEL MOP BRACKET	3	2	1/2	1/2	1	3	3	3	3
MB-1	ICE MACHINE SUPPLY BOX 1/2" NPT BOTTOM INLET 1/4" COMPRESSION OUTLET	N/A	--	--	GUY GRAY B1875	--	LSP PRODUCTS OATEY	--	--	--	--	1/2	1	0.25	0.25	--	--
KCO-1	WALL CLEANOUT TEE WITH COUNTERSINK PLUS STAINLESS STEEL COVER PLATE	N/A	--	NICKLE BRONZE	ZURN C02410	--	JOSAM JR. SMITH MADE/MATTS	--	--	--	--	--	--	--	--	--	--
FCO-1	FLOOR CLEANOUT TEE WITH COUNTERSINK PLUS HEAVY DUTY SECURED COVER	YES	--	NICKLE BRONZE	ZURN C02452	--	JR. SMITH MADE/MATTS	--	--	--	--	--	--	--	--	--	--
SCO-1 AND SCO-2	ROUND CAST IRON BODY BRONZE DOUBLE FLANGED HOUSING HEAVY DUTY SECURED COVER	YES	VANDAL RESISTANT SCREWS TAPER THREAD BRONZE PLUS	NICKLE BRONZE	ZURN Z1474-N-VP	--	JOSAM JR. SMITH MADE/MATTS	PROVIDE 2-WAY CLEANOUT AT EACH SCO-2, TWO COVERS REQUIRED	--	--	--	--	--	--	--	--	--
FD-1	6" ROUND TOP ROUND CAST IRON BODY, FLASHING COLLAR, ADJUSTABLE STRAINER HEAD, SECURED GRATE	YES	TRAP PRIMER CONNECTION	NICKLE BRONZE	ZURN FD2322	--	JOSAM JR. SMITH MADE/MATTS	FOR FINISHED FLOOR AREAS	NOTED ON PLANS	2	--	--	2	--	--	2	4
FS-1	SQUARE CAST IRON BODY, FLASHING COLLAR, PORCELAIN ENAMELED INTERIOR, DOME STRAINER	N/A	REMOVABLE HALF GRATE	NICKLE BRONZE	ZURN Z1201	--	JOSAM JR. SMITH MADE/MATTS	12" SQUARE X 12" DEEP	NOTED ON PLANS	2	--	--	3	--	--	2	6
HB-1	SURFACE MOUNTED EXPOSED TYPE HOSE BIBB, ALL BRASS REMOVABLE TEE HANDLE, SPOUT OUTLET VACUUM BREAKER	N/A	DOUBLE CHECK VALVE, 3/4" HOSE THREAD OUTLET	ROUGH BRASS	CHICAGO 243CP-E21	--	JOSAM JR. SMITH MADE/MATTS	FOR USE IN NON PUBLIC, HEATED AREAS ONLY	--	--	--	3/4	1	2	2	--	--
WH-1	HYDRANT, ALL BRASS SELF DRAINING BODY, LOOSE KEY, KEY LOCK COVER	N/A	DOUBLE CHECK VALVE, 3/4" HOSE THREAD OUTLET	ROUGH BRASS	WOODFORD B61	--	JOSAM JR. SMITH MADE/MATTS	SELF DRAINING BODY AND SHANK, SHANK LENGTH SUFFICIENT TO PREVENT FREEZING	--	--	--	3/4	1	2	2	--	--
BFP-1	REDUCED PRESSURE TYPE BACKFLOW PREVENTER ASSE APPROVED	N/A	--	BRONZE	FEECO B60	--	CONBRACO MATTS WILKINS	--	--	--	--	--	--	--	--	--	--
TP-1	WATER SAVER SINK TAILPIECE STYLE TRAP PRIMER, CHROME PLATED, SEMI CAST BODY	N/A	--	--	ZURN TP2422-PC	--	JOSAM JR. SMITH MADE/MATTS	--	--	--	--	--	--	--	--	--	--
TMV-1	POINT OF USE THERMOSTATIC MIXING VALVE WITH HIGH TEMPERATURE LIMIT STOP, INTEGRAL CHECK VALVES	N/A	MINIMUM FLOW 0.5 GPM, MAXIMUM FLOW 7 GPM, LOCKING TEMPERATURE CONTROL	BRONZE	LEONARD #220	--	LAWLER POWERS SYMMONS	--	--	--	--	--	--	--	--	--	--
--	RESIDENTIAL TYPE DISHWASHER PROVIDED BY OTHERS	N/A	--	BY OTHERS	N/A	N/A	N/A	COORDINATE EXACT ROUGH-IN CONNECTIONS REQUIRED WITH EQUIPMENT SUPPLIER	2	--	1/2	--	1	2	2	1	1
									TOTAL FIXTURE UNITS: (TOTAL GPM)				31.65 (23.1)				40

GAS FIRED DOMESTIC WATER HEATER SCHEDULE													
SYMBOL	MODEL	STORAGE TANK (GAL)	MBH INPUT @ S.L.	MBH OUTPUT @ 5000'	INLET WATER TEMP (F)	OUTLET WATER TEMP (F)	RECOVERY RATE @ S.L. (GPH)	FLUE SIZE (IN)	ELEG	DIAMETER (IN)	HEIGHT (IN)	OPERATING WEIGHT (LBS)	NOTES
6WH-1	BTX-80	50	76.0	56.7	40	120	206	(2) 3	120-1	22	68	600	1, 2, 3, 4
NOTES: 1. EQUIPMENT SCHEDULE BASED ON: A.O. SMITH. 2. ACCEPTABLE MANUFACTURERS INCLUDE: A.O. SMITH, BRADFORD WHITE, LOCHINVAR, RHEIM/RUUD, AND STATE. 3. BURNER SHALL BE DESIGNED TO FIRE ON NATURAL GAS T <sub>1</sub> WC, NOT B1WC. 4. WATER HEATER SHALL BE PROVIDED WITH MANUFACTURER SUPPLIED, INTEGRAL HEAT TRAP ON SUPPLY AND DISCHARGE CONNECTIONS.													

TOTAL CONNECTED GAS LOAD SCHEDULE					
EQUIPMENT	QTY.	INPUT EACH (BTUH @ S.L.)	INPUT TOTAL (BTUH @ S.L.)	INLET PRESSURE	NOTES
FURN-1	1	100,000	100,000	T <sub>1</sub> WC	1, 2, 3
FURN-2	1	100,000	100,000	T <sub>1</sub> WC	1, 2, 3
FURN-3	1	40,000	40,000	T <sub>1</sub> WC	1, 2, 3
FURN-4	1	100,000	100,000	T <sub>1</sub> WC	1, 2, 3
6WH-1	1	76,000	76,000	T <sub>1</sub> WC	1, 2, 3
TOTAL NEW LOAD=			416,000		
NOTES: 1. MODIFICATIONS TO GAS METER AND/OR SERVICE PIPING SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR. SUBMIT REQUIRED GAS SERVICE APPLICATION TO XCEL ENERGY (FAX 1-800-628-2521, PHONE 1-800-628-2121). 2. FARTHEST CONNECTED DEVICE DISTANCE BASED ON 100'. 3. PIPE SIZING BASED ON PRESSURE AT METER OUTLET OF T <sub>1</sub> WC, CONTRACTOR TO FIELD VERIFY OUTLET PRESSURE PRIOR TO STARTING WORK.					

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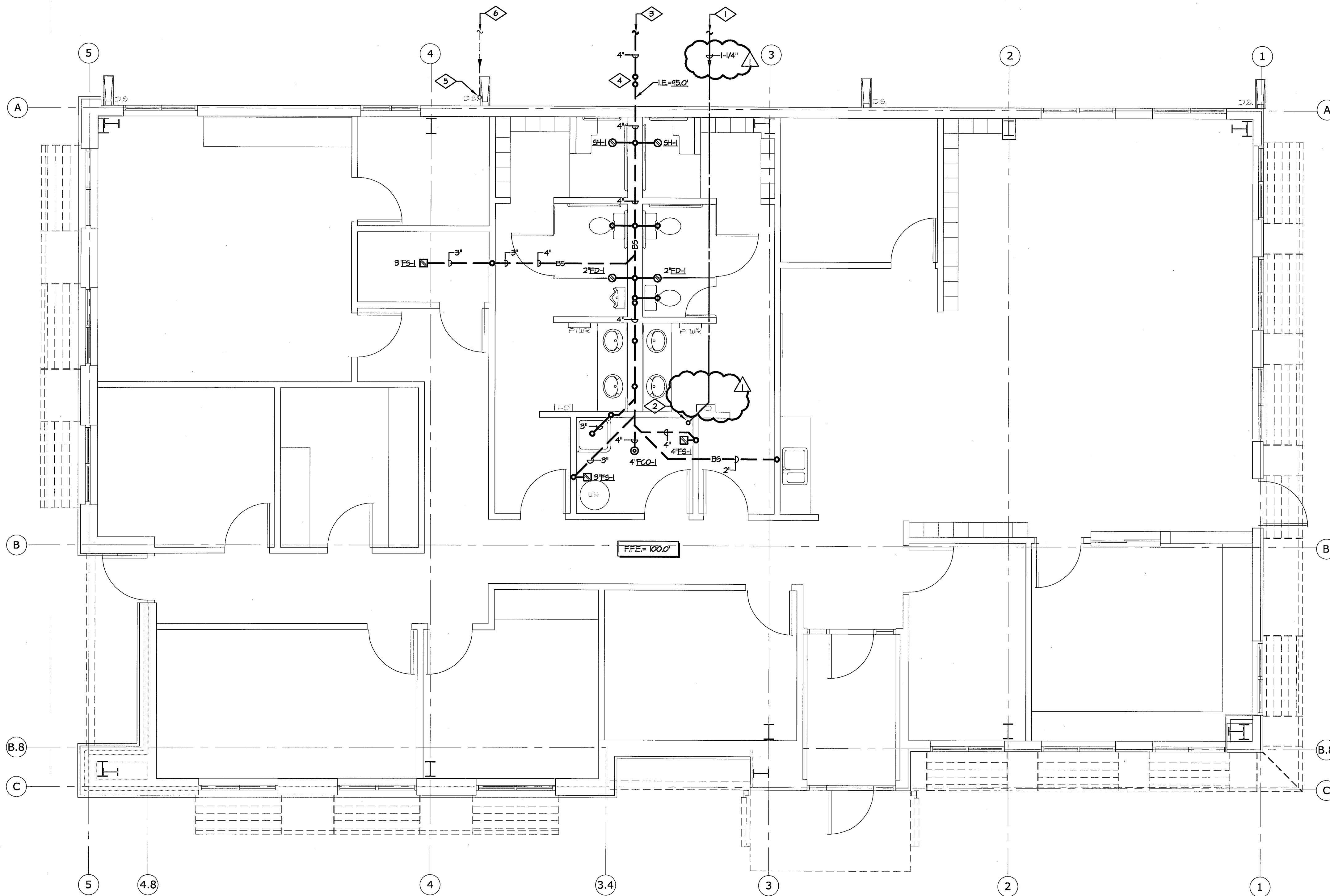
ISSUE DATES:  
 10/27/10 BUILDING DEPARTMENT REVISIONS

PROJECT NO. 10004  
 DRAWN BY: AXH  
 CHECKED BY: PRR  
 DATE: 3-30-10

SHEET TITLE:  
**PLUMBING SCHEDULES**

SHEET NO.  
**P-2**

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 3565 S. Yosemite St.  
 Denver, CO 80237  
 info@mep-eng.com  
 (W) 303.936.1633  
 (F) 303.934.3299  
 www.mep-eng.com



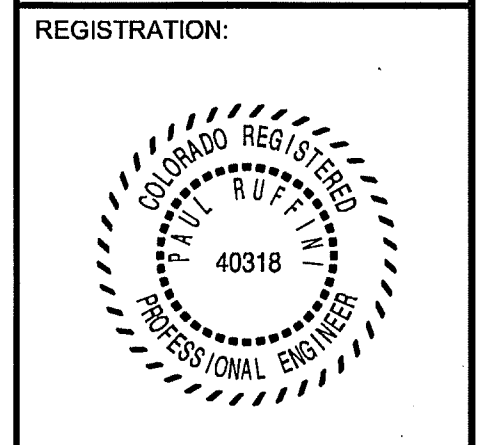
**DRAWING NOTES**

1. DOMESTIC COLD WATER FROM WATER METER. SEE CIVIL DRAWINGS FOR CONTINUATION.
2. DOMESTIC WATER UP FROM BELOW SLAB ON GRADE.
3. 4"BS TO SEWER MAIN. SEE CIVIL FOR CONTINUATION.
4. 4"BS DOWN FROM SURFACE CLEAN OUT.
5. NATURAL GAS LINE SUPPLY BELOW GRADE UP TO GAS METER. SEE PLUMBING PLAN P-4 FOR CONTINUATION.
6. NATURAL GAS SUPPLY MAIN BELOW GRADE. SEE CIVIL DRAWINGS FOR CONTINUATION.

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PROJECT NO. 10004  
DRAWN BY: AXH  
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SHEET TITLE:  
**UNDERGROUND  
PLUMBING  
PLAN**

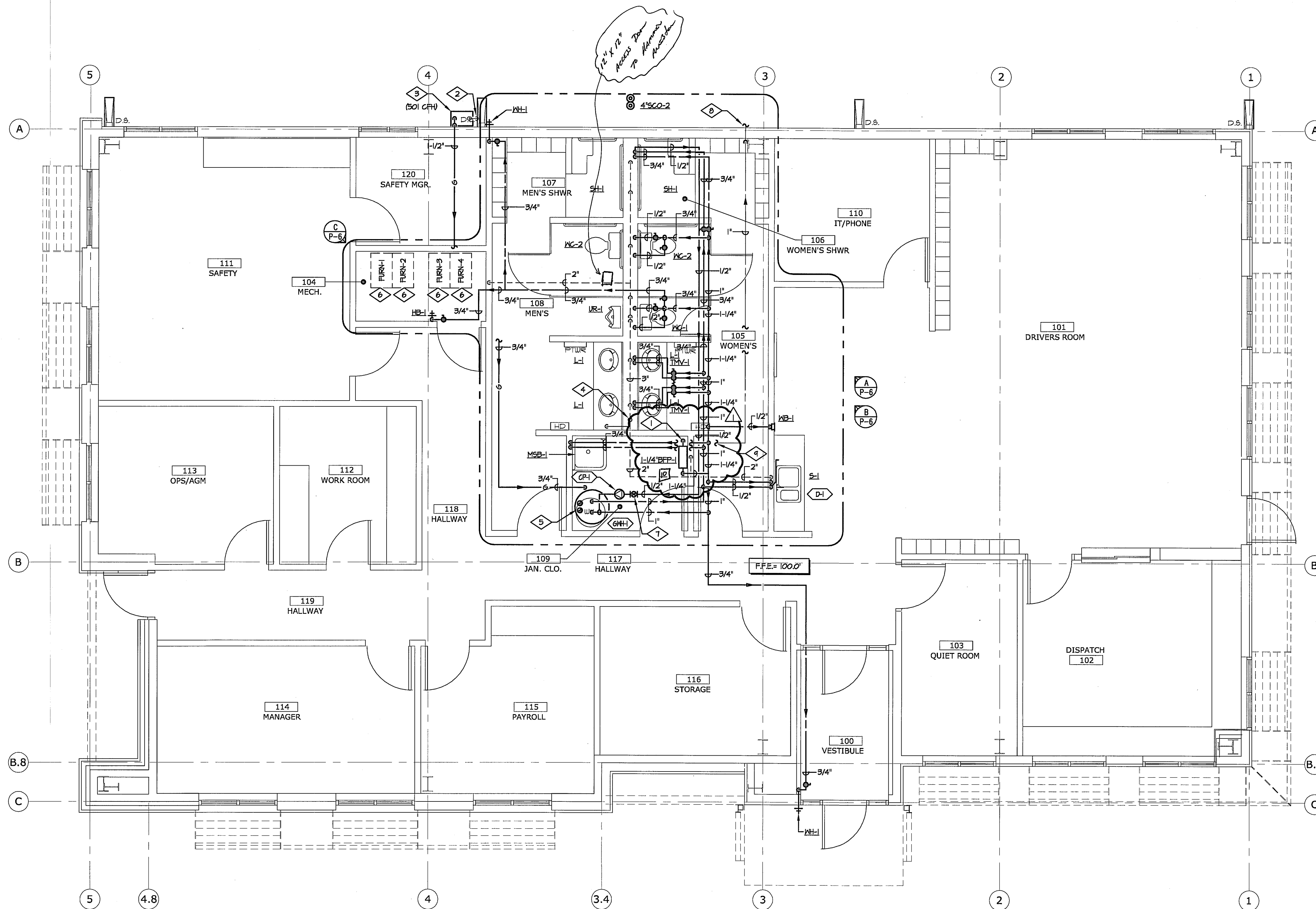
SHEET NO.  
**P-3**

**UNDERGROUND PLUMBING PLAN**  
SCALE: 1/4" = 1'-0"



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**GENERAL NOTES**

1. REFER TO DOMESTIC WATER RISER DIAGRAM, SHEET P-6, FOR LOCATION OF ALL DOMESTIC WATER ISOLATION VALVES.

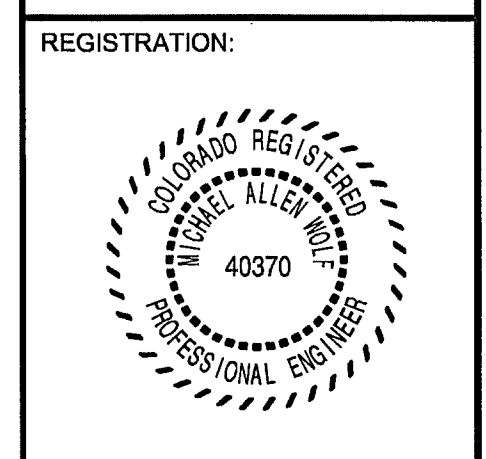
**DRAWING NOTES**

1. 1/4" COLD WATER SERVICE ENTRY DOWN FROM 2" BACKFLOW PREVENTER DEVICES TO BELOW SLAB ON GRADE. REFER TO PLUMBING SHEET P-9 FOR CONTINUATION, SEE DETAIL.
  2. GAS SUPPLY LINE DOWN FROM GAS METER TO BELOW SLAB ON GRADE. REFER TO PLUMBING SHEET P-3 FOR CONTINUATION.
  3. GAS METER LOCATION AND INSTALLATION BY COLORADO SPRINGS UTILITIES. METER SHALL BE LOCATED A MINIMUM OF 3'-0" AWAY FROM ANY WINDOW OR DOORWAY.
  4. 3" VENT UP THRU ROOF TO 3" VIE.
  5. 3" AIR-INTAKE AND FLUE UP INTO CONCENTRIC TERMINATION THRU ROOF, SEE DETAIL.
  6. GAS FURNACE, REFER TO MECHANICAL PLANS FOR EQUIPMENT DETAILS AND INFORMATION. PROVIDE CONDENSATE NEUTRALIZER FOR MECH. EQUIPMENT FLUE CONDENSATION, SEE DETAIL.
  7. PROVIDE 1/2" BALANCING VALVE, SET AT 2 GPM.
  8. ROUTE 1" IRRIGATION LINE DOWN AND EXIT EXTERIOR WALL AT 12" ABOVE FINISHED GRADE, CONNECTION BY IRRIGATION CONTRACTOR. REFER TO IRRIGATION PLANS FOR CONTINUATION.
  9. 1" IRRIGATION LINE FROM 1" BACKFLOW PREVENTER, BFP-1. SEE DETAIL.
- RFP 03  
 (10) ADD CITY APPROVED ICA METER TO 1" ICA WATER PIPING UPSTREAM OF REDUCED PRESSURE BACKFLOW PREVENTER.

**PLUMBING PLAN**  
 SCALE: 1/4" = 1'-0"

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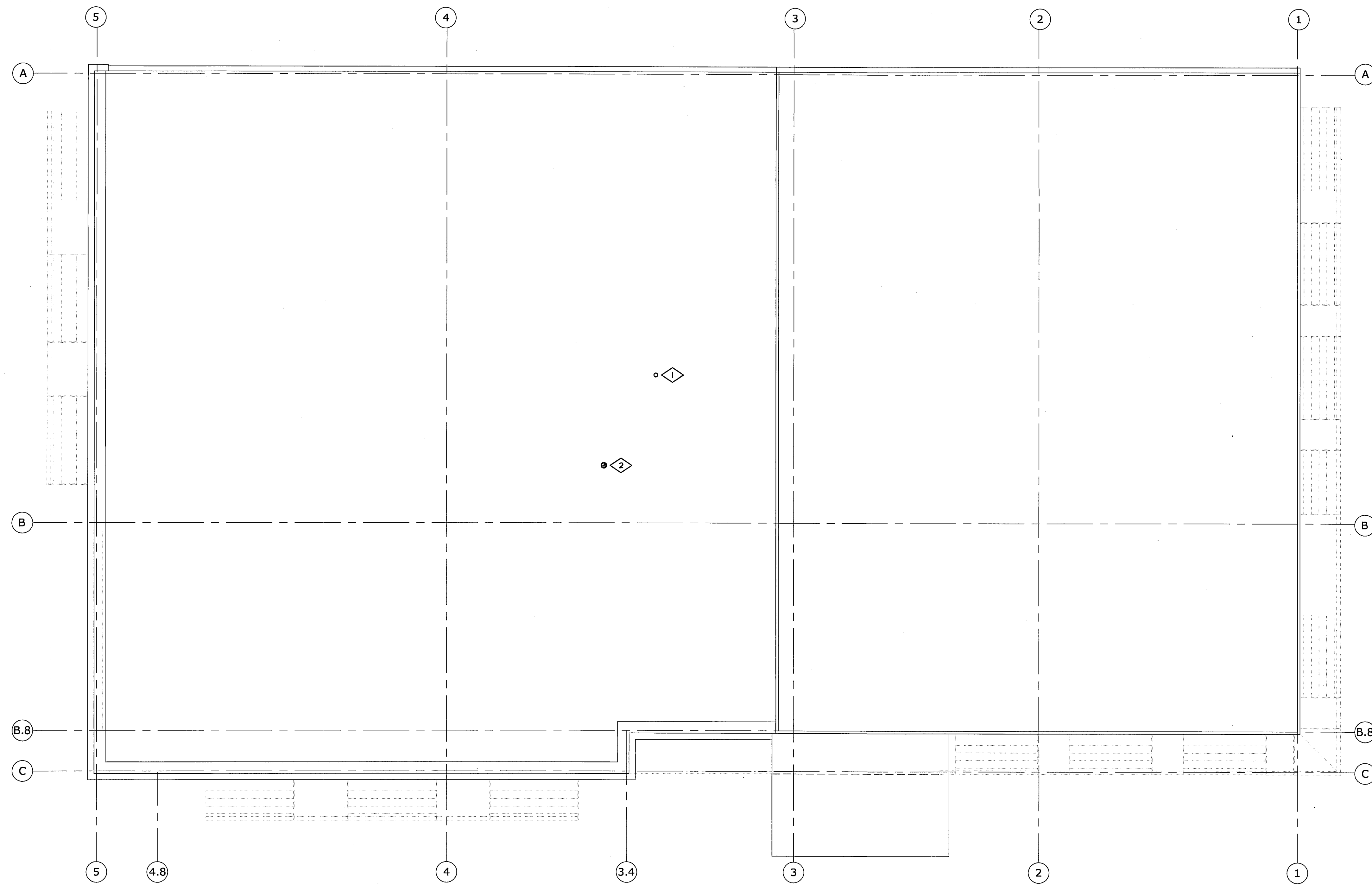
PROJECT NO. 10004  
 DRAWN BY: AXH  
 CHECKED BY: PRR  
 DATE: 3-30-10

SHEET TITLE:  
**PLUMBING PLAN**

SHEET NO.  
**P-4**



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 3565 S. Yosemite St. (W) 303.936.1633  
 Denver, CO 80237 (F) 303.934.3299  
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**ROOF PLUMBING PLAN**  
SCALE: 1/4" = 1'-0"

**DESIGN EDGE**

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COLORADO SPRINGS, CO 80903  
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**GENERAL NOTES**

1. PROVIDE HEAT TRACE ON ALL STORM DRAIN GUTTERS AND DOWNSPOUTS. COORDINATE LENGTHS AND CONNECTIONS WITH ELECTRICAL. SEE DETAIL. HEAT TAPE AND INSULATE PIPING FOR ENTIRE LENGTH OF RUN WITH RAYCHEM RSK-1 XL-TRACE SELF REGULATING PIPE HEATING OR APPROVED EQUAL, 5.0WATTS/FT. (15-1). PIPING SHALL BE INSULATED FOR ENTIRE LENGTH. PROVIDE 0.016" SMOOTH ALUMINUM JACKET OVER ALL INSULATED PIPING WITH ALL OTHER JOINTS AND SEAMS SEALED. HEAT TRACE SYSTEM SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS ALONG WITH ALL NECESSARY COMPONENTS FOR A COMPLETE AND OPERATIONAL SYSTEM. PROVIDE NECESSARY COVER CONNECTION KIT.

**DRAWING NOTES**

1. 3"X12" SEAL PENETRATION WEATHERTIGHT. REFER TO DETAILS.
2. 3" CONCENTRIC AIR-INTAKE AND FLUE TERMINATION. SEAL PENETRATION WEATHERTIGHT, REFER TO DETAIL.

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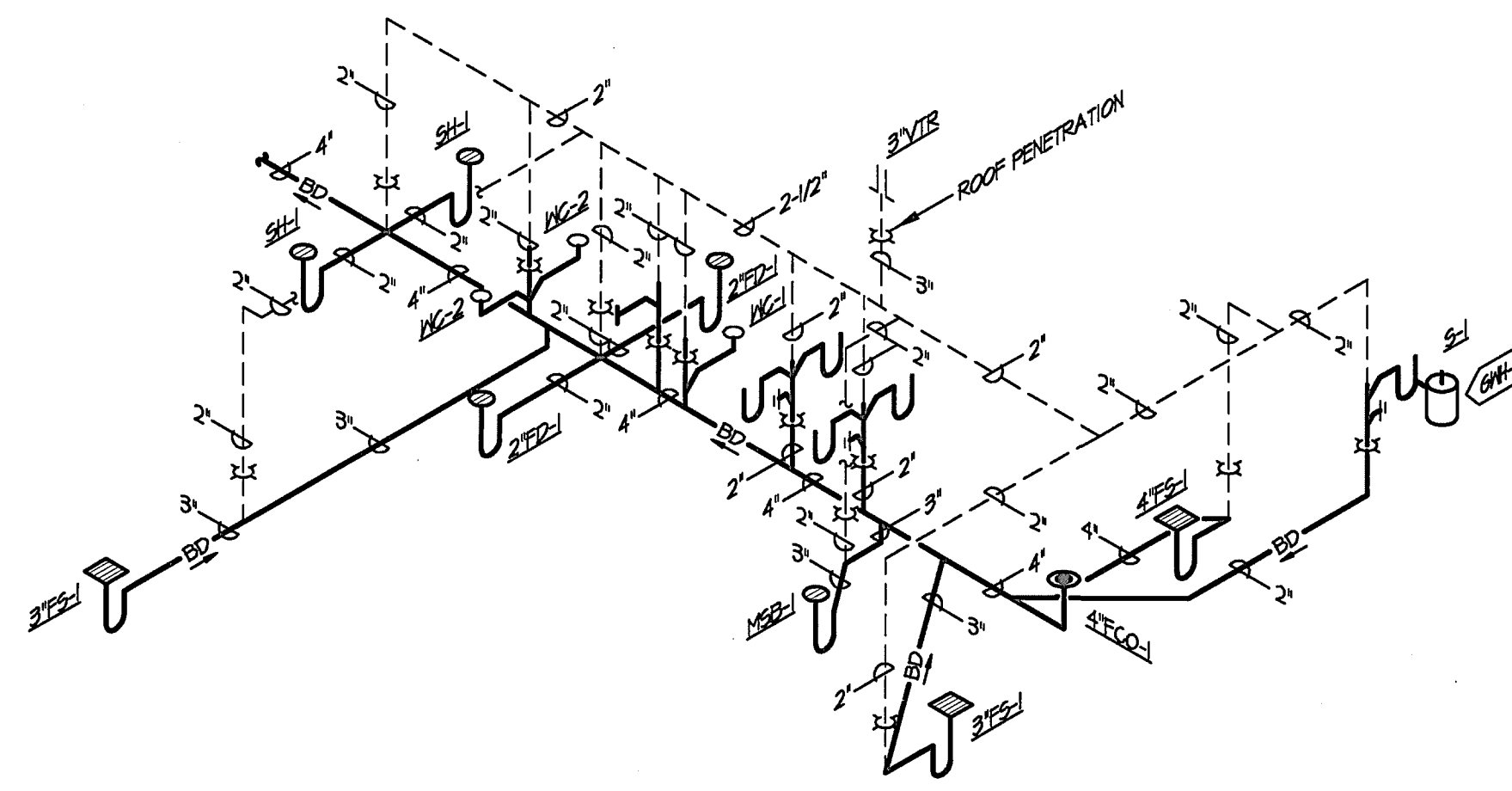
SHEET TITLE:  
**ROOF  
PLUMBING  
PLAN**

SHEET NO.  
**P-5**

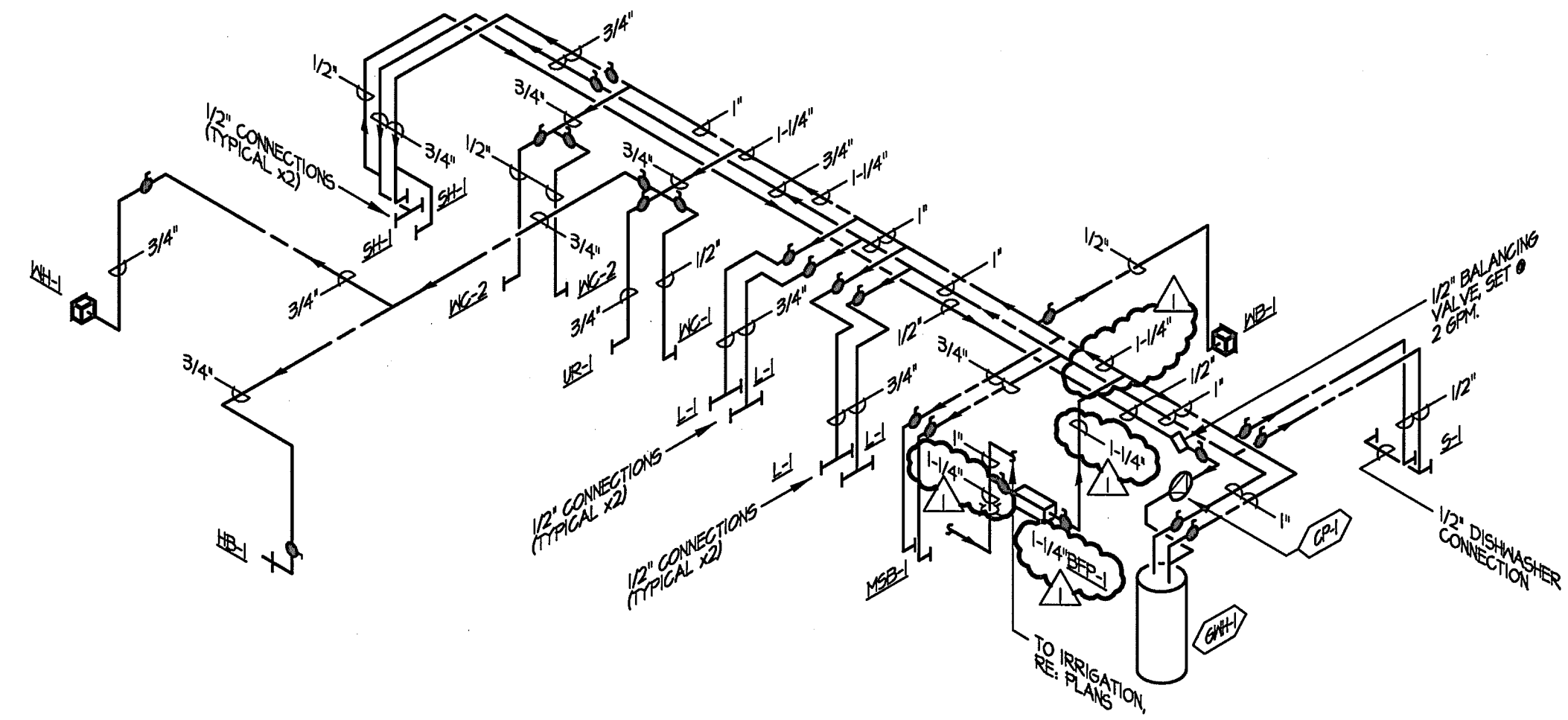


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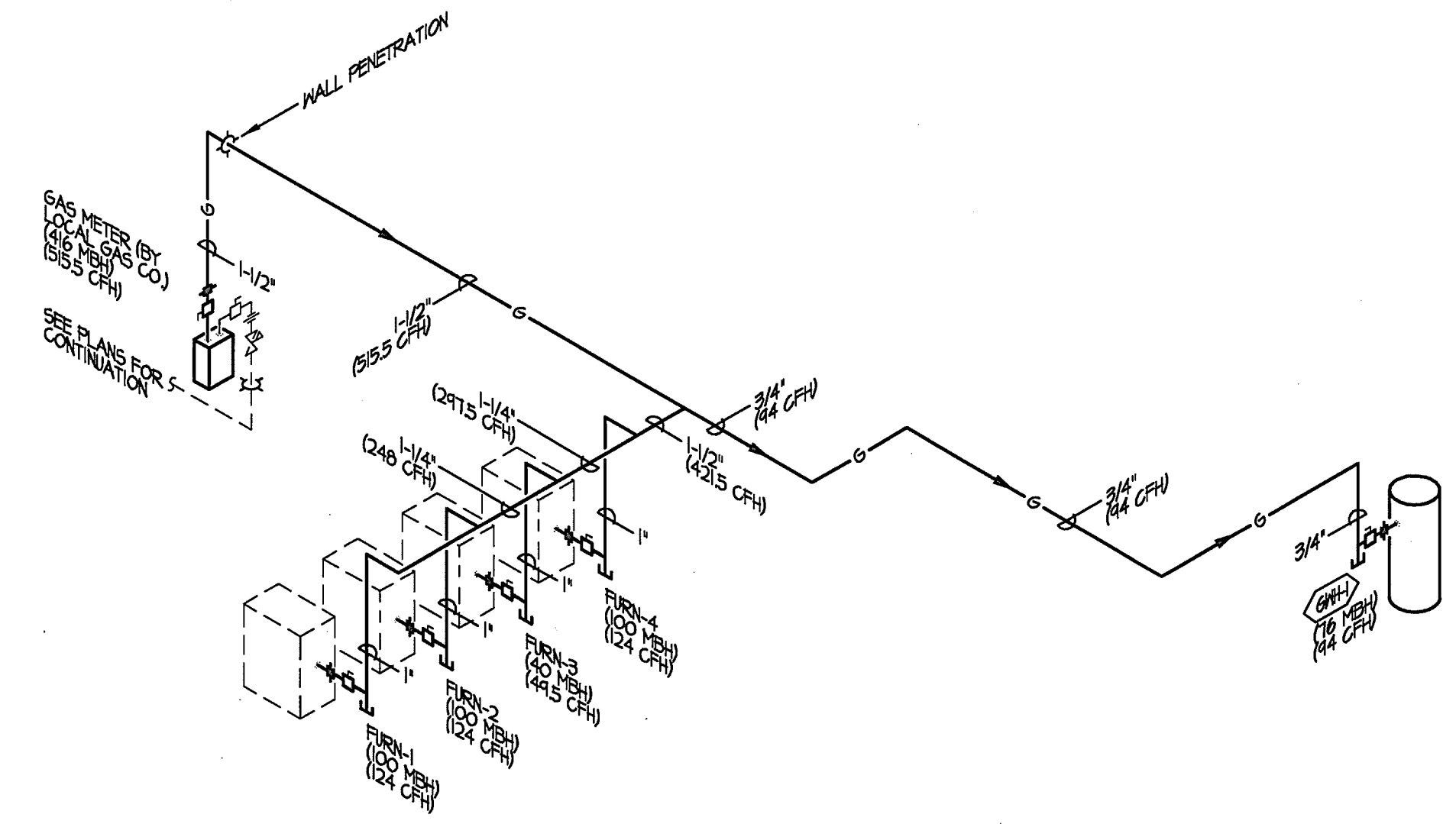




**B WASTE AND VENT RISER DIAGRAM**  
SCALE: NONE



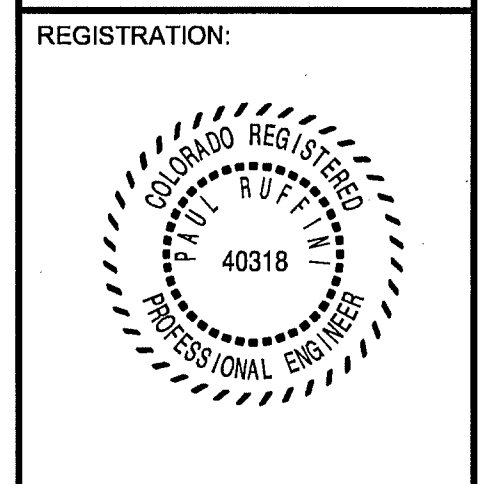
**A DOMESTIC WATER RISER DIAGRAM**  
SCALE: NONE



**C DOMESTIC NATURAL GAS RISER DIAGRAM**  
SCALE: NONE

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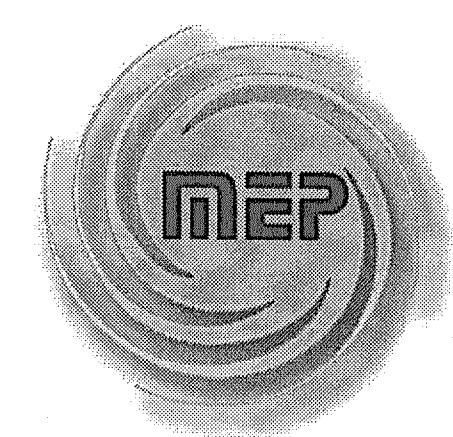
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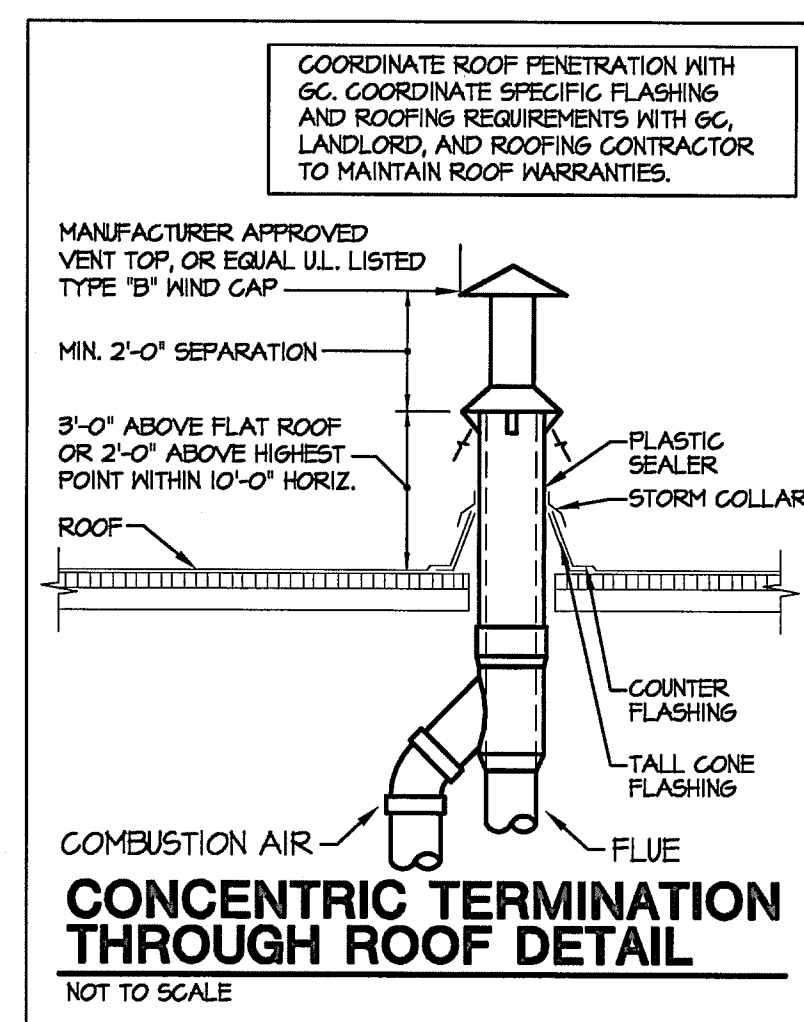
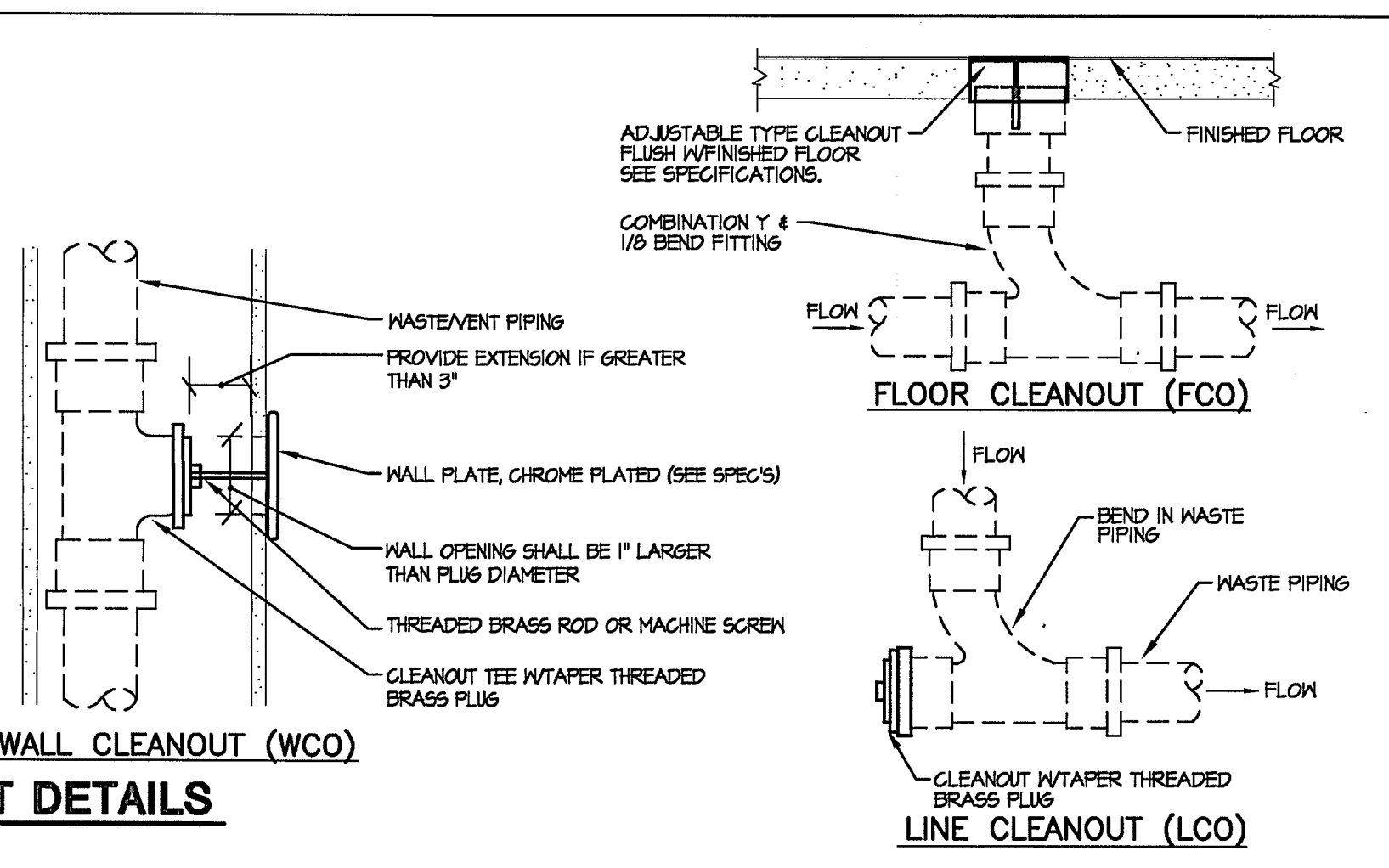
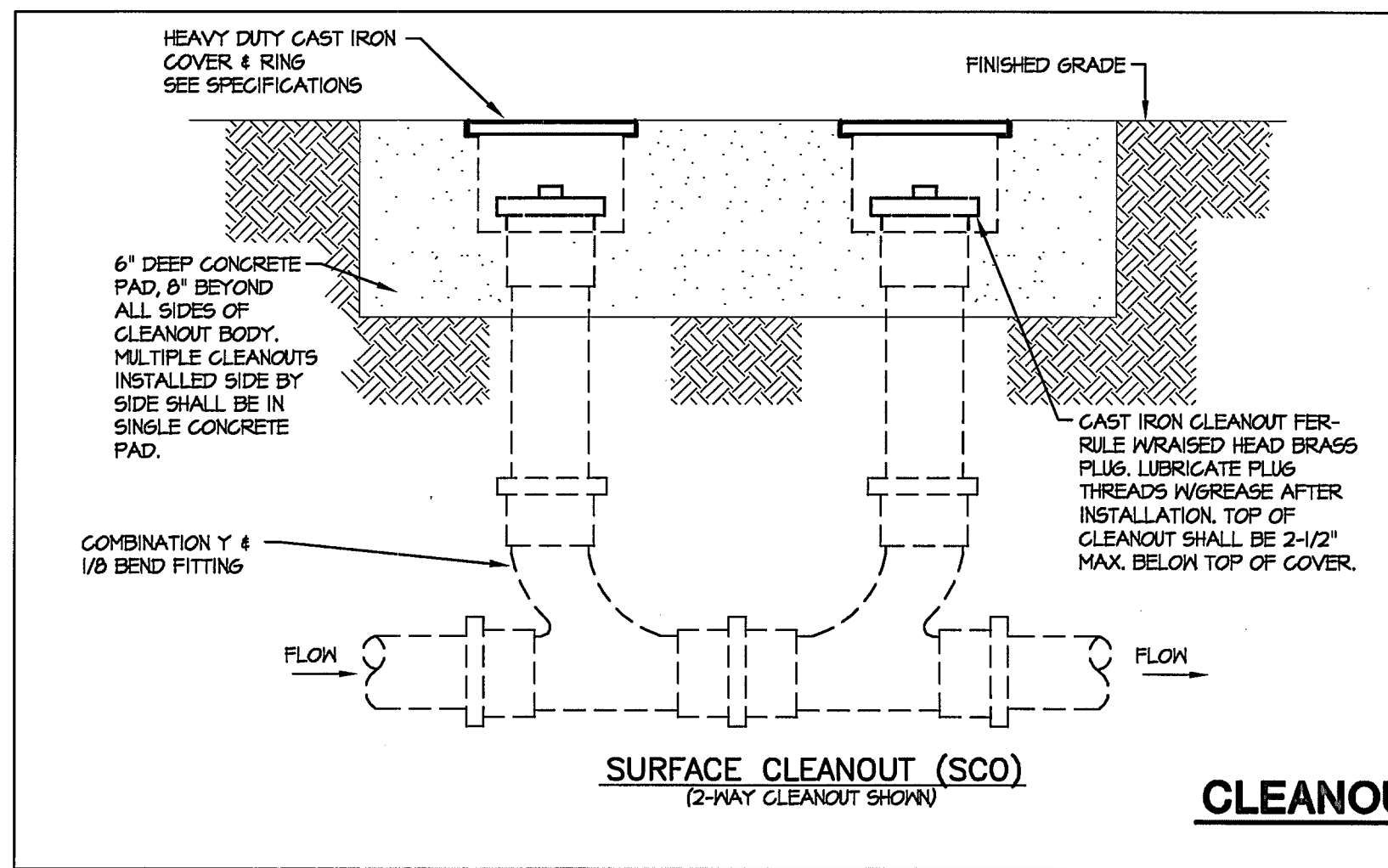
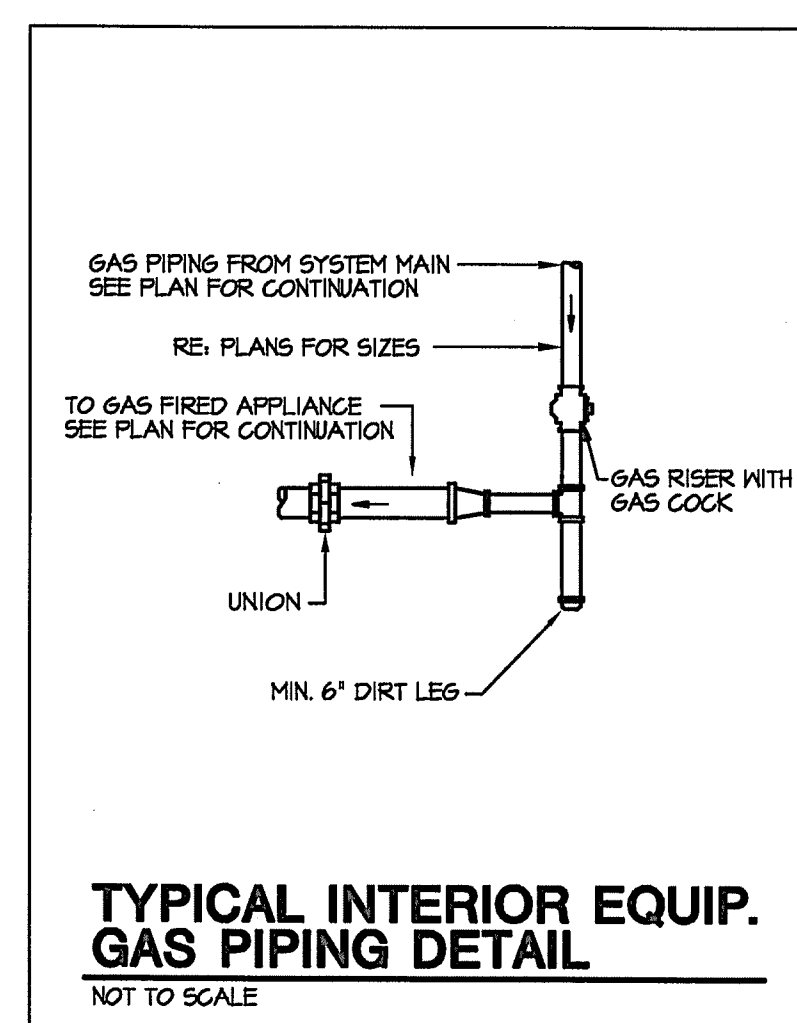
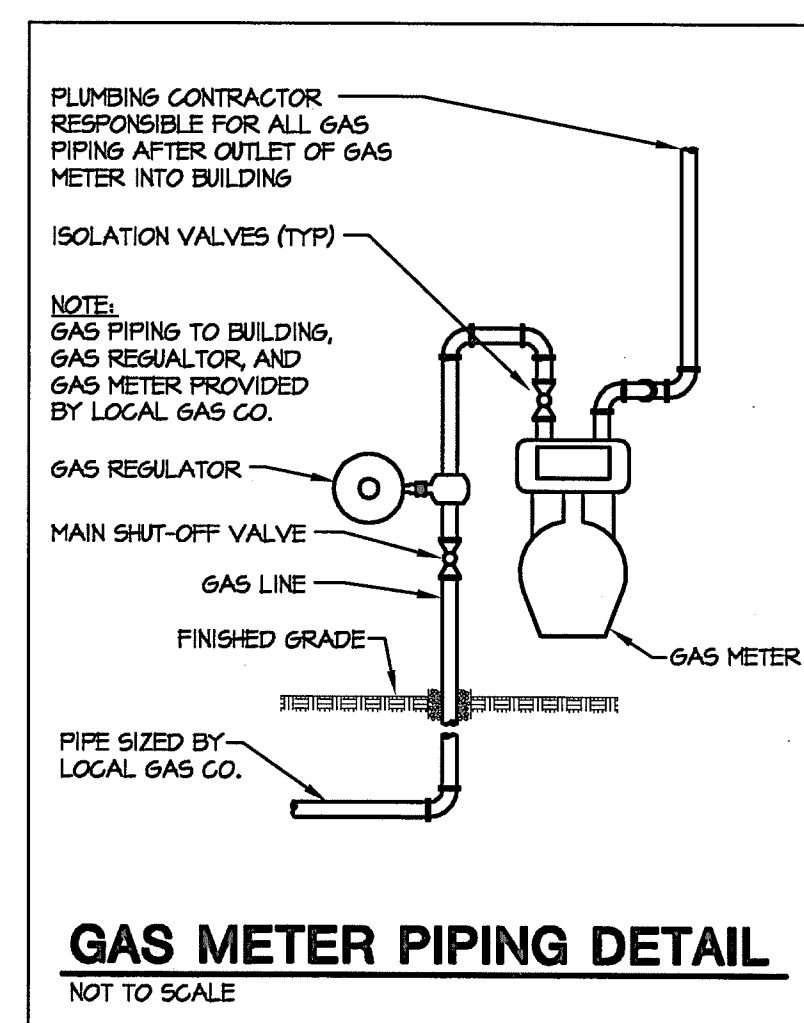
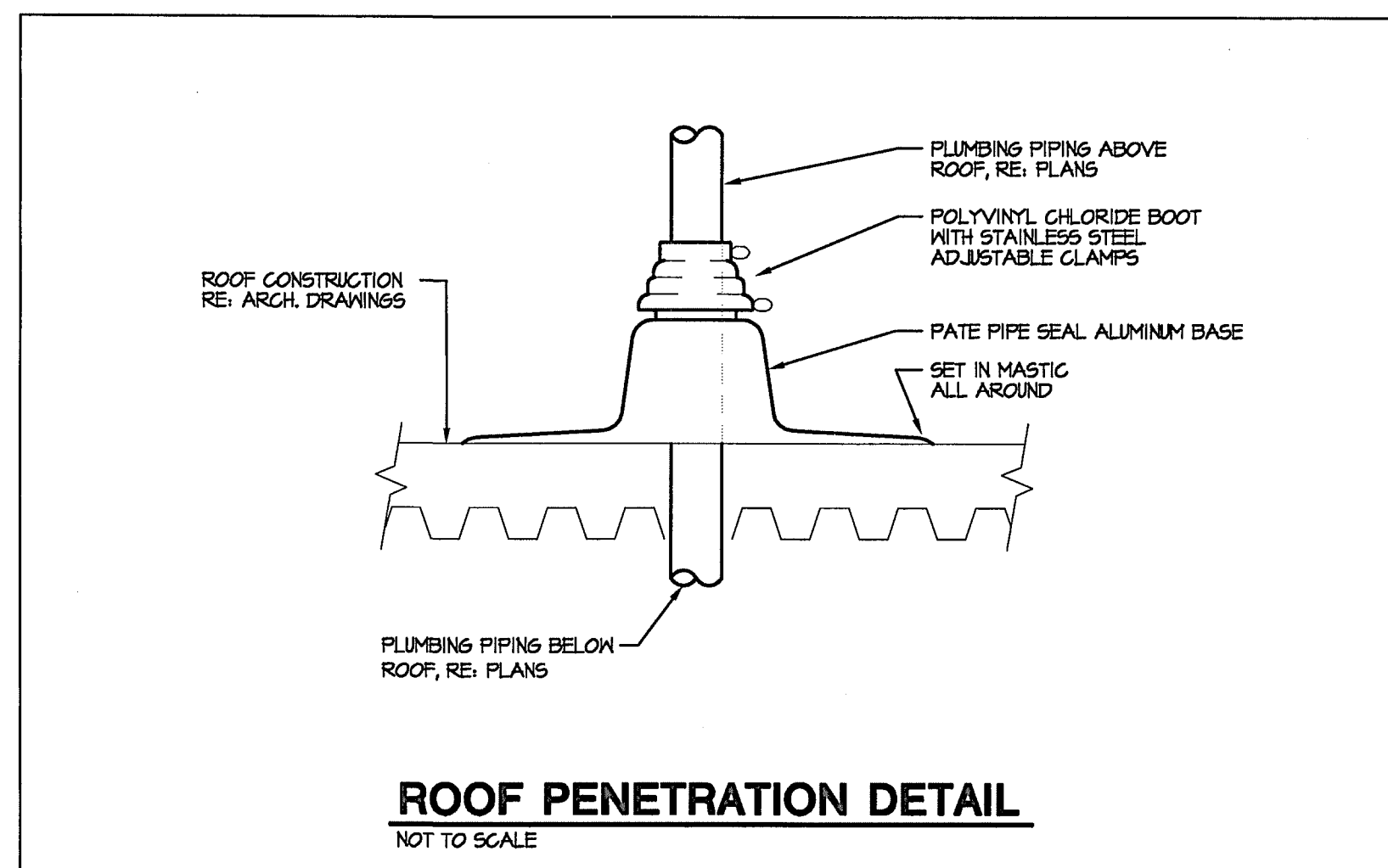
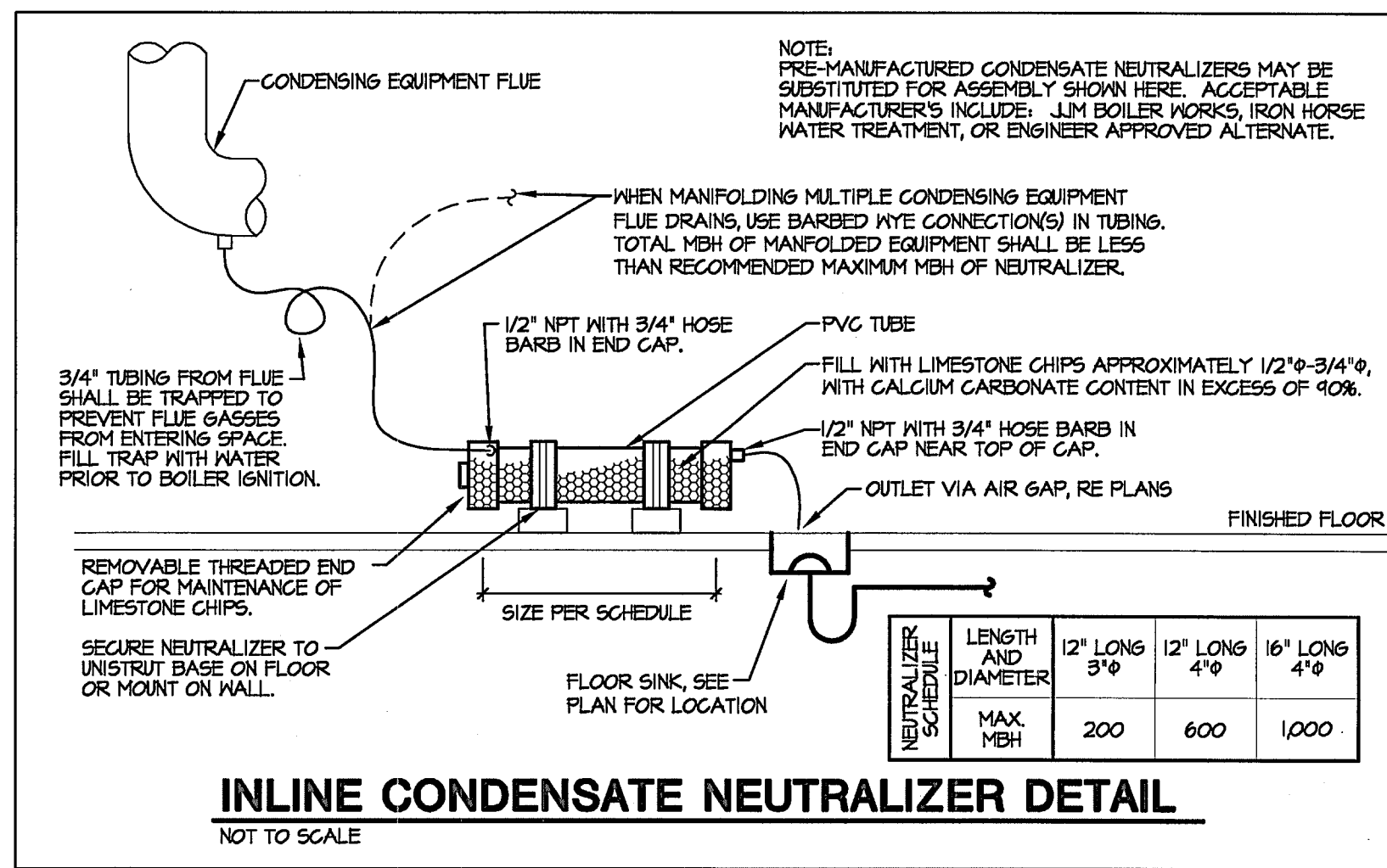
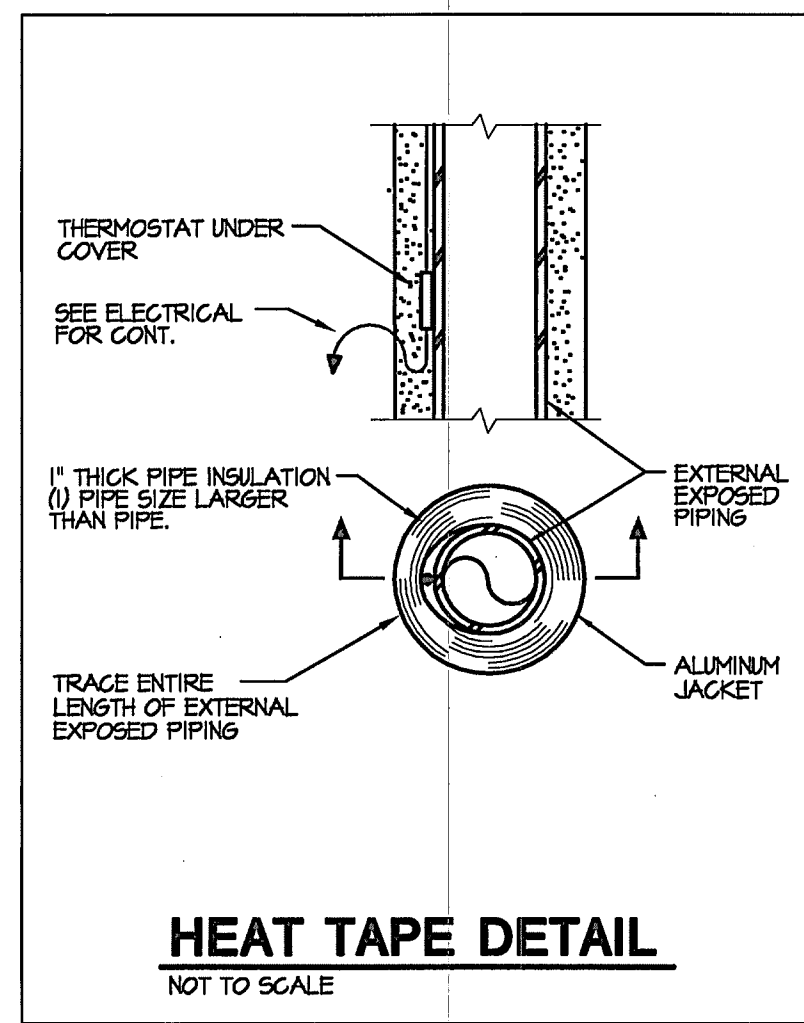
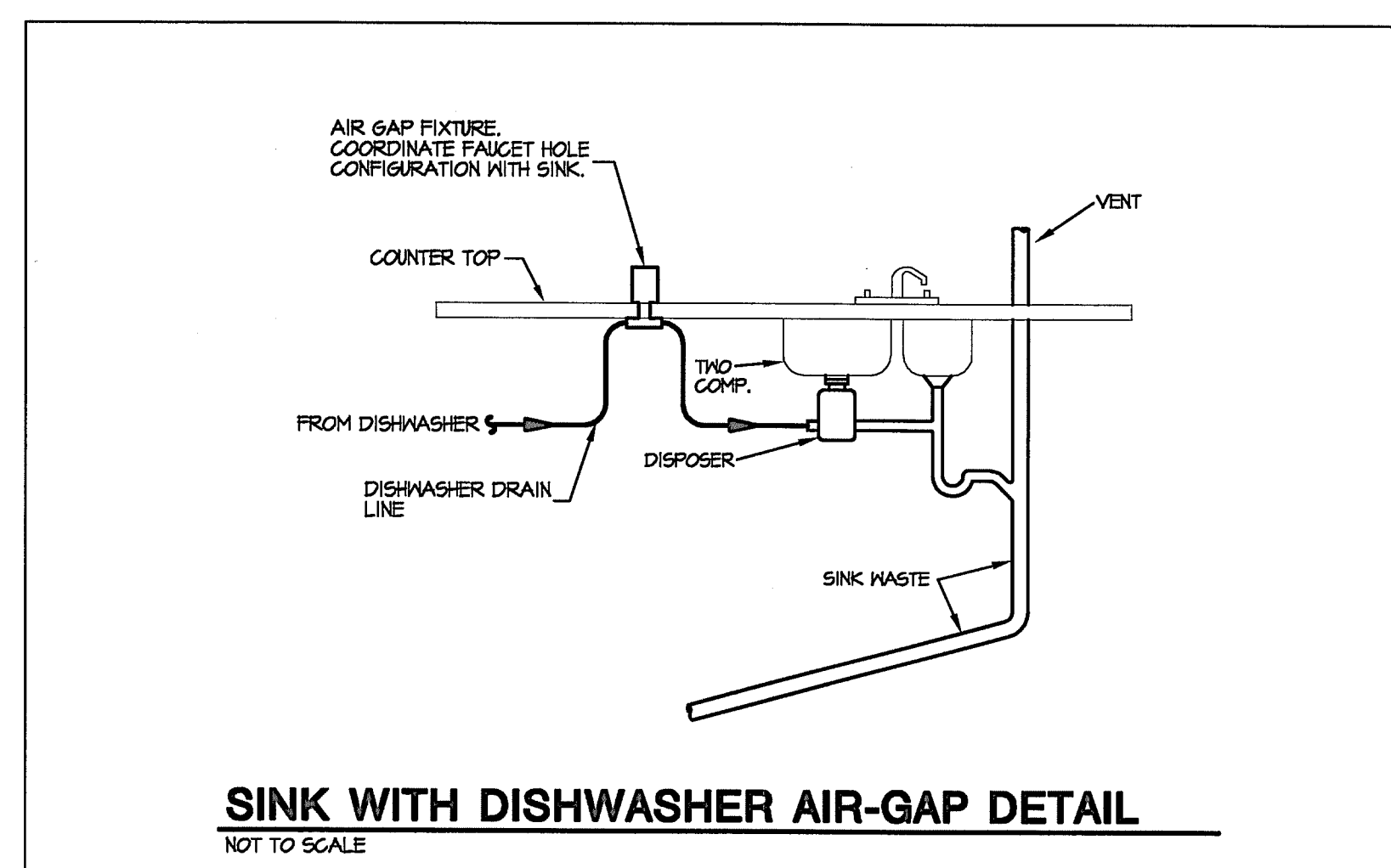
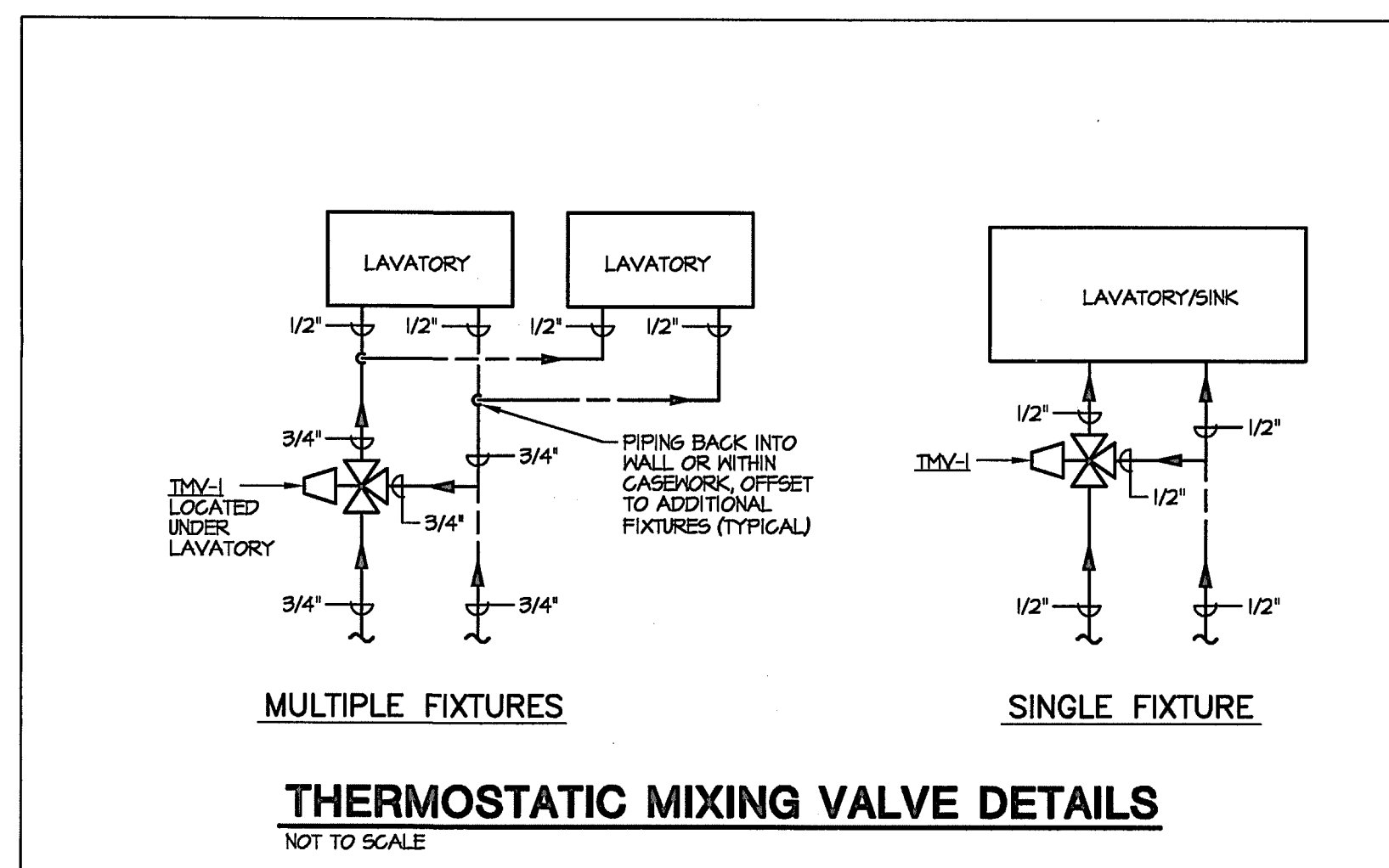
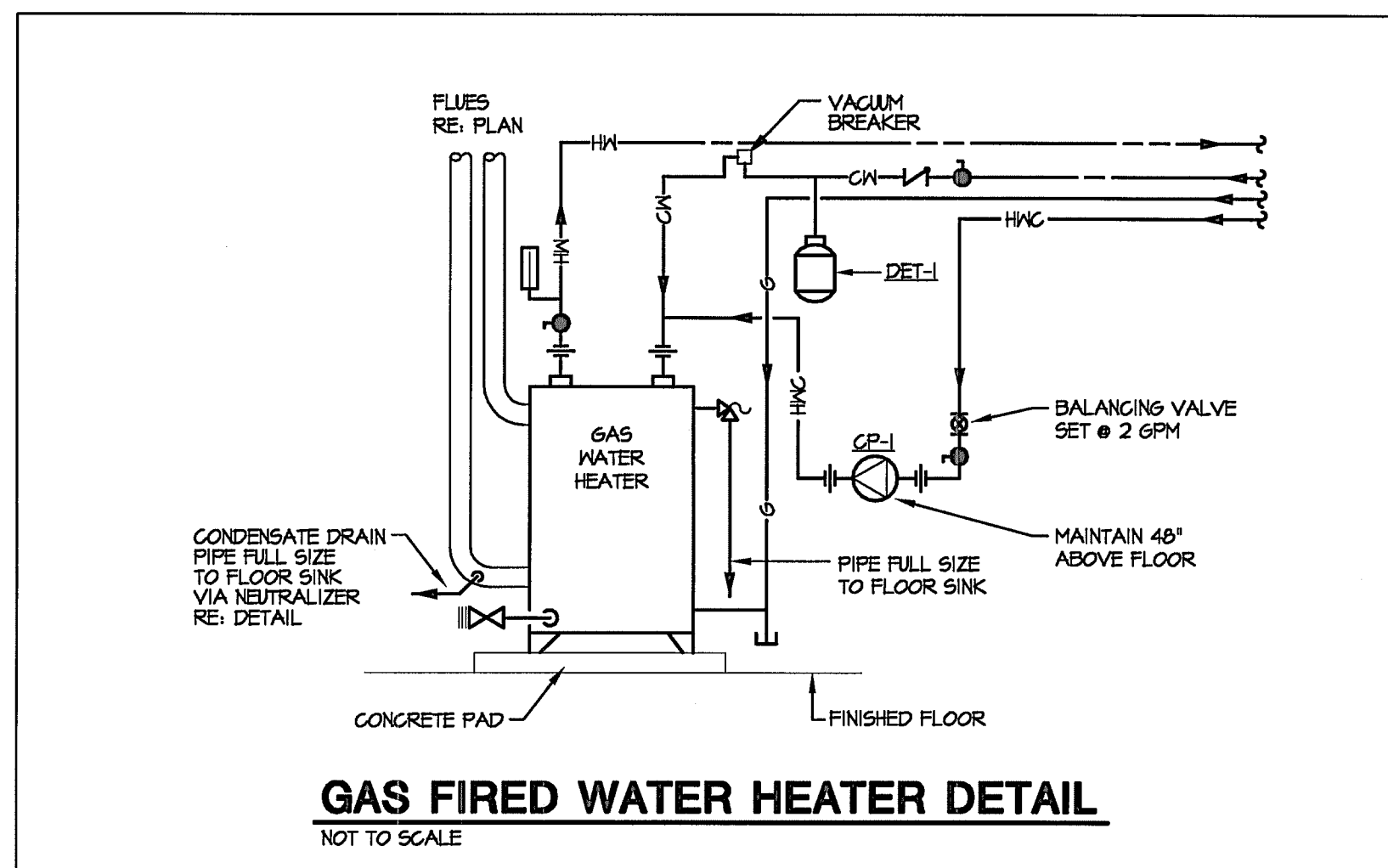
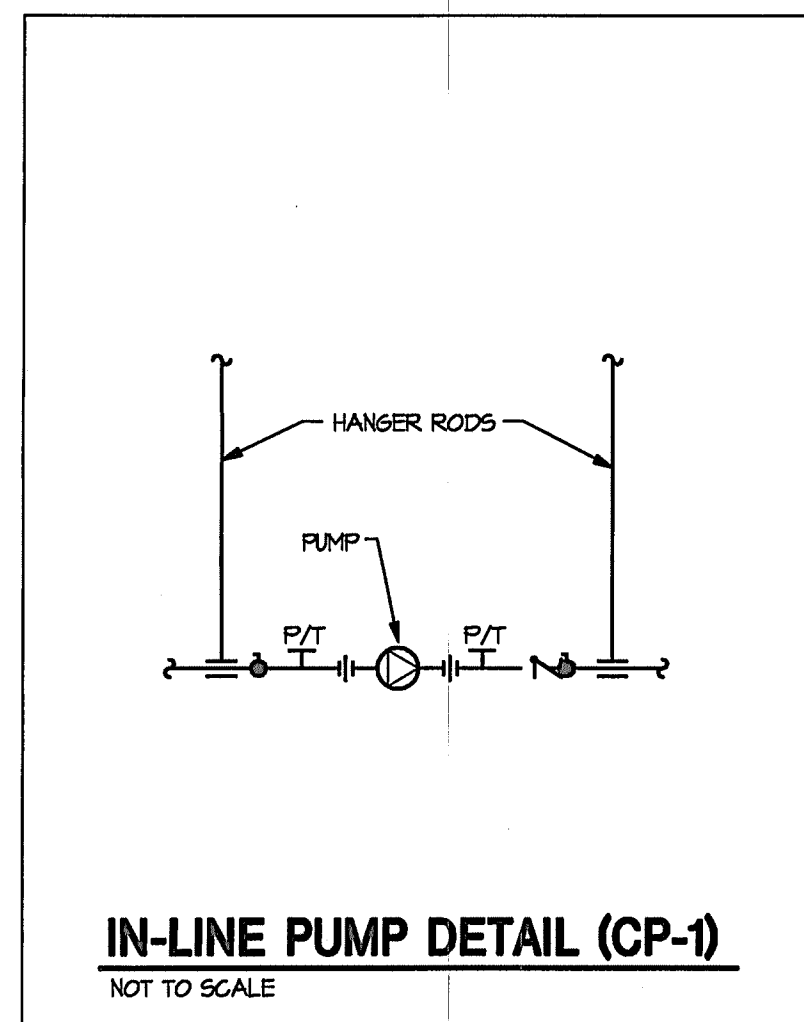
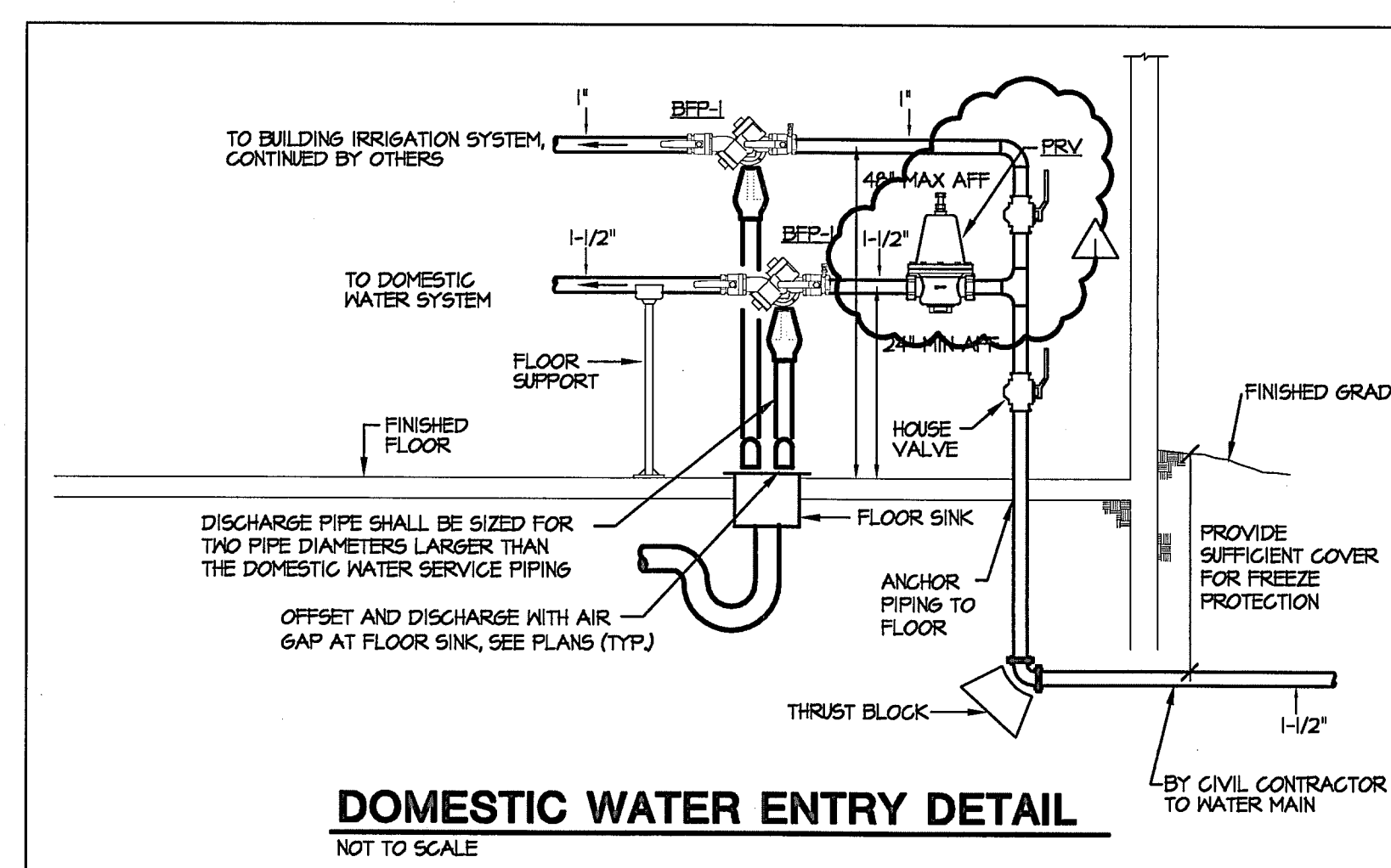
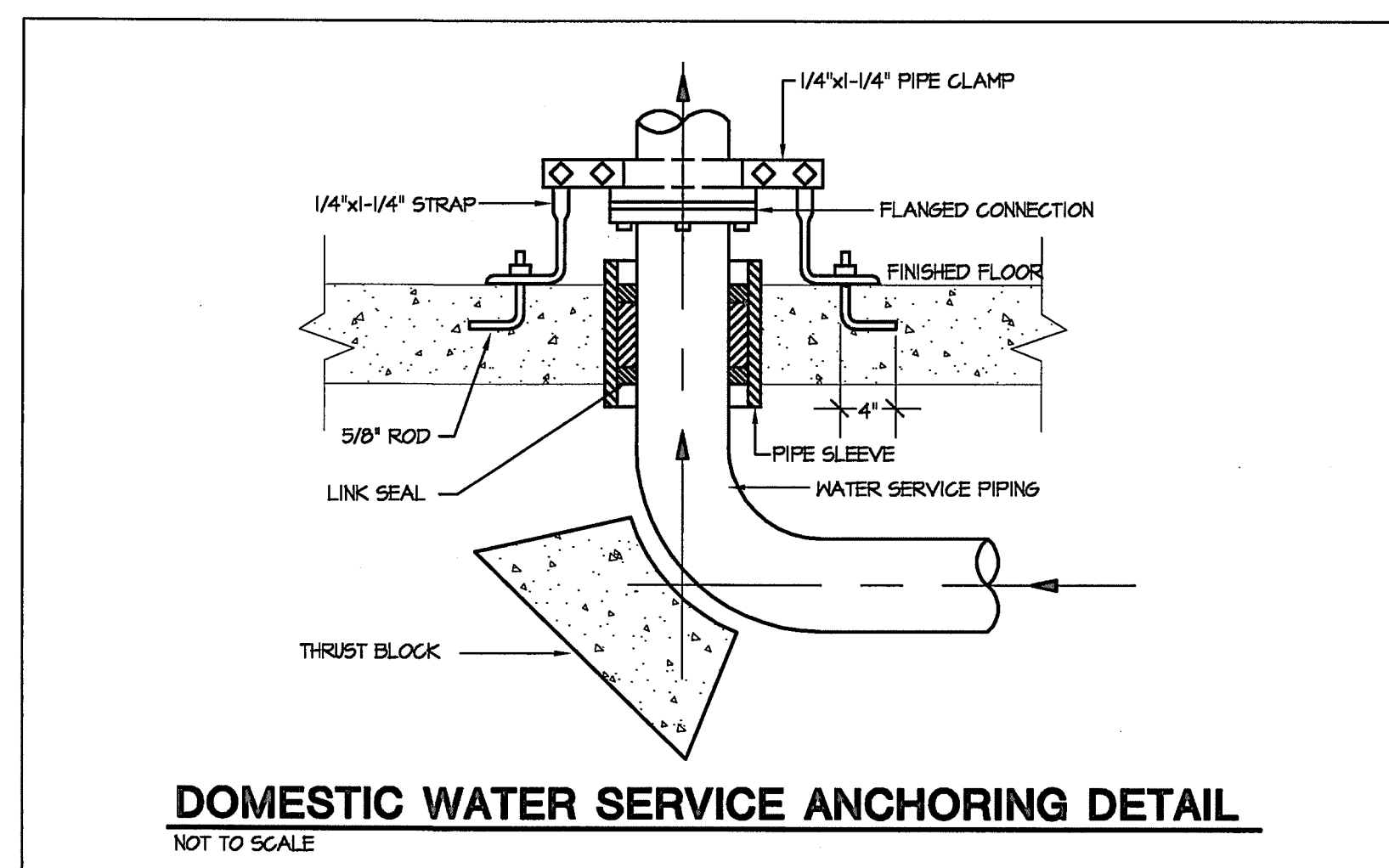
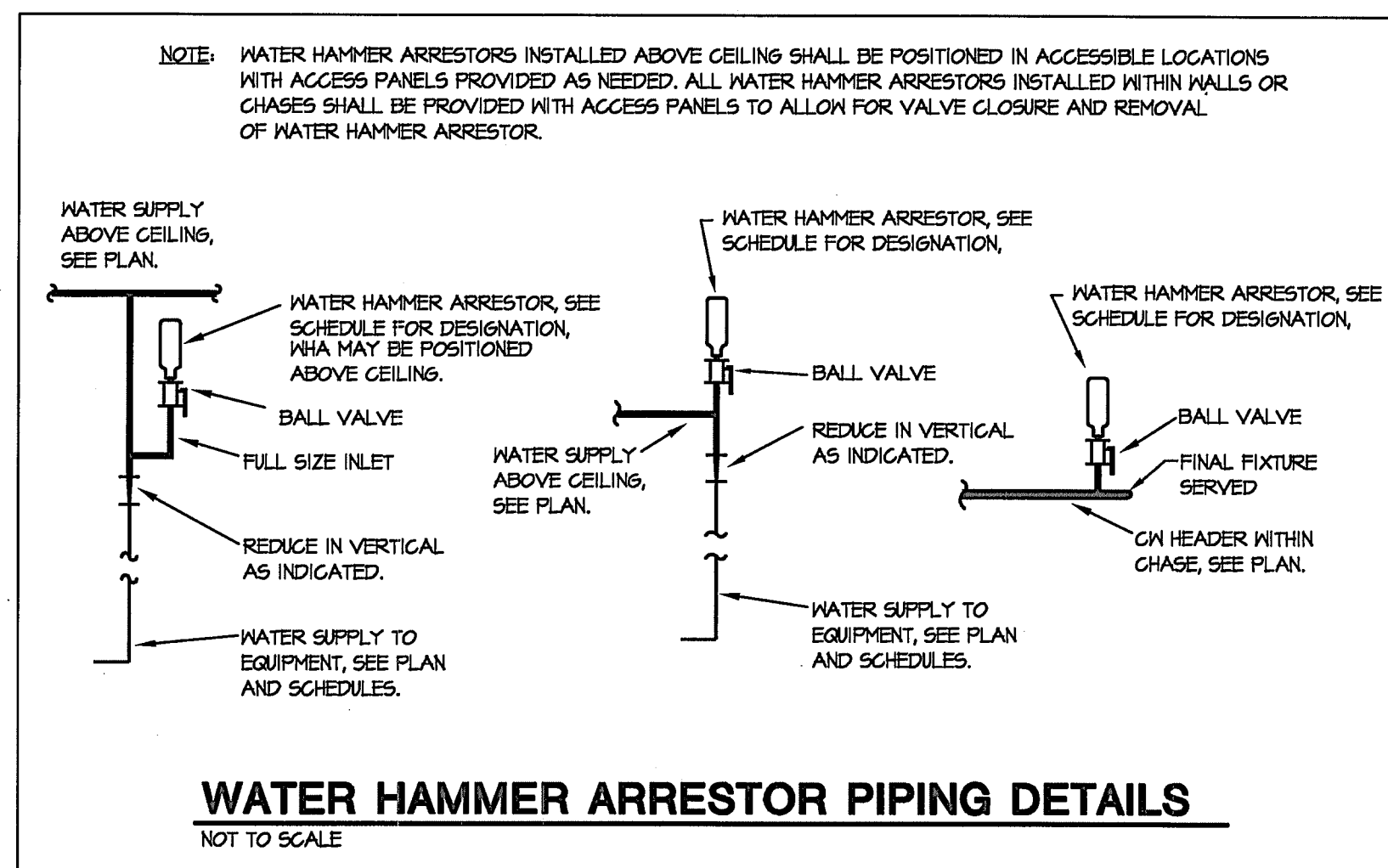
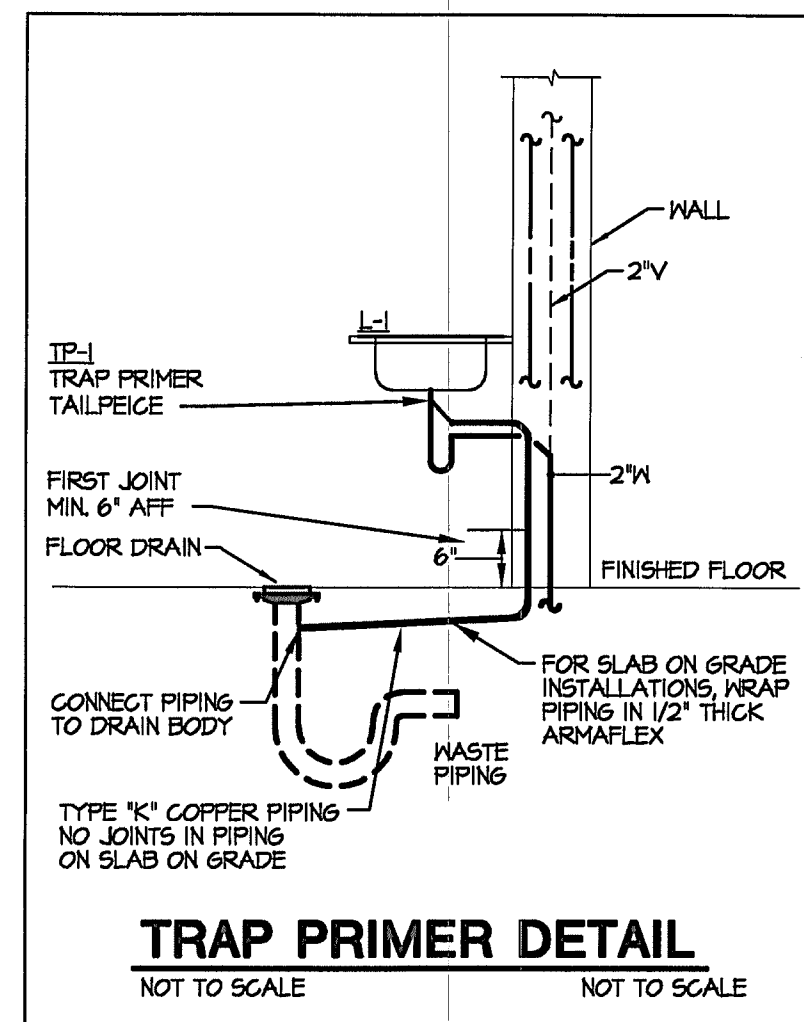
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DRAWN BY: AXH  
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SHEET TITLE:  
**PLUMBING RISER DIAGRAMS**

SHEET NO.  
**P-6**



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3565 S. Yosemite St. (W) 303.936.1633  
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1070 TRANSIT DRIVE, COLORADO SPRINGS CO 80903

ISSUE DATES:  
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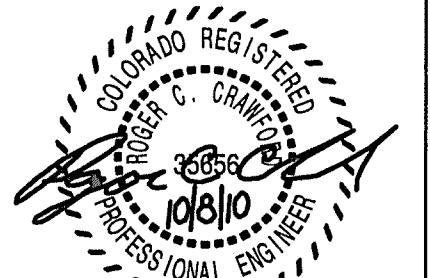
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**PLUMBING  
DETAILS**

SHEET NO.  
**P-7**

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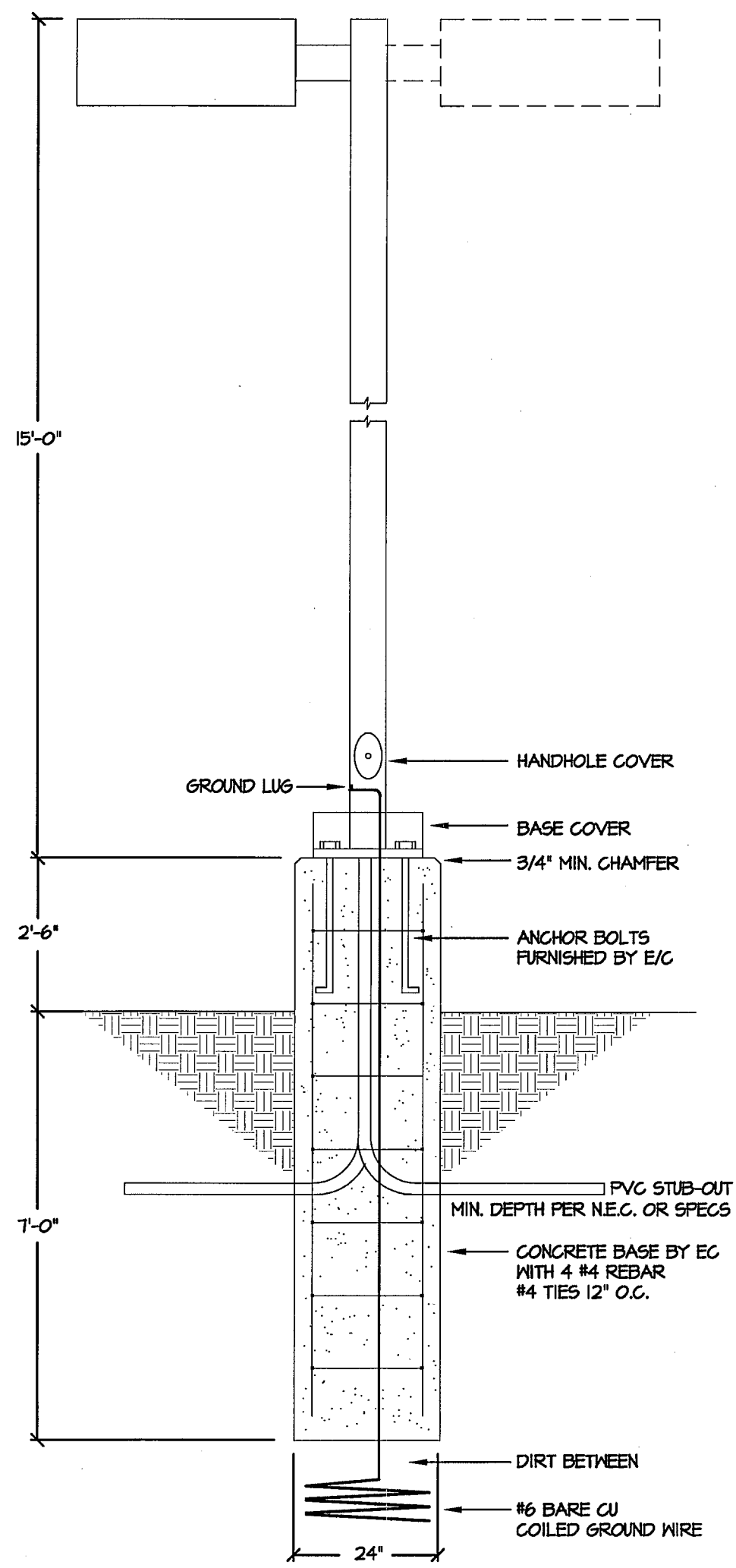
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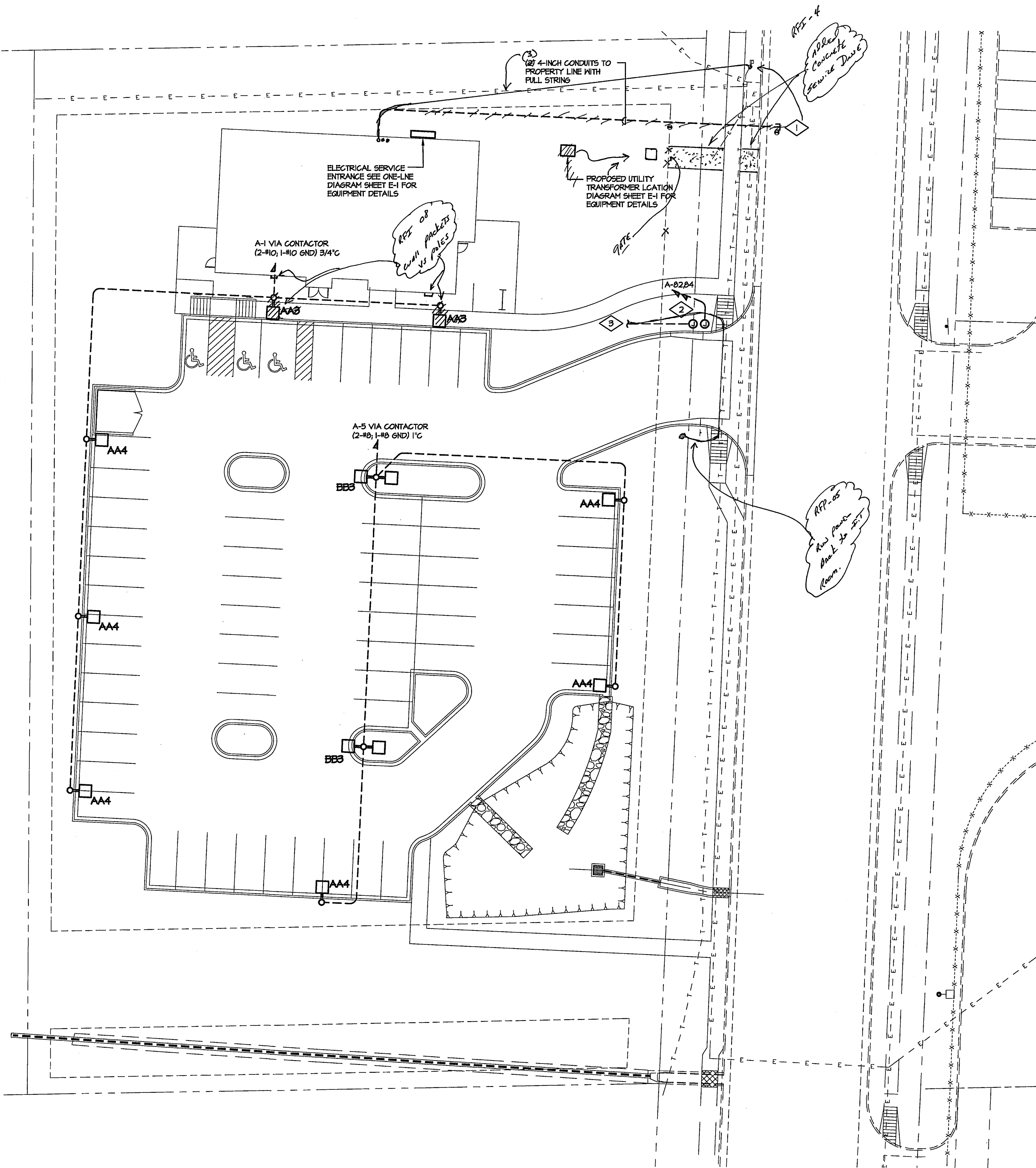
PROJECT NO. 10004  
DRAWN BY: KSP  
CHECKED BY: RCC  
DATE: 3-30-10

SHEET TITLE:  
**ELECTRICAL  
SITE PLAN**

SHEET NO.  
**E-2**



**POLE BASE DETAIL**  
NOT TO SCALE



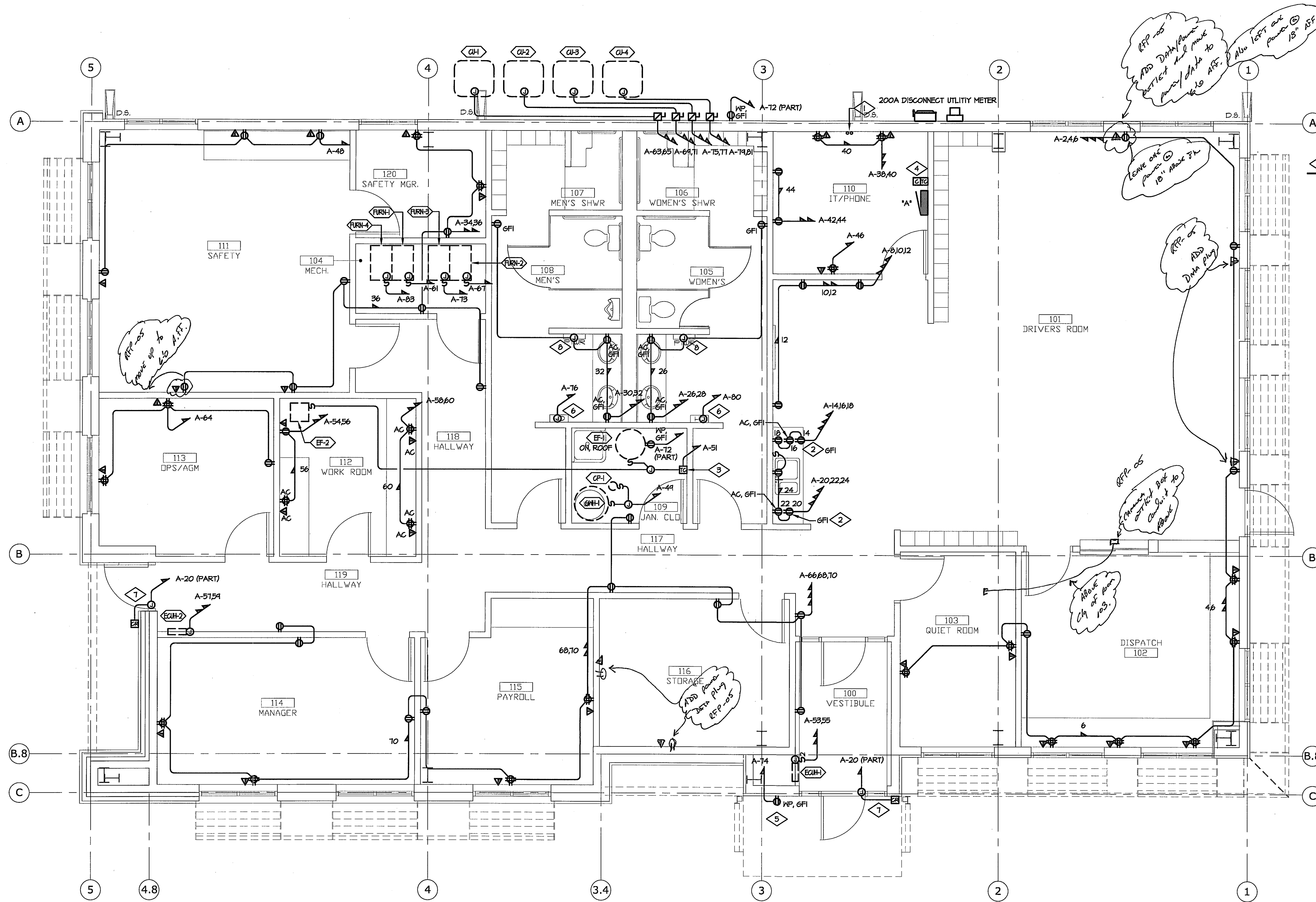
**ELECTRICAL SITE PLAN**  
SCALE: 1" = 20'-0"


**DRAWING NOTES**

1. VERIFY TELEPHONE PEDESTAL LOCATION AND REQUIREMENTS WITH LOCAL UTILITY PRIOR TO ROUGH-IN.
2. PROVIDE CONNECTION TO SECURITY GATE. VERIFY EXACT LOCATION AND REQUIREMENTS WITH OWNER PRIOR TO ROUGH-IN.
3. PROVIDE (1) 1" CONDUIT FOR SECURITY GATE CONTROL. VERIFY EXACT LOCATION WITH OWNER PRIOR TO ROUGH-IN. CONDUIT SHALL TERMINATE IN OWNER'S IT ROOM.





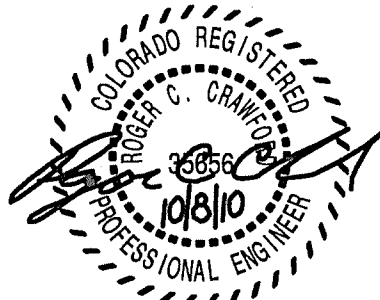



**POWER PLAN**  
 SCALE: 1/4" = 1'-0"

- DRAWING NOTES**
1. PROVIDE (2) TWO 4-INCH CONDUITS STUBBED INTO SPACE FOR TELEPHONE/DATA DEMARCATION POINT. EXTEND 4-INCH CONDUITS TO NEAREST TELEPHONE PEDESTAL AT THE PROPERTY LINE.
  2. COORDINATE WITH ARCHITECTURAL ELEVATIONS FOR EXACT LOCATION FOR MICROWAVE RECEPTACLE.
  3. PROVIDE 24 HOUR IN WALL TIMER FOR EXHAUST FAN CONTROL. TORK CAT. NO. 55720A OR EQUAL.
  4. PROVIDE TIME CLOCK AND CONTACTOR FOR EXTERIOR LIGHTING CONTROL. SEE EXTERIOR LIGHTING CONTROL DETAIL SHEET E-1 FOR MORE INFORMATION.
  5. VERIFY EXACT LOCATION AND REQUIREMENTS FOR IRRIGATION CONTROL WITH IRRIGATION CONTRACTOR PRIOR TO ROUGH-IN.
  6. PROVIDE CONNECTION TO HAND DRYERS. (2-#10, 1-#10 GND) 3/4". VERIFY EXACT LOCATION WITH OWNER PRIOR TO ROUGH-IN.
  7. PROVIDE CONNECTION TO OWNER SUPPLIED CARD READER AND ELECTRIC STRIKE. VERIFY EXACT REQUIREMENTS PRIOR TO ROUGH-IN.
  8. PROVIDE 120V CONNECTION TO TONER DISPENSER. VERIFY EXACT LOCATION AND MOUNTING HEIGHTS WITH OWNER PRIOR TO ROUGH-IN.

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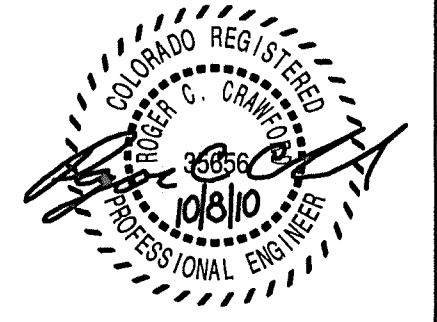
ISSUE DATES:

PROJECT NO. 10004  
 DRAWN BY: KSP  
 CHECKED BY: RCC  
 DATE: 3-30-10

SHEET TITLE:  
**POWER PLAN**

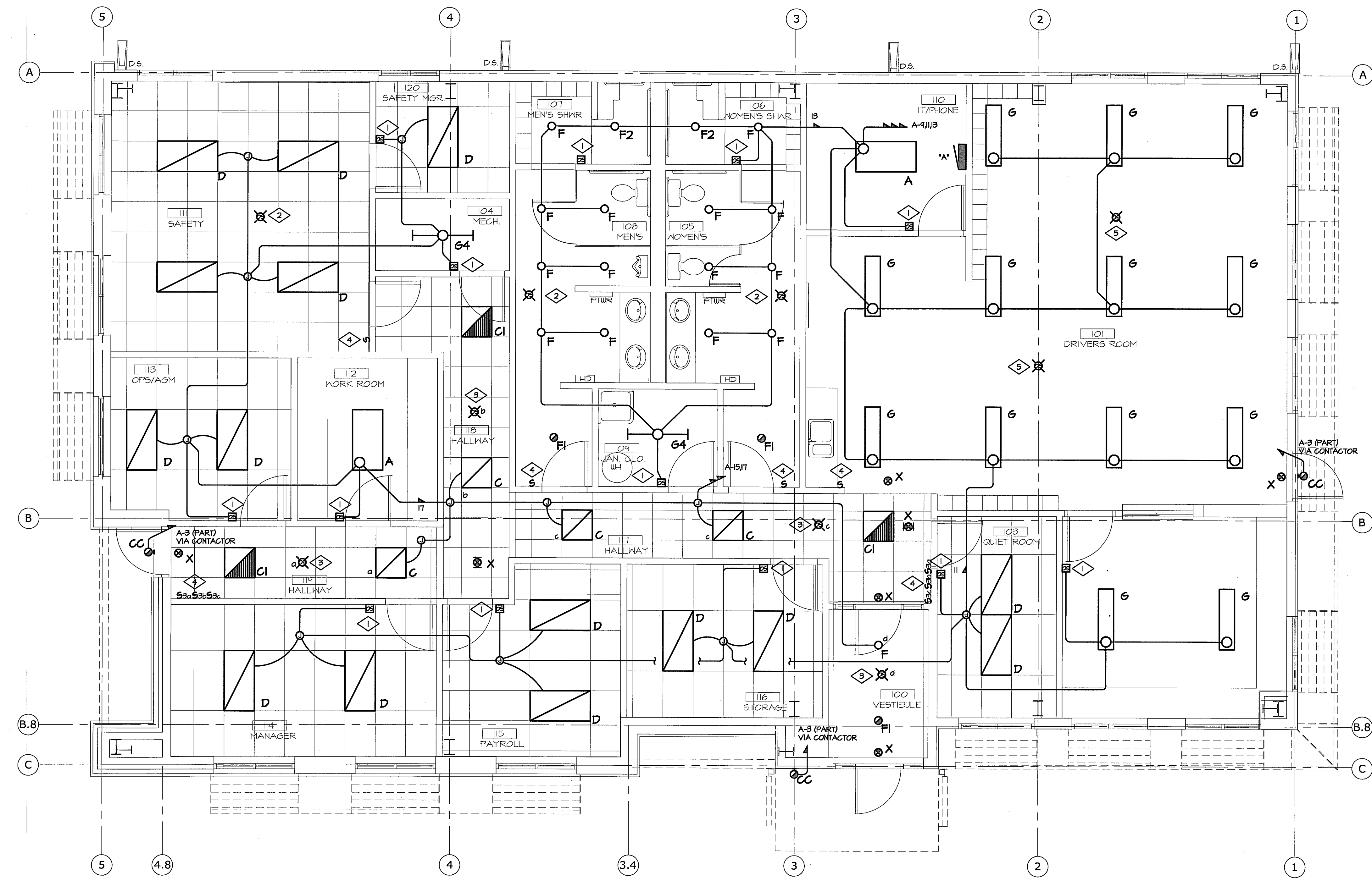
SHEET NO.  
**E-3**





**DRAWING NOTES**

1. PROVIDE WALL MOUNTED OCCUPANCY SENSOR. WATTSTOPPER PH-100N OR EQUAL.
2. PROVIDE CEILING MOUNTED OCCUPANCY SENSOR. WATTSTOPPER DT-355 OR EQUAL. PROVIDE SENSOR OVERRIDE SWITCHES AS SHOWN.
3. PROVIDE CEILING MOUNTED OCCUPANCY SENSOR. WATTSTOPPER DT-355 OR EQUAL.
4. OCCUPANCY SENSOR OVERRIDE SWITCHES.
5. PROVIDE CEILING MOUNTED OCCUPANCY SENSOR. WATTSTOPPER DT-355 OR EQUAL. SEE WIRING DIAGRAM SHEET E-1 FOR MORE INFORMATION.



**LIGHTING PLAN**

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

NOTE: ALL HALF SHADED FIXTURES AND EXIT SIGNS SHALL BE CONNECTED TO UNSWITCHED LEG OF THE LOCAL LIGHTING CIRCUIT.

**INTERIOR LIGHTING SEQUENCE OF OPERATION**

ALL INTERIOR LIGHTING SHALL BE CONTROLLED THROUGH THE USE OF OCCUPANCY SENSORS.

**SERVICE CONTRACTOR FACILITY 1**  
 CITY OF COLORADO SPRINGS METRO TRANSIT  
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ISSUE DATES:

PROJECT NO. 10004  
 DRAWN BY: KSP  
 CHECKED BY: RCC  
 DATE: 3-30-10

SHEET TITLE:  
**LIGHTING PLAN**

SHEET NO.  
**E-4**





**COMcheck Software Version 3.6.1**  
**Interior Lighting Compliance**  
**Certificate**

2003 IECC

**Section 1: Project Information**

Project Type: New Construction  
 Project Title: Service Contractor Facility 1

Construction Site:  
 1070 Transit Drive  
 Colorado Springs, CO 80903

Owner/Agent:

Designer/Contractor:  
 Kevin Probst  
 M&P Engineering Inc  
 3565 South Yosemite Street  
 Denver, CO 80237  
 303-936-1633  
 kevin@mep-eng.com

**Section 2: General Information**

Building Use Description by: Activity Type

Address: 1070 Transit Drive  
 Office

Base Area  
 3000

**Section 3: Requirements Checklist**

**Interior Lighting:**

- 1. Total proposed watts must be less than or equal to total allowed watts.
- 2. Exit signs 9 Watts or less per sign.

**Exterior Lighting:**

- 3. Efficacy greater than 45 lumens/W.

**Controls, Switching, and Wiring:**

- 4. Independent controls for each space (switch/occupancy sensor).

**5. Major switchgear:**

- Lighting in stairways or corridors that are not continuously illuminated.

**6. Individual dwelling units:**

- Each space provided with a manual control to provide uniform light reduction by at least 50%.

**7. Only one luminaire in space:**

- An occupant-actuated device controls the area.

**8. Automatic lighting shut-off:**

- Automatic lighting shut-off control in buildings larger than 5,000 sq.ft.

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**COMcheck Software Version 3.6.1**  
**Interior Lighting Application**  
**Worksheet**

2003 IECC

**Section 1: Allowed Lighting Power Calculation**

Area Category	Floor Area (ft <sup>2</sup> )	Allowed Watts / ft <sup>2</sup>	Allowed Watts (ft <sup>2</sup> x C)
Office	3000	1.1	3300
Total Allowed Watts =			3300

**Section 2: Proposed Lighting Power Calculation**

Fixture ID - Description (Lamp / Wattage Per Lamp / Ballast)	Number of Fixtures	Wattage	Total (C x D)
Office (3000 sq ft)			
Linear Fluorescent 1 A: 2'x4' Chain Mounted 40" T8 28W (Super T8) / Premium efficiency	3	84	252
Linear Fluorescent 2 C: 1'x2' Recessed / 24" T8 17W / Premium efficiency	2	34	68
Linear Fluorescent 3 D: 2'x4' Recessed Indirect / 40" T8 28W (Super T8) / Premium efficiency	2	84	168
Compact Fluorescent 1 F: 1'x2' 6" Down Light / Quad 2-pin 28W / Electronic	1	20	20
Linear Fluorescent 4 G: 0' Round Linear / 48" T8 28W (Super T8) / Premium efficiency	2	56	112
Linear Fluorescent 5 G4: 1'x4' 8-pin / 48" T8 28W (Super T8) / Premium efficiency	2	56	112
Total Proposed Watts =			796

**Section 3: Compliance Calculation**

If the Total Allowed Watts minus the Total Proposed Watts is greater than or equal to zero, the building complies.

Total Allowed Watts = 3300  
 Total Proposed Watts = 796  
 Project Compliance = 195

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Areas with only one luminaire, corridors, stairwells, restrooms, or public lobbies.

5. Photocell/automatic time switch on exterior lights.

Lighting intended for 24-hour use.

10. Tandem-wired one-lamp and three-lamp ballast luminaires (No single-lamp ballasts).

Exception: High-frequency ballasts; luminaires on emergency circuits or with no available ballast.

**Section 4: Compliance Statement**

Compliance Statement: The proposed lighting design represented in this document is consistent with the building plans, specifications and other calculations submitted with this permit application. The proposed lighting system has been designed to meet the 2003 IECC, Chapter 8, requirements in COMcheck Version 3.6.1 and to comply with the mandatory requirements in the Requirements Checklist.

Kevin A. Simpson, PE  
 10/19/10



PANEL	*A*	VOLTAGE	120 / 208 V	3 φ	4 W					
FLUSH	MAIN	MLO	X							
SURFACE	X	BUS	400A	FEED THRU	A.I.C. 25,000 A					
TYPE	DESCRIPTION	BKR	CIR	LOAD (VOLT AMPS) / PHASE	CIR	BKR	DESCRIPTION	TYPE		
L	EXTERIOR LIGHTING	20	1	1050 900		2	20	DRIVERS ROOM/DISPATCH	R	
L	EXTERIOR LIGHTING	20	3	200 1050		4	20	DISPATCH	R	
L	EXTERIOR LIGHTING	20	5		1470 1260	6	20	DISPATCH/QUIET ROOM	R	
G	EXTERIOR CONTACTOR	20	7	200 1000		8	20	VENDING	K	
L	DRIVERS ROOM/IT ROOM	20	9		784 1000	10	20	VENDING	K	
L	DISPATCH/RESTROOM	20	11		560 400	12	20	REFRIGERATOR	K	
L	RESTROOMS	20	13	486 1200		14	20	MIRCONAVE	K	
L	CORRIDOR	20	15		434 180	16	20	BREAK ROOM	K	
L	MRK RM/OPS/SAFETY	20	17		630 1200	18	20	DISHWASHER	K	
SPARE		20	19	0 1200		20	20	MIRCONAVE	K	
SPARE		20	21	0 180		22	20	BREAK ROOM	K	
SPARE		20	23	0 180	0 646	24	20	DISPOSAL	K	
SPARE		20	25	0 180		26	20	WOMENS RESTROOM	R	
SPARE		20	27	0 360		28	20	WOMENS RESTROOM	R	
SPARE		20	29	0 180		30	20	MENS RESTROOM	R	
SPARE		20	31	0 360		32	20	MENS RESTROOM	R	
SPARE		20	33	0 400		34	20	SAFETY MANAGER	R	
SPARE		20	35	0 1050		36	20	SAFETY/MECH HALL	R	
SPARE		20	37	0 500		38	20	IT ROOM	G	
SPARE		20	39	0 500		40	20	IT ROOM	G	
SPARE		20	41	0 500		42	20	IT ROOM	G	
SPARE		20	43	0 500		44	20	IT ROOM	H	
SPARE		20	45	0 500		46	20	IT ROOM	H	
SPARE		20	47	0 540		48	20	SAFETY	R	
M	EMH/ICP-1	20	49	100 250		50	20	CARD READERS	M	
H	EF-1/EF-2	20	51		600 0	52	20	SPARE	R	
H	EQUH-1	20	53		1100 1200	54	20	WORK ROOM	M	
H	-	20	55	1100 360		56	20	WORK ROOM	R	
H	EQUH-2	20	57		1100 360	58	20	WORK ROOM	R	
H	-	20	59		1100 360	60	20	WORK ROOM	R	
H	FURN-1	20	61	1488 0		62	20	SPARE	R	
H	CU-1	30	63		2100 120	64	20	OFFASH	R	
H	-	30	65		2100 400	66	20	STORAGE/CLAN	R	
H	FURN-2	20	67	1488 1080		68	20	PAYROLL/MANAGER	R	
H	CU-2	30	69		2100 1080	70	20	MANAGER	R	
H	-	30	71		2100 360	72	20	EXTERIOR/ROOF	R	
H	FURN-3	15	73	1164 200		74	20	IRRIGATION CONTROL	M	
H	CU-3	20	75		1456 2000	76	30	HAND DRYER MENS	M	
H	-	20	77		1456 0	78	20	SPARE	M	
H	CU-4	30	79	2100 2000		80	30	HAND DRYER WOMENS	M	
H	-	30	81		2100 500	82	20	SECURITY GATE	M	
H	FURN-4	15	83		1488 500	84	20	SECURITY GATE	M	
TOTAL KVA		145	22.0	22.4	64.4	TOTAL KVA	18.7	21.4	22.6	63.2
TOTAL AMPS		155.8	182.6	186.1	186.1					

LOAD TYPE	CONNECTED KVA			TOTAL	FACTOR	DEMAND KVA			TOTAL	
	A	B	C	ALL PHASES		A	B	C	ALL PHASES	
LIGHTING	15	14	2.7	5.6	125%	14	1.8	3.3	1.0	
RECEPTACLE (10KVA OR LESS)	2.4	3.3	3.3	4.5	100%	2.4	3.3	3.3	4.5	
RECEPTACLE (OVER 10KVA)	0.0	1.2	1.3	2.5	100%	0.0	1.2	1.3	2.5	
HVAC/MOTOR	7.4	11.3	10.5	24.7	100%	7.4	11.3	10.5	24.1	
MOTOR(LARGEST)	0.0	0.0	0.0	0.0	125%	0.0	0.0	0.0	0.0	
KITCHEN EQUIPMENT	3.4	1.4	2.8	7.6	65%	2.2	0.4	1.8	4.1	
MISCELLANEOUS	3.8	3.5	2.2	4.5	100%	3.8	3.5	2.2	4.5	
TOTAL KVA		145	22.0	22.4	64.4	TOTAL KVA	18.7	21.4	22.6	63.2
TOTAL AMPS		155.8	182.6	186.1	186.1					

LEGEND L = LIGHTING R = RECEPTACLE H = HVAC / MOTOR K = KITCHEN G = MISCELLANEOUS

BUILDING LUMINAIRE SCHEDULE					
TYPE	MANUFACTURER	CATALOG NUMBER	DESCRIPTION	MOUNTING	LAMPS
A	COLUMBIA	LHV4-392-6H-4EPH-L-F0835	CHAIN HNG 2X4 4-LAMP FLUORESCENT HIGH BAY WITH DUAL LEVEL SWITCHING	CHAIN	(2) F028/035 SUPER T8-LAMPS
C	COLUMBIA	EM5522-2IT-6-MPO-EI04-U-F0835	RECESSED 2X2, 3-LAMP CENTER BASKET INDIRECT/DIRECT FLUORESCENT LIGHT FIXTURE	LAY-IN	(2) F011/035 T8-LAMPS
C1	COLUMBIA	EM5522-2IT-6-MPO-EI04-U-F0835-EL	SAME AS TYPE C, EXCEPT WITH 90-MINUTE EMERGENCY BALLAST	LAY-IN	(2) F011/035 SUPER T8-LAMPS
D	COLUMBIA	EM524-232-6-MPO-EI04-U-F0835	RECESSED 2X4, 2-LAMP CENTER BASKET INDIRECT/DIRECT FLUORESCENT LIGHT FIXTURE	LAY-IN	(2) F032/035 SUPER T8-LAMPS
F	PRESCOLITE	GFT632EB-S1F602-B6-LP26T35	RECESSED COMPACT FLUORESCENT DOWNLIGHT WITH 6-INCH APERTURE AND CLEAR ALZAK REFLECTOR	RECESSED GYPSUM	(1) 26WTRT/035
F1	PRESCOLITE	GFT632EB-EM-S1F602-B6-LP26T35	SAME AS TYPE F, EXCEPT WITH 90-MINUTE EMERGENCY BALLAST	RECESSED	(1) 26WTRT/035
F2	PRESCOLITE	GFT632EB-S1F602-DL-B6-LP26T35	RECESSED COMPACT FLUORESCENT MET LABELED SHOWER LIGHT WITH PRISMATIC GLASS LENS	RECESSED	(1) 26WTRT/035
G	ALERA	IT6 4 2D TB CH GLA U	CABLE HNG 6" TUBE 2-LAMP FLUORESCENT FIXTURE	CABLE 10'-0" AFF	(2) F028/035 SUPER T8-LAMPS
G4	COLUMBIA	CS4-232-E-U	SURFACE MOUNTED 4-FOOT 2-LAMP FLUORESCENT STRIP LIGHT	SURFACE	(2) F032/035 SUPER T8-LAMPS
X	DUALITE	LX18HE	UNIVERSAL MOUNT LED EXIT SIGN WITH GREEN LED AND WHITE HOUSING AND 90-MINUTE BATTERY PACK	UNIVERSAL	WITH UNIT
AA3	LITHONIA	KSP1-IT5M-R3-TB-SPO4-SCHA-DBL-LPI	POLE MOUNTED SQUARE AREA LIGHT WITH TYPE 3 DISTRIBUTION, IT5M METAL HALIDE SQUARE STRAIGHT STEEL POLE WITH SINGLE HEAD 15 FOOT POLE ON 2 1/2" BASE	POLE	(1) IT5M 14WGU
AA4	LITHONIA	KSP1-IT5M-R45C-TB-SPO4-SCHA-DBL-LPI	POLE MOUNTED SQUARE AREA LIGHT WITH TYPE 4 HOUSE SIDE SHEILD DISTRIBUTION IT5M METAL HALIDE SQUARE STRAIGHT STEEL POLE WITH SINGLE HEAD 15 FOOT POLE ON 2 1/2" BASE	POLE	(1) IT5M 14WGU
BB3	LITHONIA	KSP1-IT5M-R3-TB-SPO4-SCHA-DBL-LPI DOUBLE HEAD	POLE MOUNTED SQUARE AREA LIGHT WITH TYPE 3 DISTRIBUTION, IT5M METAL HALIDE SQUARE STRAIGHT STEEL POLE, DOUBLE HEAD 15 FOOT POLE ON 2 1/2" BASE	POLE	(2) IT5M 14WGU
CC	LITHONIA	MR4 2/26TRT FT 120 SCHA ELDH DNAT	HALL MOUNTED HALF ROUND SHAPED FULL CUTOFF EXTERIOR LIGHT FIXTURE WITH COMPACT FLUORESCENT LAMPS EMERGENCY 0-DEGREE BALLAST AND NATURAL ALUMINUM FINISH	SURFACE 4'-0" TO TOP OF FIXTURE	(2) 26WTRT

\* ALL FIXTURES MUST COMPLY WITH NEC 422.51.

MECHANICAL EQUIPMENT SCHEDULE												
DESIGNATION	DESCRIPTION	VOLTAGE	PH	HP	KVA	FLA (MCA)	CONDUCTORS	CONDUIT	SWITCH	CB	FUSE SIZE/TYP	REMARKS
CP-1	CIRCULATION PUMP	120	1	1/2	-	-	2#12/1#16	1/2	SPST	20A	-	-
CU-1	CONDENSING UNIT	208	1	-	-	(26.0)	2#10/1#16	3/4	30/2	30/2	30A FRN-R	-
CU-2	CONDENSING UNIT	208	1	-	-	(26.0)	2#10/1#16	3/4	30/2	30/2	30A FRN-R	-
CU-3	CONDENSING UNIT	208	1	-	-	(14.0)	2#12/1#16	3/4	30/2	20/2	15A FRN-R	-
CU-4	CONDENSING UNIT	208	1	-	-	(26.0)	2#10/1#16	3/4	30/2	30/2	30A FRN-R	-
EQUH-1	CABINET HEATER	208	1	-	2.2	-	2#12/1#16	3/4	DPST	20/2	-	-
EQUH-2	CABINET HEATER	208	1	-	2.2	-	2#12/1#16	3/4	DPST	20/2	-	-
EF-1	EXHAUST FAN	120	1	1/8	-	-	2#12/1#16	1/2	SPST	20A	-	1
EF-2	EXHAUST FAN	120	1	-	-	1.0	2#12/1#16	1/2	SPST	20A	-	1
FURN-1	GAS FIRED FURNACE	120	1	3/4	-	12.4	2#12/1#16	1/2	SPST	20A	-	-
FURN-2	GAS FIRED FURNACE	120	1	3/4	-	12.4	2#12/1#16	1/2	SPST	20A	-	-
FURN-3	GAS FIRED FURNACE	120	1	1/2	-	4.1	2#12/1#16	1/2	SPST	20A	-	-
FURN-4	GAS FIRED FURNACE	120	1	1/2	-	12.4	2#12/1#16	1/2	SPST	20A	-	-
GNH-1	GAS FIRED WATER HEATER	120	1	-	0.5	-	2#12/1#16	1/2	SPST	20A	-	-

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