

GENERAL NOTES

- 1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FAMILIARIZING HIMSELF WITH THE JOBSITE.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SAFEGUARDING AND PROTECTING ALL MATERIAL AND EQUIPMENT STORED ON THE JOBSITE.
4. WRITTEN DIMENSIONS ON THESE DRAWINGS SHALL HAVE PRECEDENCE OVER SCALE DIMENSIONS.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS AND CONSTRUCTION INSPECTIONS WITH THE PROPER REGULATORY AGENCIES.
6. CONTRACTOR TO OBTAIN ALL PERMITS REQUIRED PRIOR TO STARTING CONSTRUCTION OF UTILITIES AND/OR CURBS WITHIN RIGHT-OF-WAYS.
7. TOPOGRAPHIC SURVEY BY: KERR SURVEYING, L.L.C.
8. BENCHMARK: SEE SURVEY
9. CONTRACTOR IS SOLELY RESPONSIBLE FOR CONTACTING THE SURVEYOR AND VERIFYING THE BENCHMARK AND ON SITE TRIMS IN THE FIELD.
10. THE DRAWINGS SHOW AS MUCH INFORMATION AS CAN BE REASONABLY OBTAINED FROM ON THE GROUND OBSERVATION AND EXISTING CONSTRUCTION DRAWINGS.
11. THE EXISTING UTILITIES SHOWN WERE PROVIDED BY THE SURVEYOR.
12. CONTRACTOR SHALL COMPLY WITH ALL OCCUPATIONAL SAFETY AND HEALTH ACT (O.S.H.A.) REGULATIONS.
13. ALL WORK IS TO BE DONE IN ACCORDANCE WITH APPLICABLE NATIONAL, STATE, MUNICIPAL, AND LOCAL CODES.
14. IT IS THE CONTRACTORS RESPONSIBILITY TO SUPERVISE AND COORDINATE ALL WORK TO ENSURE THE PROPER EXECUTION.
15. THE CONTRACTOR SHALL KEEP ALL STREETS FREE OF DIRT, MUD, ETC. DURING THE COURSE OF CONSTRUCTION.
16. THE CONTRACTOR SHALL NOT LEAVE ANY TRENCHES OR PITS OPEN OVER NIGHT.
17. CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES IN THE AREA PRIOR TO COMMENCING WORK IN ANY RIGHT-OF-WAY OR EXISTING EASEMENT.
18. CONTRACTOR SHALL COORDINATE WITH APPROPRIATE UTILITY COMPANIES TO RELOCATE EXISTING POWER POLES(S) AND/OR UTILITY BOXES) OR ANY OTHER UTILITIES DEEMED NECESSARY BY THE ENGINEER.
19. STRIPING AND CROSS-HATCHING SHALL BE TRAFFIC YELLOW PAINTED LINES, FOUR (4) INCHES WIDE UNLESS OTHERWISE NOTED.
20. REFER TO ARCHITECTURAL SHEETS FOR HANDICAP SIGNAGE.
21. EXISTING PAVEMENTS, CURBS, SIDEWALKS, AND DRIVEWAYS DAMAGED OR REMOVED DURING CONSTRUCTION SHALL BE REPLACED TO CITY STANDARDS.
22. CONDITION OF THE ROAD AND/OR RIGHT-OF-WAY, UPON COMPLETION OF JOB, SHALL BE AS GOOD AS OR BETTER THAN THE CONDITION PRIOR TO STARTING WORK.
23. ADEQUATE DRAINAGE SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION AND SHALL BE RESTORED TO THE SATISFACTION OF THE OWNING AUTHORITY.
24. WHEEL CHAIR RAMPS SHALL BE INSTALLED IN ACCORDANCE WITH CITY STANDARDS AT ALL INTERSECTIONS WHERE SIDEWALKS EXIST AND THE EXISTING CURB OR SIDEWALK IS DAMAGED OR REMOVED DURING CONSTRUCTION.
25. THIS PROPERTY IS LOCATED IN ZONE "AE" UNIMPAVED. AREAS DETERMINED TO BE OUTSIDE OF THE 500-YEAR FLOODPLAIN AS SHOWN ON THE FLOOD INSURANCE RATE MAP BY (FEMA) 4804 C0215F PANEL 215 OF 475, DATED APRIL 2, 2014 THIS STATEMENT IS BASED ON SCALING THE LOCATION OF THIS SURVEY ON THE ABOVE REFERENCED MAP.

UTILITY NOTES

- 26. THE CONTRACTOR SHALL FURNISH ALL MATERIALS, EQUIPMENT, AND LABOR FOR EXCAVATION, INSTALLATION, BACKFILLING OF WATER AND/OR SEWER MAINS AND RELATED APPURTENANCES AS SHOWN ON THE PLANS AND/OR DESCRIBED IN THE SPECIFICATIONS.
27. THE CONTRACTOR SHALL COMPLY WITH O.S.H.A. REGULATIONS AND STATE OF TEXAS LAW CONCERNING EXCAVATION.
28. CONTRACTOR SHALL INCLUDE IN BASE PROPOSAL ALL COSTS ASSOCIATED WITH DEWATERING, WELL POINTING, STABILIZING, ETC. THAT MAY BE REQUIRED TO INSTALL ANY AND ALL UNDERGROUND UTILITIES.
29. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SHIPPING AND STORING OF ALL WATER AND SEWER MATERIALS.
30. THE LOADING AND UNLOADING OF ALL PIPE, VALVES, HYDRANTS, MANHOLES AND OTHER ACCESSORIES SHALL BE IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDED PRACTICES AND SHALL AT ALL TIMES BE PERFORMED WITH CARE TO AVOID ANY DAMAGE TO THE MATERIALS.
31. ALL STORM SEWER TO BE HIGH DENSITY POLYETHYLENE CORRUGATED EXTERIOR / SMOOTH INTERIOR PIPE WITH WATER TIGHT JOINTS PER ASTM D 3212 UNLESS OTHERWISE OR SPECIFICALLY NOTED.
32. HIGH DENSITY POLYETHYLENE PIPE SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATION OR THE PLANS / SPECIFICATIONS, WHICHEVER IS MORE RESTRICTIVE.
33. ALL WATER MAINS TO HAVE A MINIMUM OF 4' (FOUR FEET) OF COVER FROM PROPOSED TOP OF CURB WHEN CONSTRUCTED IN STREET RIGHT-OF-WAY AND 4' (FOUR FEET) OF COVER FROM FINISHED GRADE WHEN CONSTRUCTED WITHIN EASEMENTS.
34. PIPE SLEEVES ARE TO BE #6 PVC, SCHEDULE 40 PIPE CAPPED AT EACH END.
35. ROOF DRAIN AND DOWNSPOUT COLLECTOR LINES SHALL BE PVC, SDR-26 PIPE (ASTM D2241) OR SCHEDULE 40 PIPE.
36. CONTRACTOR SHALL PROVIDE A MINIMUM OF 6" (SIX INCHES) VERTICAL CLEARANCE AT STORM SEWER AND WATER LINE CROSSINGS AND AT STORM SEWER AND SANITARY SEWER CROSSINGS.
37. MARK LOCATIONS OF ALL CABLE AND TELEPHONE LINES EXTENDING BENEATH PAVING BY SETTING A 600 GALVANIZED NAL FLUSH WITH TOP OF CURB (OR TOP OF PAVEMENT WHERE THERE IS NO CURB).
38. CONNECTION TO EXISTING MANHOLES / INLETS SHALL BE MADE IN A NEAT AND WORKMANLIKE MANNER.
39. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGE TO EXISTING PUBLIC OR PRIVATE UTILITY LINES, INCLUDING BUT NOT LIMITED TO WATER LINES, WASTEWATER COLLECTION SYSTEMS AND STORM SEWERS, DURING CONSTRUCTION.

UTILITY NOTES

- 40. EXISTING UTILITIES SHALL REMAIN IN SERVICE DURING THE CONSTRUCTION PERIOD UNTIL SUCH TIME THAT NEW UTILITIES CAN BE MADE OPERATIONAL.
41. REFER TO THE M.E.P. SHEETS FOR EXACT LOCATIONS OF WATER, FIRE, GAS AND SANITARY SEWER CONNECTIONS AT THE BUILDING.
42. REFERENCE M.E.P. SHEETS FOR REMOVAL AND/OR REROUTING OF ANY ELECTRICAL SERVICES OR ANY UTILITY LINE (ROOF DRAIN, SANITARY SEWER, ETC.) THAT LIES UNDER A PROPOSED STRUCTURE.
43. UTILITY CONTRACTOR SHALL PROVIDE TEMPORARY SILT BARRIER FENCE ON ALL NON-CURB INLETS WHICH WILL REMAIN IN PLACE AFTER UNDERGROUND CONSTRUCTION IS COMPLETE.
44. CONTRACTOR SHALL PROVIDE SILT BARRIER FENCE ON ALL STAGE 1 CURB INLETS.
45. THE CONTRACTOR SHALL INCLUDE IN THE PROPOSAL AN INCIDENTAL AMOUNT FOR THE SAW CUTTING, REMOVAL AND REPLACEMENT OF PAVEMENT AT ALL LOCATIONS WHERE PROPOSED UTILITIES CROSS EXISTING PAVEMENT.
46. WHEN CONNECTING TO EXISTING SANITARY SEWERS OR STORM DRAINAGE SYSTEMS, THE CONTRACTOR SHALL START AT THE DOWNSTREAM END AND WORK UPSTREAM.
47. TELEPHONE COMPANY FACILITIES MAY EXIST ON THE PROPERTY.
48. CAUTION: UNDERGROUND GAS FACILITIES
49. WARNING: OVERHEAD ELECTRICAL FACILITIES
50. ALL UNDERGROUND PIPE SHALL HAVE A 1/2 GAUGE METALLIC TRACER WIRE RUNNING THE FULL LENGTH OF THE PIPE.

PAVING AND GRADING NOTES

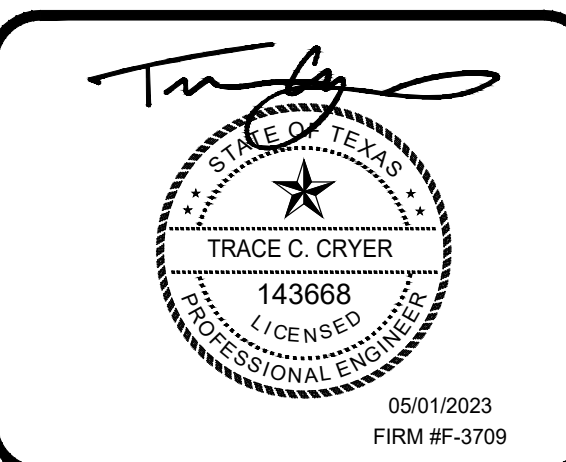
- 51. THE INLETS/MANHOLES SHALL BE COORDINATED WITH THE LOCATION OF PAVEMENT JOINT PATTERN WITHIN PAVEMENT AREAS.
52. EXPANSION JOINT MATERIAL SHALL BE PLACED BETWEEN THE BUILDING AND PERIMETER CONCRETE PAVING.
53. UNLESS OTHERWISE SPECIFIED, ALL PAVEMENT JOINT SEALANT SHALL BE SELF-LEVELING SILICONE JOINT SEALANT.
54. REFER TO STRUCTURAL FOR ANY DOWELS REQUIRED TYING THE BUILDING FOUNDATION AND ADJACENT CONCRETE PAVING TOGETHER.
55. SAVED JOINTS & TRANSVERSE JOINTS ARE TO BE EQUALLY SPACED BETWEEN EXPANSION JOINTS.
56. SAWING OF JOINTS MUST BEGIN AS SOON AS THE CONCRETE HAS HARDENED SUFFICIENTLY TO AVOID EXCESSIVE RAVELING.
57. THE CONTRACTOR SHALL REPLACE ANY DAMAGED AND/OR REMOVED CONCRETE PAVEMENT, CURB AND/OR WALK TO EQUAL OR BETTER THAN EXISTING CONDITION.
58. THE CONTRACTOR SHALL GRADE THE SITE AS INDICATED BY THE CONTOUR LINES.
59. AT ALL DOORWAYS, THE LANDING SHALL SLOPE AT A MAXIMUM OF 2% AWAY FROM DOORWAY FOR A MINIMUM OF 5 FEET.
60. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONSTRUCTING SILT FENCE OR PLACING SQUARE HAY BALES AT ALL POINTS WHERE STORMWATER RUNOFF EXISTS.
61. SITE TO BE CLEARED OF VEGETATION AND DEBRIS AS NECESSARY TO COMPLETE PROJECT OR AS DIRECTED BY ENGINEER.
62. ALL EXCESS DEBRIS, TREES, AND/OR WASTE MATERIALS SHALL BE REMOVED FROM THE SITE AND DISPOSED OF PROPERLY.
63. BACKFILL TO TOP OF NEW PAVEMENT OR CURBS WITH CLEAN SOIL FREE OF CLODS.
64. WHERE NEW CONCRETE PAVING MEETS EXISTING CONCRETE PAVING, INSTALL 3/4" SMOOTH DOWELS.
65. PAVEMENT GRADES SHALL VARY UNIFORMLY BETWEEN ELEVATIONS SHOWN.
66. SECURE PRECAST CONCRETE WHEEL STOPS BY DRILLING AND SETTING #4 DOWELS INTO PAVEMENT.
67. FILL AREAS NOTED ON PLANS SHALL BE FILLED IN LAYERS NOT EXCEEDING 6" IN DEPTH.
68. CONTRACTOR SHALL INSTALL A GRASS SOLID SOD ADJACENT TO ALL PROPOSED CURBS, DRIVES AND/OR WALLS.
69. MATCH ALL ELEVATIONS WHERE PROPOSED PAVEMENT ADJOINS EXISTING PAVEMENT.
70. PRIOR TO ANY CHEMICAL STABILIZATION OF SOIL WITH LIME, FLY ASH OR ANY OTHER MATERIAL.
71. TOPSOIL SHALL BE FERTILE, FRAGILE, NATURAL SANDY LOAM SURFACE SOIL.
72. HYDROMULCH ALL DISTURBED AREAS, UNLESS OTHERWISE NOTED.

CIVIL LEGEND table with symbols and descriptions: 201 PROPOSED CONTOUR, PROPOSED CATCH BASIN (C-1), PROPOSED 'A' INLET (A-1), PROPOSED 'E' INLET (E-1), PROPOSED STORM MANHOLE W/ GRATE TOP, PROPOSED MANHOLE, PROPOSED H-2 OR JUNCTION BOX INLET, GATE VALVE & BOX, PIPE SLEEVES, PIPE SLEEVES, MAPPING SLEEVE A VALVE, TOP OF CURB ELEVATION, TOP OF PAVEMENT ELEVATION, TOP OF GRATE ELEVATION, TOP OF RIM (MANHOLE), FINISH GRADE ELEVATION, MATCH EXISTING GRADE, FLOWLINE ELEVATION, SWALE, THRU FLOWLINE ELEVATION ('E' INLET), FIRE HYDRANT, MANHOLE, CLEAN OUT, DOUBLE CLEAN OUT, DOWNSPOUT COLLECTOR, NOT IN CONTRACT, ROOF DRAIN COLLECTOR, GATE VALVE, STORM SEWER, SANITARY SEWER, REINFORCED CONCRETE PIPE, HIGH DENSITY POLYETHYLENE, FILTER FABRIC FENCE, REINFORCED FABRIC BARRIER, INLET PROTECTION BARRIER, EXPANSION JOINT, LONGITUDINAL CONSTRUCTION JOINT, LONGITUDINAL-TIED CONSTRUCTION JOINT, SAWED TRANSVERSE CONSTRUCTION JOINT, UTILITY EASEMENT, SANITARY SEWER EASEMENT, EDGE OF PAVEMENT, HIGH BANK OF DITCH, CENTERLINE OF DITCH, POWER POLE, GUY WIRE, GAS METER, PHONE BOX, FENCE CORNER, CABLE BOX, NATURAL GROUND, EXISTING ELEVATION, PROPOSED ELEVATION, ATHLETIC LIGHTPOLE, ELECTRICAL PEDISTAL, HOSE BIB.



ARCHITECT PBK Architects, Inc. HOUSTON 11 Greenway Plaza, 22nd Floor Houston, TX 77046 713-965-9608 P 713-961-4571 F TX Firm: F-3709

LEGENDS EVENT CENTER - EXTERIOR AMENITIES CITY OF BRYAN CONTRACT NO. 20-020 - CO 01 2633 MIDTOWN PARK BLVD. BRYAN, TX 77801 ISSUE FOR CONSTRUCTION

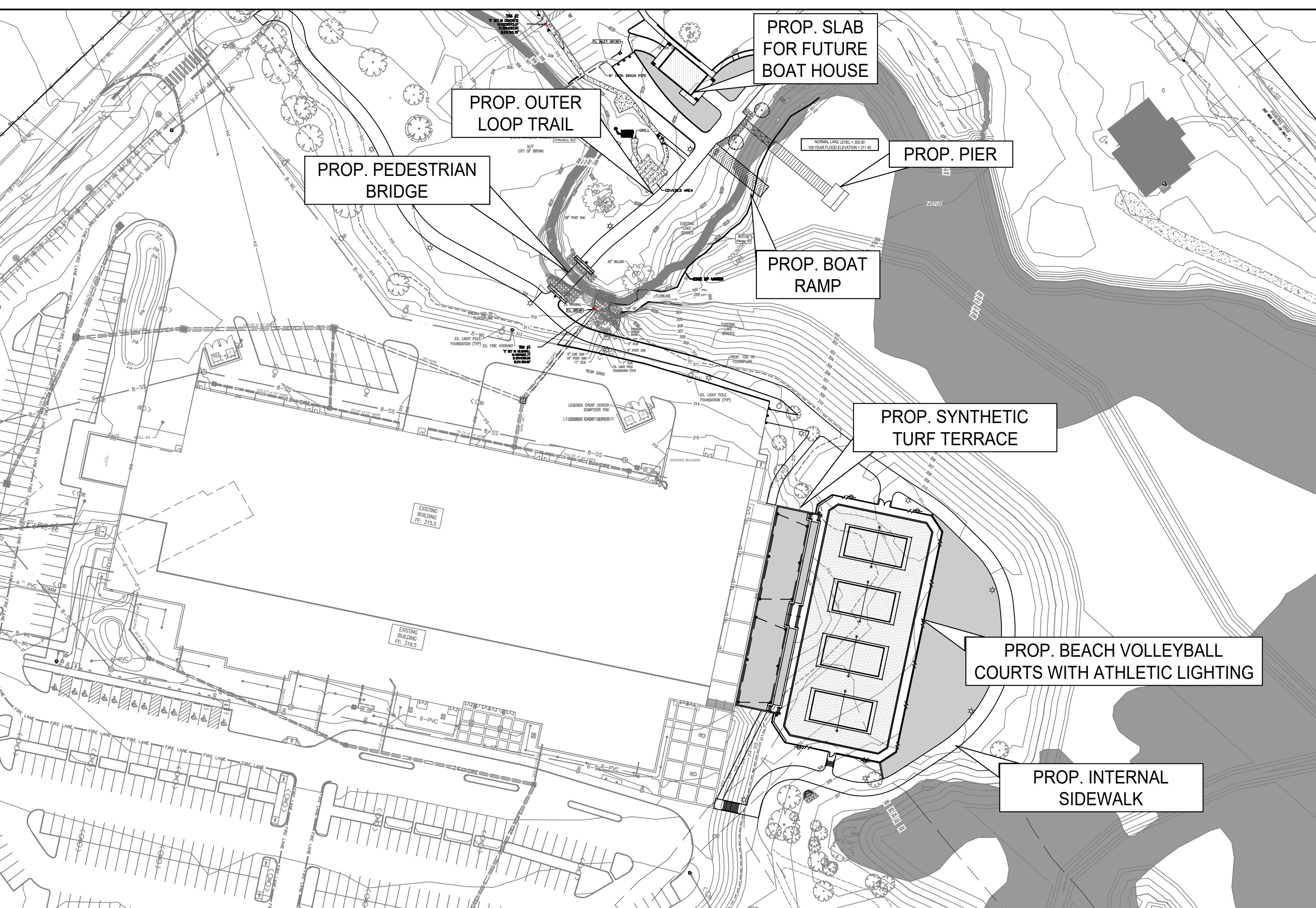


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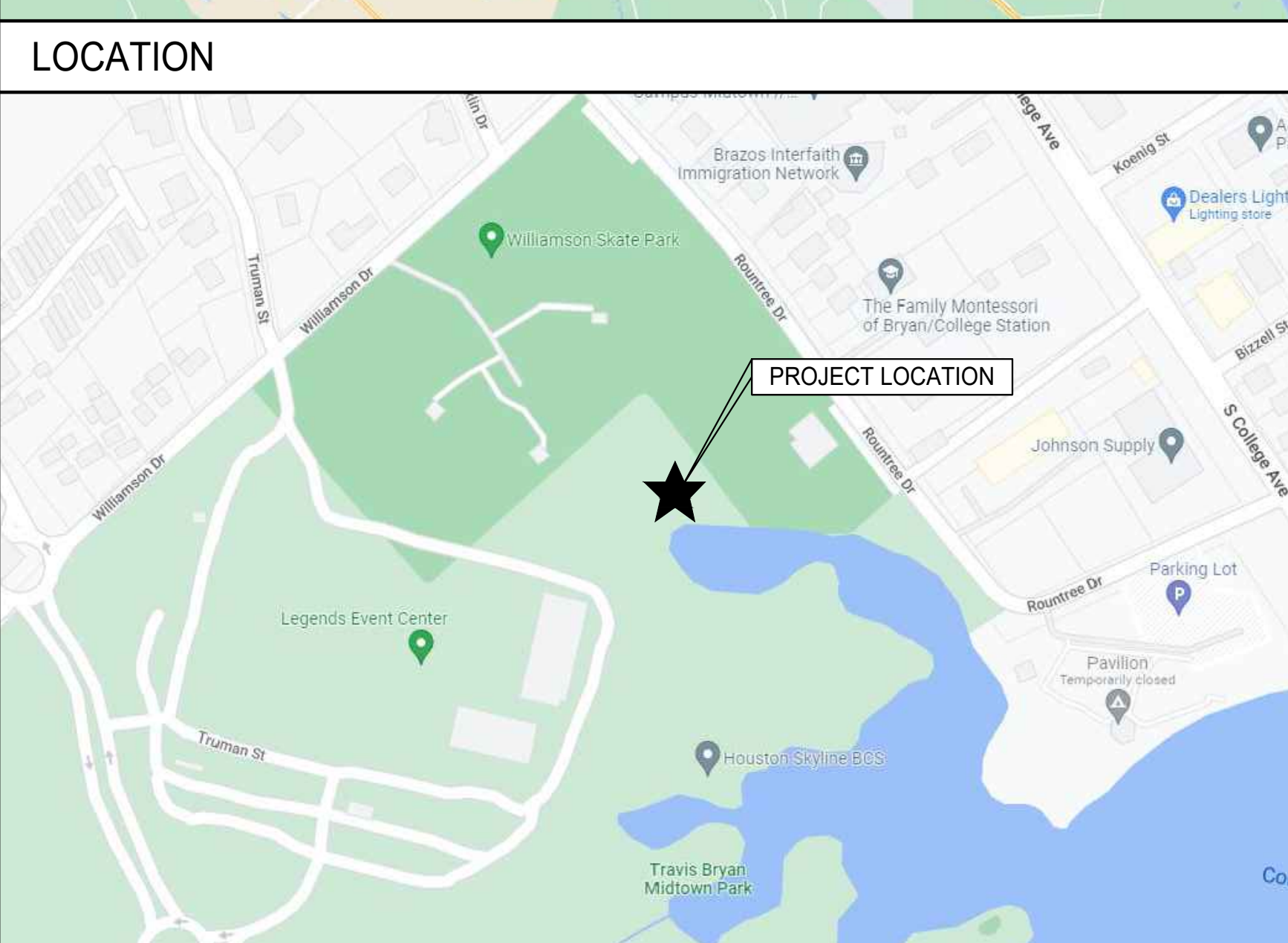
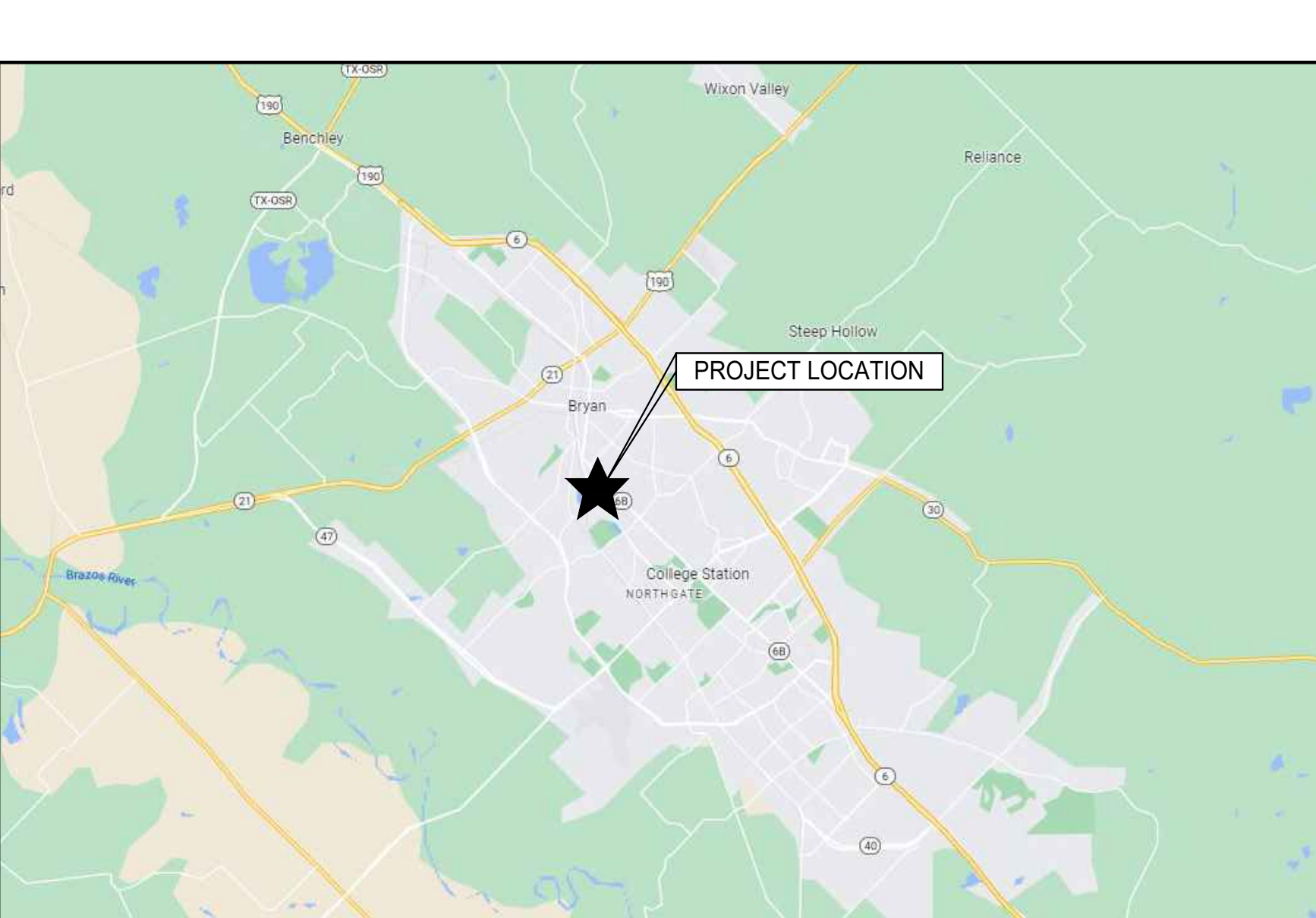
ISSUE FOR CONSTRUCTION INDEX, NOTES AND LEGEND

CA 001

GENERAL NOTES



SITE PLAN



VICINITY BRYAN, TX 77801

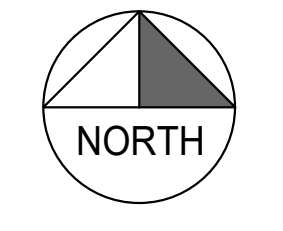
CIVIL LEGEND

PROJECT NAME: LEGENDS EVENT CENTER - EXTERIOR AMENITIES LEGAL DESCRIPTION: COUNTRY CLUB LAKE ADDN, BLOCK 1, LOT 2 (PT OF), ACRES 98.6 PHYSICAL ADDRESS: 206 W WILLA MARIA RD BRYAN, TX TOTAL ACREAGE OF EXISTING LOT: 98.6 ACRES ZONE: PLANNED DEVELOPMENT DISTRICT (PD)

Table with columns SHEET and DESCRIPTION. Lists sheets CA 000 through CA 508 and their descriptions: CIVIL COVER, INDEX, NOTES, AND LEGENDS, EXISTING CONDITIONS, DEMOLITION PLAN, etc.

CIVIL INDEX OF DRAWINGS

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NOTES TO SHEET

- CONTRACTOR SHALL TAKE EXTREME PRECAUTION TO PROTECT SURROUNDING FACILITIES DURING CONSTRUCTION.
- REPLACE AND REPAIR ALL ASPHALT AND CONCRETE PAVING DAMAGED OR REMOVED FOR UTILITY INSTALLATION.
- REPAINT ANY PARKING LOT STRIPING DAMAGED OR REMOVED DURING CONSTRUCTION.

LEGEND

SAWCUT, REMOVE AND DISPOSE OF EXISTING CONCRETE OR ASPHALT SECTION TO EXISTING SUBGRADE ELEVATION. REPAIR SOLID SOIL AND IRRIGATION SYSTEM.

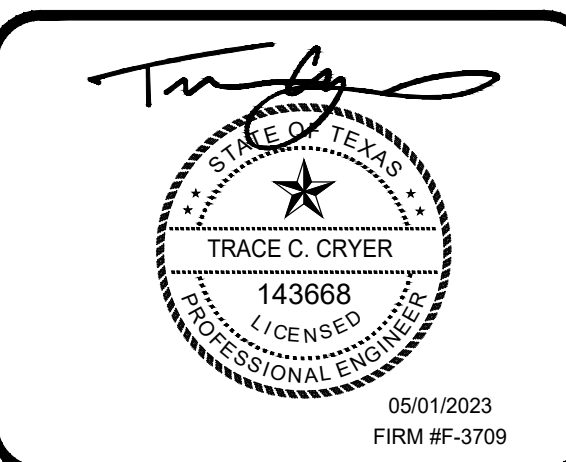


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DOUGLAS ENGINEERING
1914-999-655
SITE STRUCTURAL
KARLA ENGINEERING
713-965-2339
MEP TECHNOLOGY
"CLEAR AND BROAD THINKERS"
1315-21-8181

LEGENDS EVENT CENTER - EXTERIOR AMENITIES
CITY OF BRYAN CONTRACT NO. 20-020 - CO 01

26333 MIDTOWN PARK BLVD.
BRYAN, TX
77801
ISSUE FOR CONSTRUCTION



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| CLIENT CITY OF BRYAN | | |
| DATE 05/01/2023 | PROJECT NUMBER 20197SP | |
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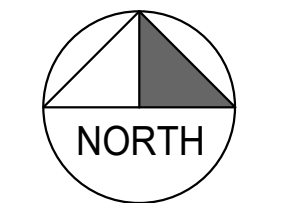
DEMOLITION
PLAN

CA 003

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NOTES TO SHEET

- REFER TO SPECIFICATION SECTION 32 18 23.30.1 FOR ADDITIONAL INFORMATION ON SYNTHETIC TURF.
- THE SYNTHETIC TURF SYSTEM SHALL BE A NON-FILLED SYNTHETIC TURF SYSTEM INSTALLED OVER A DECOMPOSED CRUSHED GRANITE BASE.
- ALL NEW FENCING TO BE BLACK ORNAMENTAL INCLUDING ALL HARDWARE.
- DIMENSIONS ARE BASED ON AS-BUILT DRAWINGS. ALL DIMENSIONS SHALL BE FIELD VERIFIED BY CONTRACTOR.
- ALL SWING GATES SHALL OPEN OUTSIDE OF THE COURTS AND SHALL HAVE STOPS INSTALLED TO PREVENT GATES SWINGING INTO THE FIELD.



VICINITY MAP

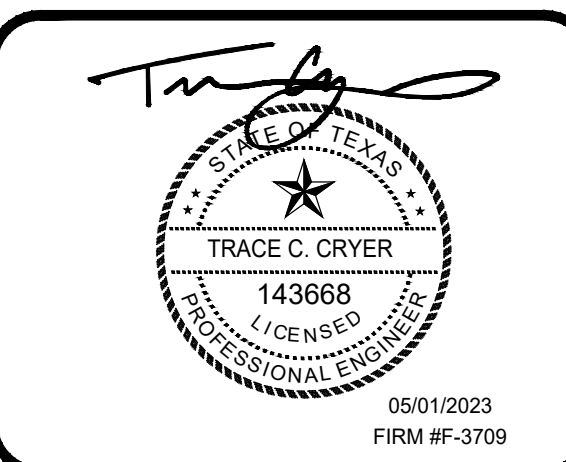


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 STRUCTURAL
 DOCKEY ENGINEERING
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 SITE STRUCTURAL
 HARRIS ENGINEERING
 713-965-3359
 MECHANICAL/ELECTRICAL
 "CLAYTON L. HARRIS ENGINEERS"
 713-241-8181

LEGENDS EVENT CENTER - EXTERIOR AMENITIES
 CITY OF BRYAN CONTRACT NO. 20-020 - 001

2633 MIDTOWN PARK BLVD.
 BRYAN, TX
 77801
 ISSUE FOR CONSTRUCTION



CLIENT CITY OF BRYAN
 DATE 05/01/2023 PROJECT NUMBER 20197SP

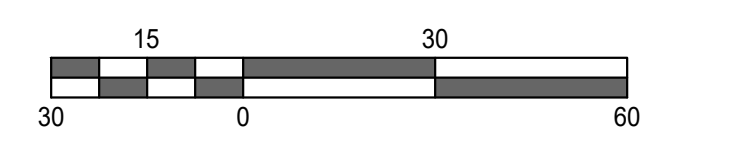
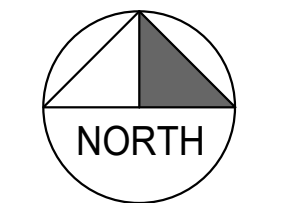
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ISSUE FOR CONSTRUCTION

SITE PLAN

CA 101

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NOTES TO SHEET

1. DIMENSIONS ARE BASED ON AS-BUILT DRAWINGS. ALL DIMENSIONS SHALL BE FIELD VERIFIED BY CONTRACTOR.
2. ENGINEER TO BE NOTIFIED IMMEDIATELY OF ANY VARIATION FROM THE DIMENSIONS, AND OTHER CONDITIONS SHOWN BY THESE DRAWINGS.

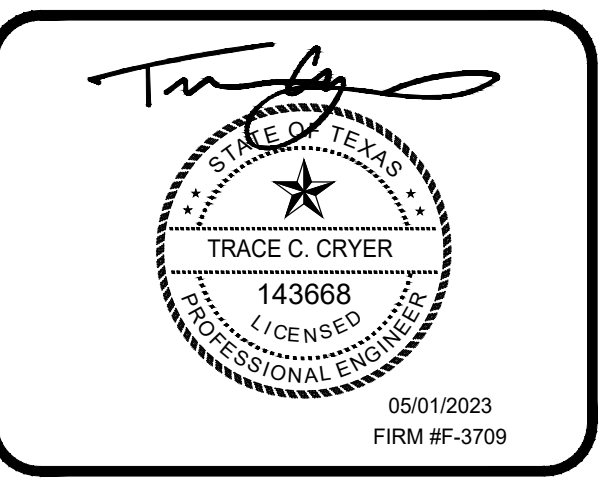
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 SITE STRUCTURAL ENGINEER: **DOUGLAS ENGINEERING**
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LEGENDS EVENT CENTER - EXTERIOR AMENITIES
 CITY OF BRYAN CONTRACT NO. 20-020 - CO 01

2633 MIDTOWN PARK BLVD.
 BRYAN, TX
 77801

ISSUE FOR CONSTRUCTION

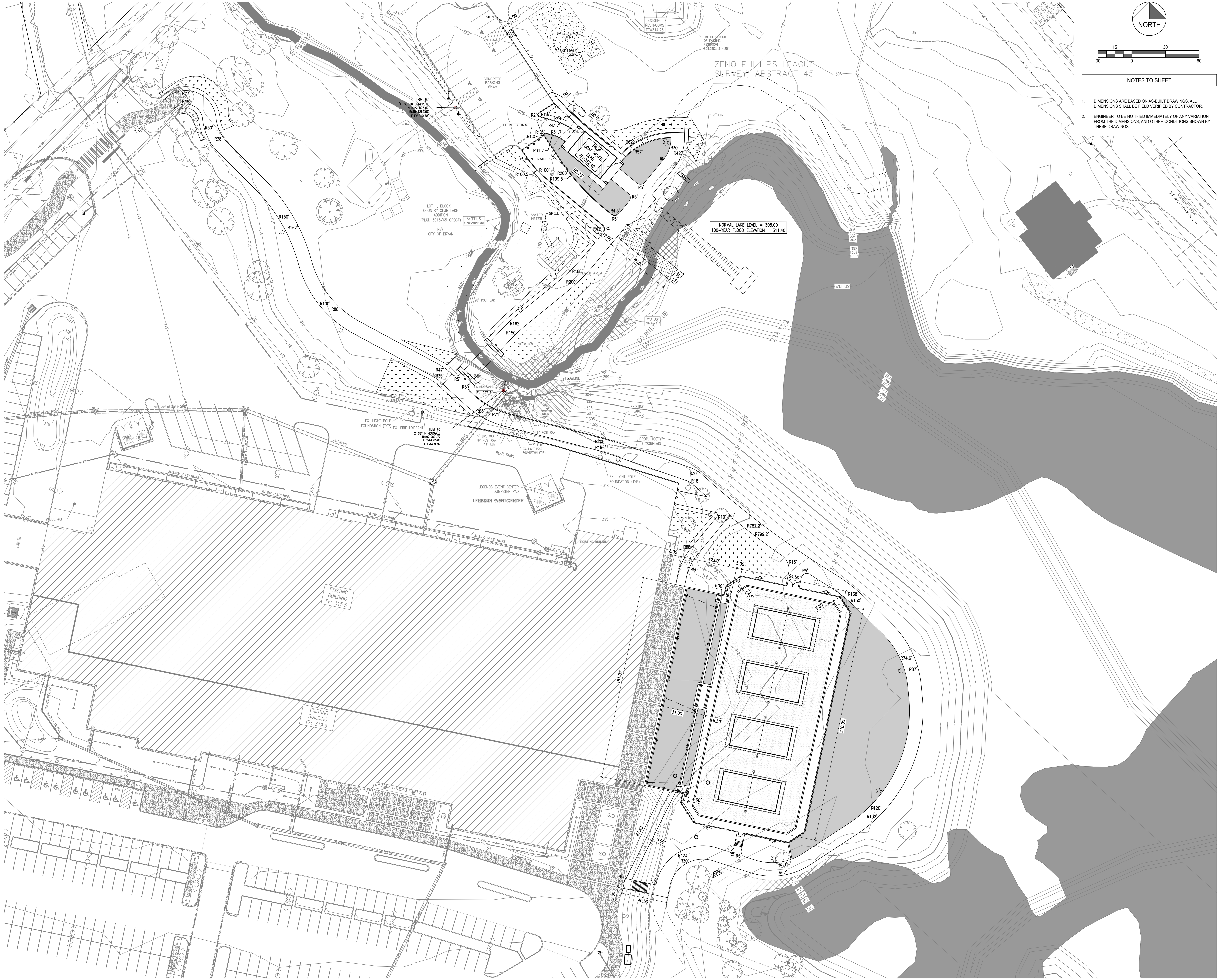


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ISSUE FOR CONSTRUCTION

DIMENSIONAL CONTROL PLAN

CA 102



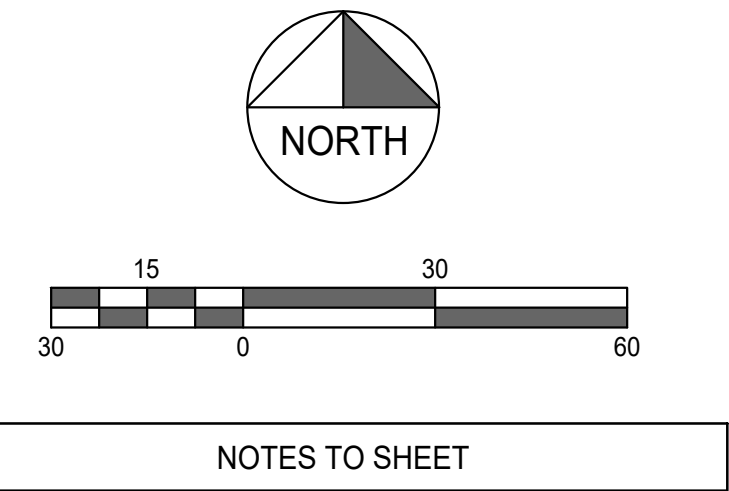
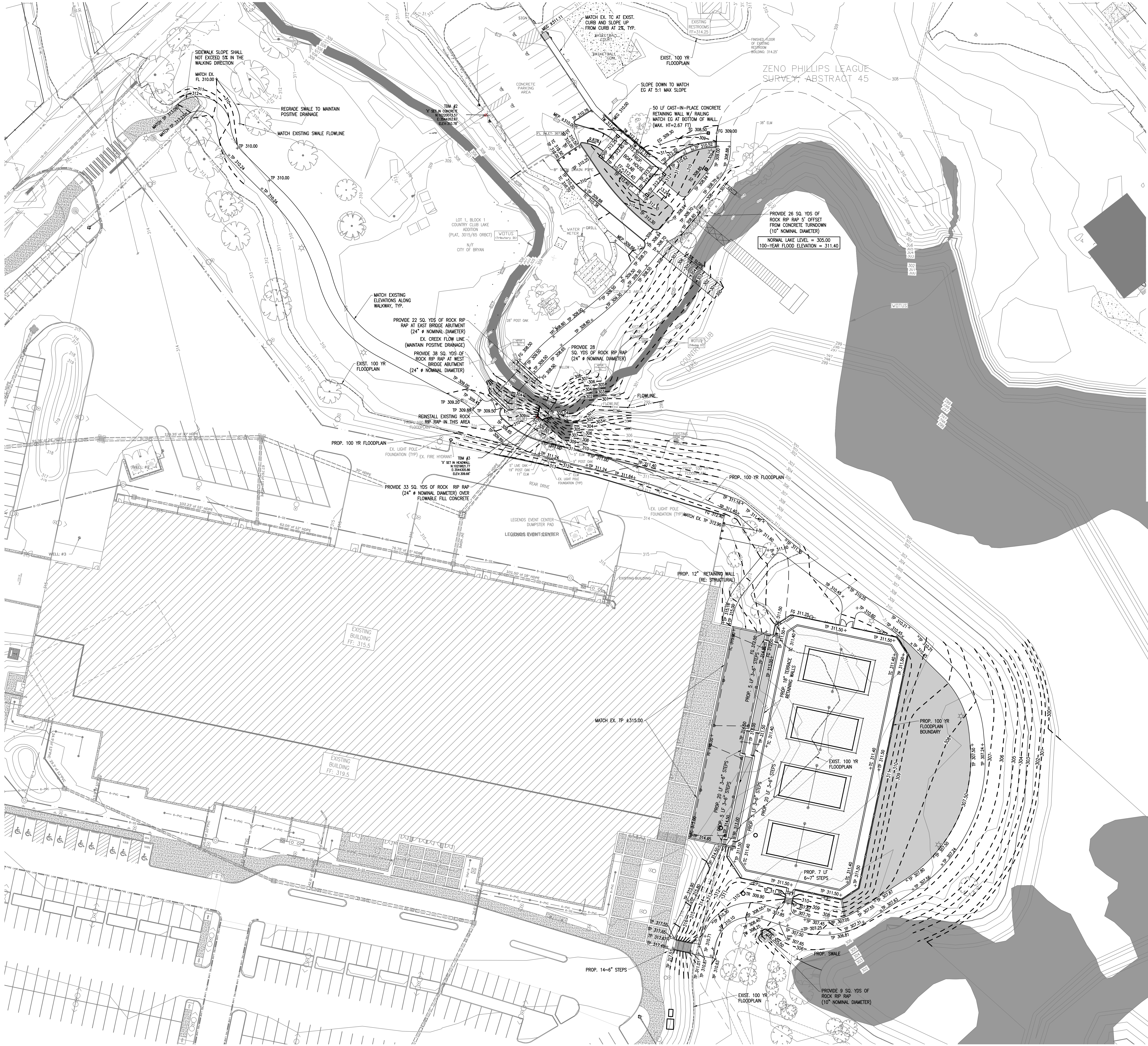
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- NOTES TO SHEET**
- TOP OF DAILER BOARD SHALL BE 3/4" BELOW TOP OF CURB.
 - REFER TO DETAILS FOR SUBGRADE PREPARATION.
 - SOME ELEVATIONS ARE BASED ON AS-BUILT DRAWINGS AT THE LEGENDS EVENT CENTER. FIELD VERIFY ALL ELEVATIONS AND NOTIFY ENGINEER IF DISCREPANCIES EXIST.

- LEGEND**
- | | |
|------|----------------------|
| TC | TOP OF CURB |
| FL | FLOW LINE |
| TP | TOP OF PAVEMENT |
| TSub | TOP OF SUBGRADE |
| TR | TOP OF RIM |
| TG | TOP OF GRATE |
| TN | TOP OF MAILER |
| A-X | AREA INLET |
| ID-X | INLINE DRAIN |
| CB-X | CATCH BASIN |
| MEG | MATCH EXISTING GRADE |
| TS | TOP OF SIDEWALK |
| TW | TOP OF WALL |
| TM | TOP OF MOW STRIP |

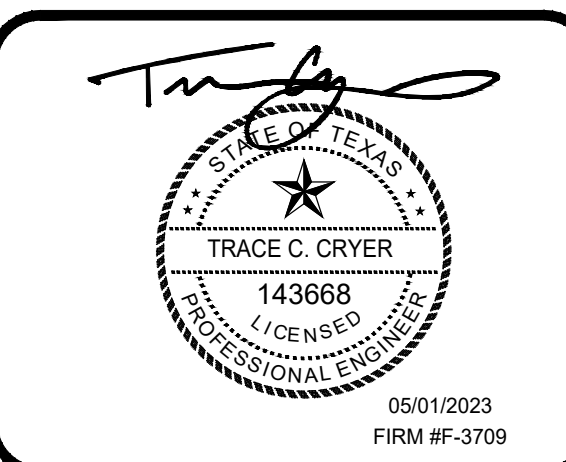
- SIDEWALK
- 5' LIGHT DUTY CONCRETE (3500 PSI)
W/ 8" LIME STABILIZED SUBGRADE
- 6' MEDIUM DUTY CONCRETE (3500 PSI)
W/ 6" LIME STABILIZED SUBGRADE
- NON-FILLED LAWN TURF
- FLEXTERRA HYDROMULCH
- BEACH VOLLEYBALL PIT
- HYDROMULCH
- COMMON BERMUDA
SOLID SOD



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LEGENDS EVENT CENTER - EXTERIOR AMENITIES
 CITY OF BRYAN CONTRACT NO. 20-020 - CO 01

26333 MIDTOWN PARK BLVD.
 BRYAN, TX
 77801
 ISSUE FOR CONSTRUCTION

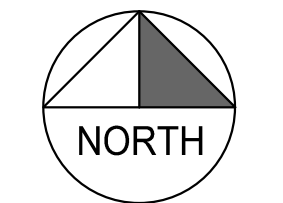
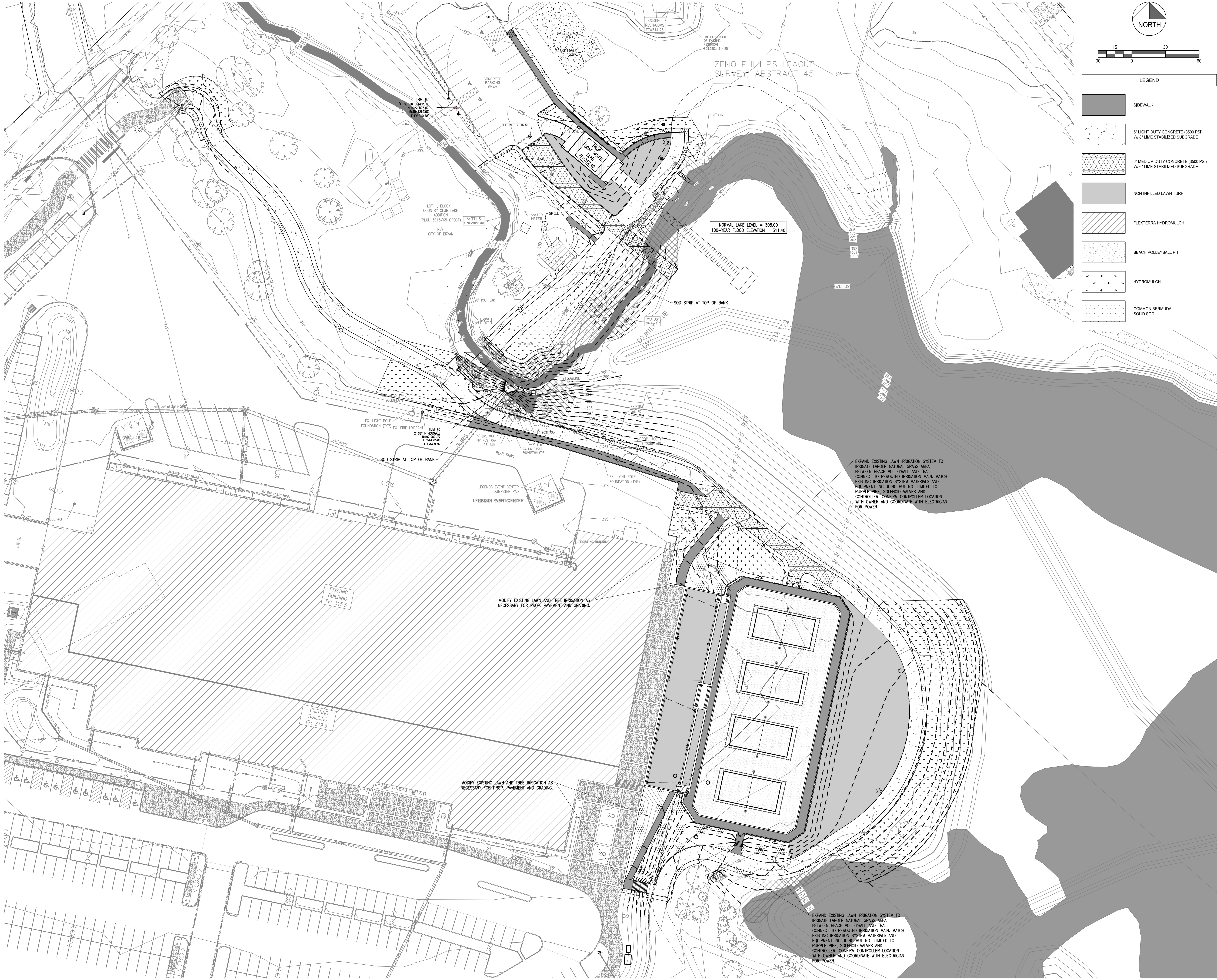


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ISSUE FOR CONSTRUCTION

GRADING PLAN

CA 301



LEGEND

| | |
|-----------|---|
| [Pattern] | SIDEWALK |
| [Pattern] | 5" LIGHT DUTY CONCRETE (3500 PSI) W/ 6" LIME STABILIZED SUBGRADE |
| [Pattern] | 6" MEDIUM DUTY CONCRETE (3500 PSI) W/ 6" LIME STABILIZED SUBGRADE |
| [Pattern] | NON-FILLED LAWN TURF |
| [Pattern] | FLEXITERRA HYDROMULCH |
| [Pattern] | BEACH VOLLEYBALL PIT |
| [Pattern] | HYDROMULCH |
| [Pattern] | COMMON BERMUDA SOLID SOD |

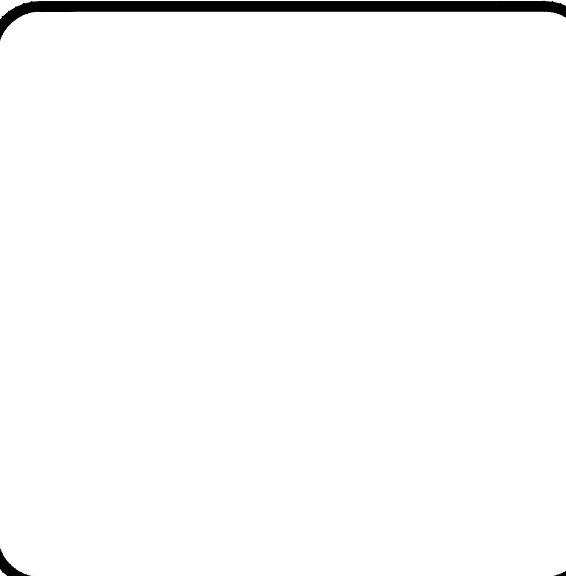


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 PBK SPORTS
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 STRUCTURAL
 CIVIL ENGINEERING
 119421.0000
 SITE STRUCTURAL
 MECHANICAL ENGINEERING
 119421.0000
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LEGENDS EVENT CENTER - EXTERIOR AMENITIES
 CITY OF BRYAN CONTRACT NO. 20-020 - CO 01

26333 MIDTOWN PARK BLVD.
 BRYAN, TX
 77801
 ISSUE FOR CONSTRUCTION



CLIENT
 CITY OF BRYAN
 DATE
 05/01/2023
 PROJECT NUMBER
 20197SP

DRAWING HISTORY

| No. | Description | Date |
|-----|-------------|------|
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ISSUE FOR CONSTRUCTION

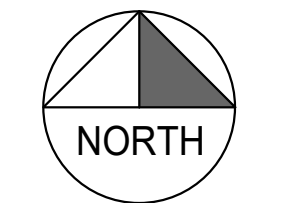
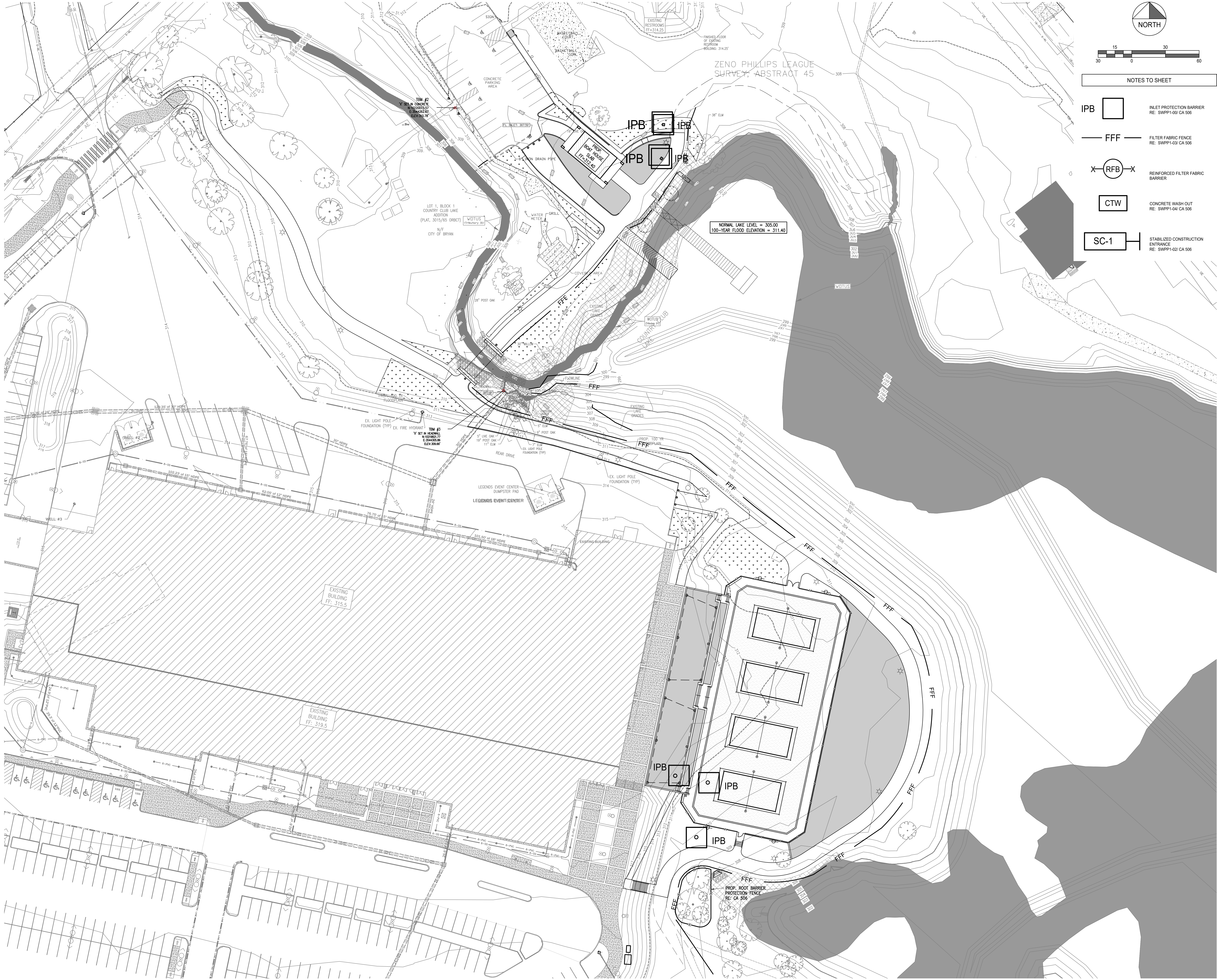
PAVING AND
 GROUND COVER
 PLAN

CA 303

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 Tuesday, May 2, 2023 12:07:48 PM

CHECKED BY: TC

DRAWN BY: SG



NOTES TO SHEET

- IPB INLET PROTECTION BARRIER
RE: SWPP1-03/ CA 506
- FFF FILTER FABRIC FENCE
RE: SWPP1-03/ CA 506
- X (RFB) X REINFORCED FILTER FABRIC BARRIER
- CTW CONCRETE WASH OUT ENTRANCE
RE: SWPP1-04/ CA 506
- SC-1 STABILIZED CONSTRUCTION ENTRANCE
RE: SWPP1-02/ CA 506



ARCHITECT PBK Architects, Inc.
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713-965-0608 P
713-961-4571 F
TX Firm: F-3709

THE ARCHITECTS INC
11111 Katy Road, Suite 100
Houston, TX 77058
713-965-0608
STRUCTURAL
DOUGLAS ENGINEERING
11111 Katy Road, Suite 100
Houston, TX 77058
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SITE STRUCTURAL
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11111 Katy Road, Suite 100
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MECHANICAL
DOUGLAS ENGINEERING
11111 Katy Road, Suite 100
Houston, TX 77058
713-965-0608

LEGENDS EVENT CENTER - EXTERIOR AMENITIES
CITY OF BRYAN CONTRACT NO. 20-020 - CO 01

2633 MIDTOWN PARK BLVD.
BRYAN, TX
77801

ISSUE FOR CONSTRUCTION



| CLIENT | | CITY OF BRYAN |
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| DATE | 05/01/2023 | PROJECT NUMBER |
| DRAWING HISTORY | | 20197SP |
| No. | Description | Date |
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ISSUE FOR CONSTRUCTION

EROSION CONTROL PLAN

CA 401

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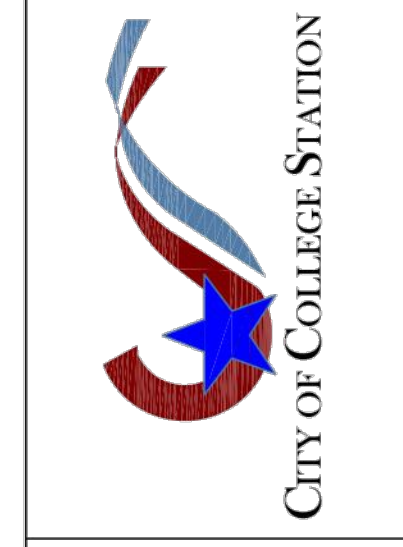
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REVISIONS:

| | |
|----------|--|
| 7/1/2016 | Detail W6-00 thru W6-04 Accepted for use by COB |
|----------|--|

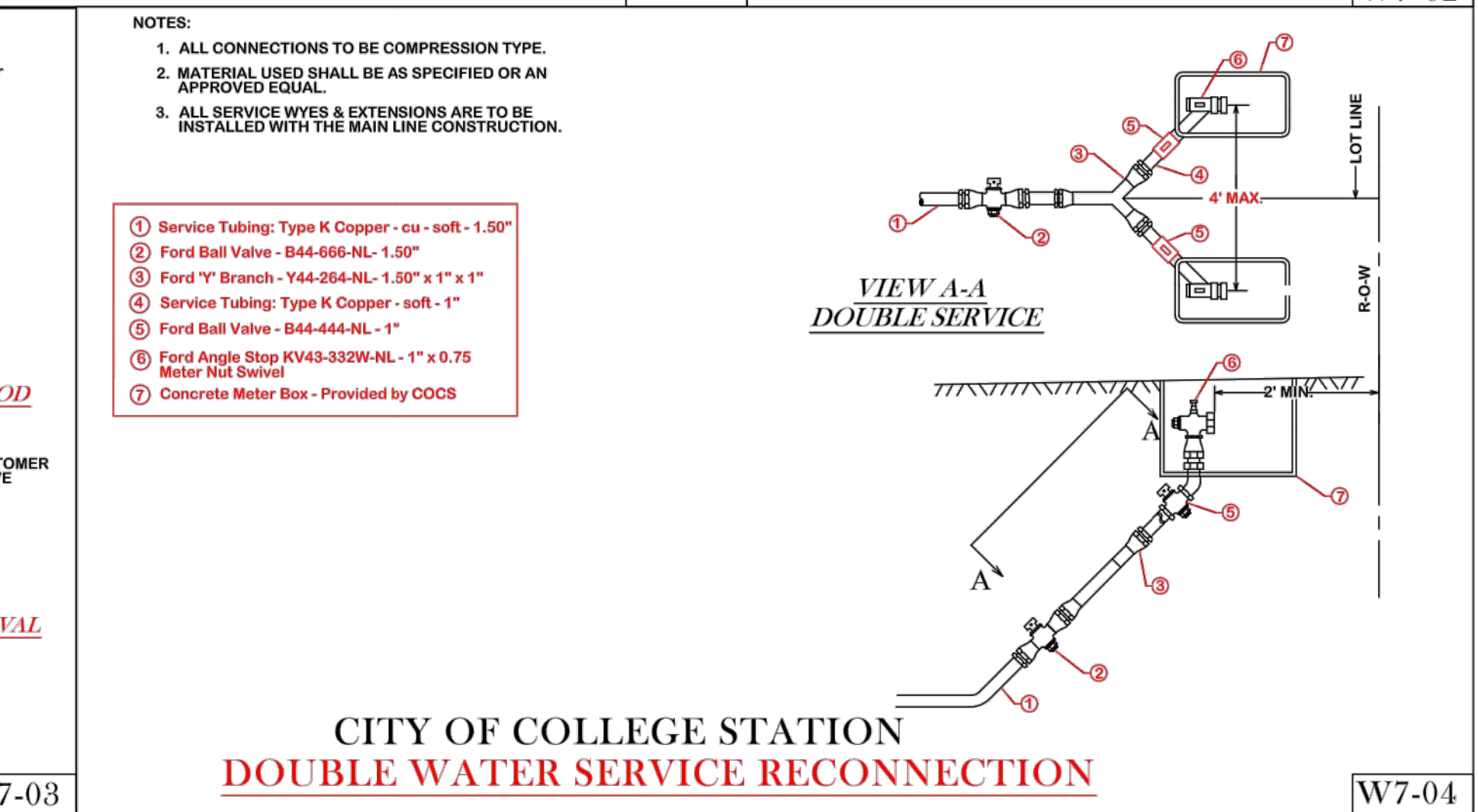
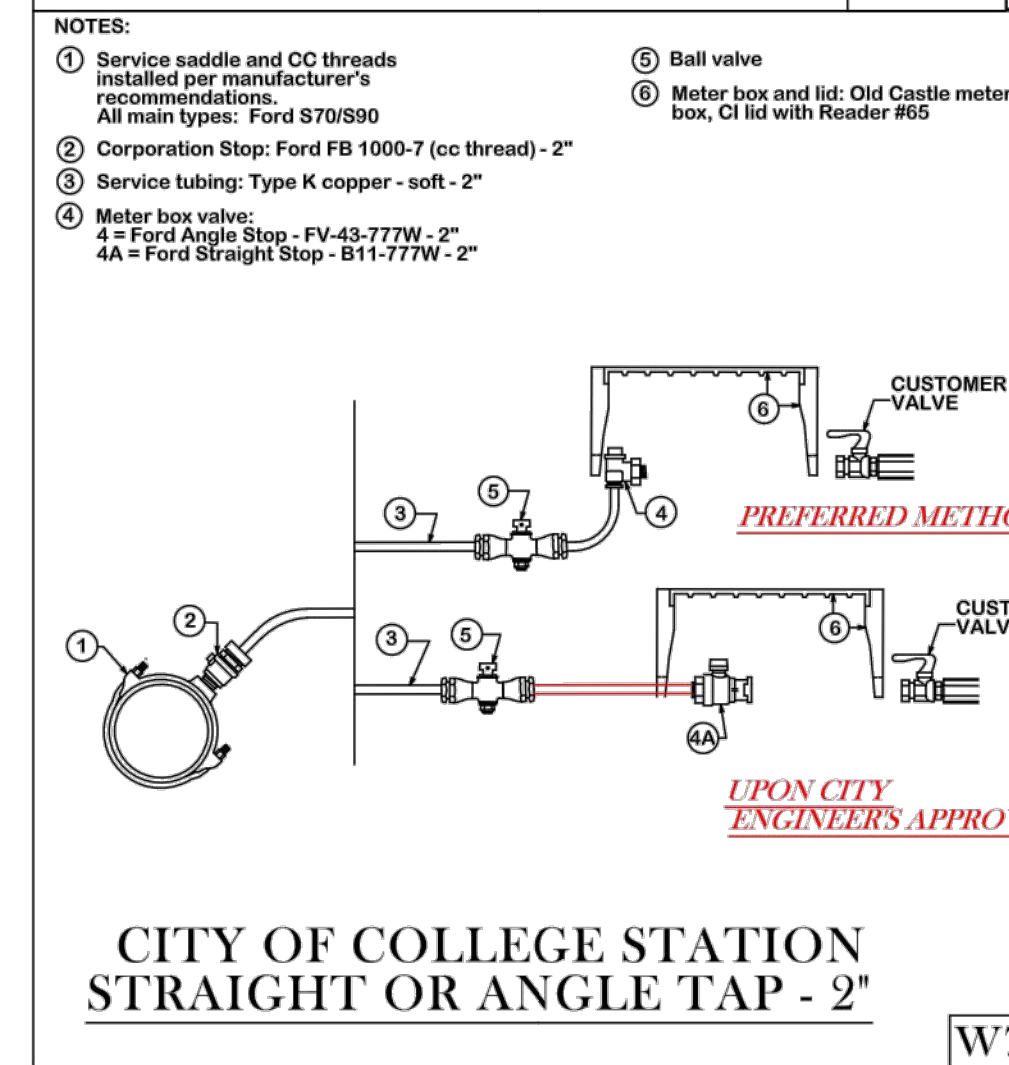
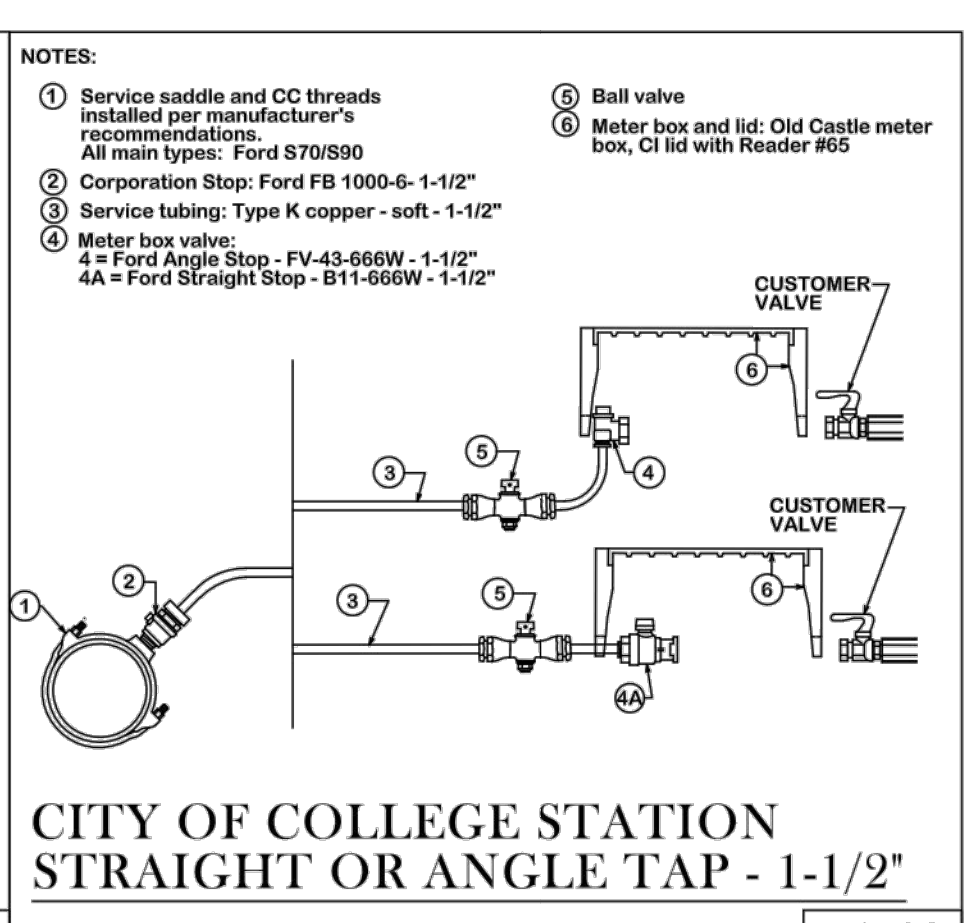
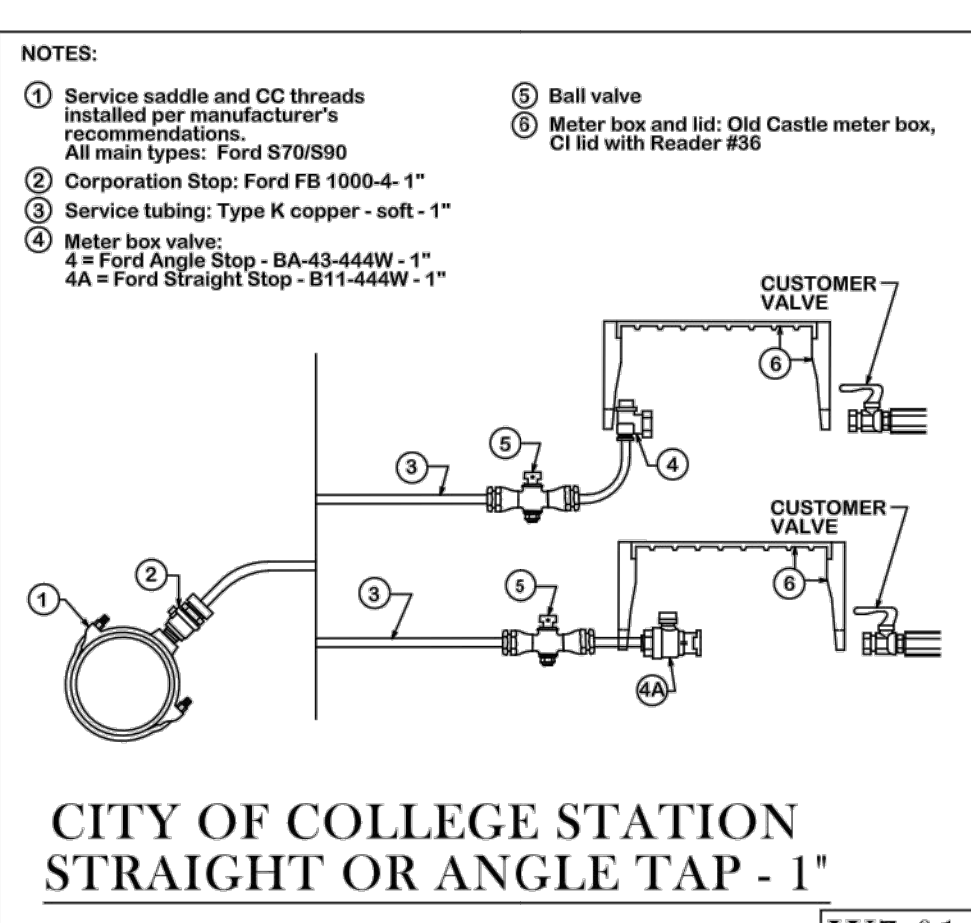
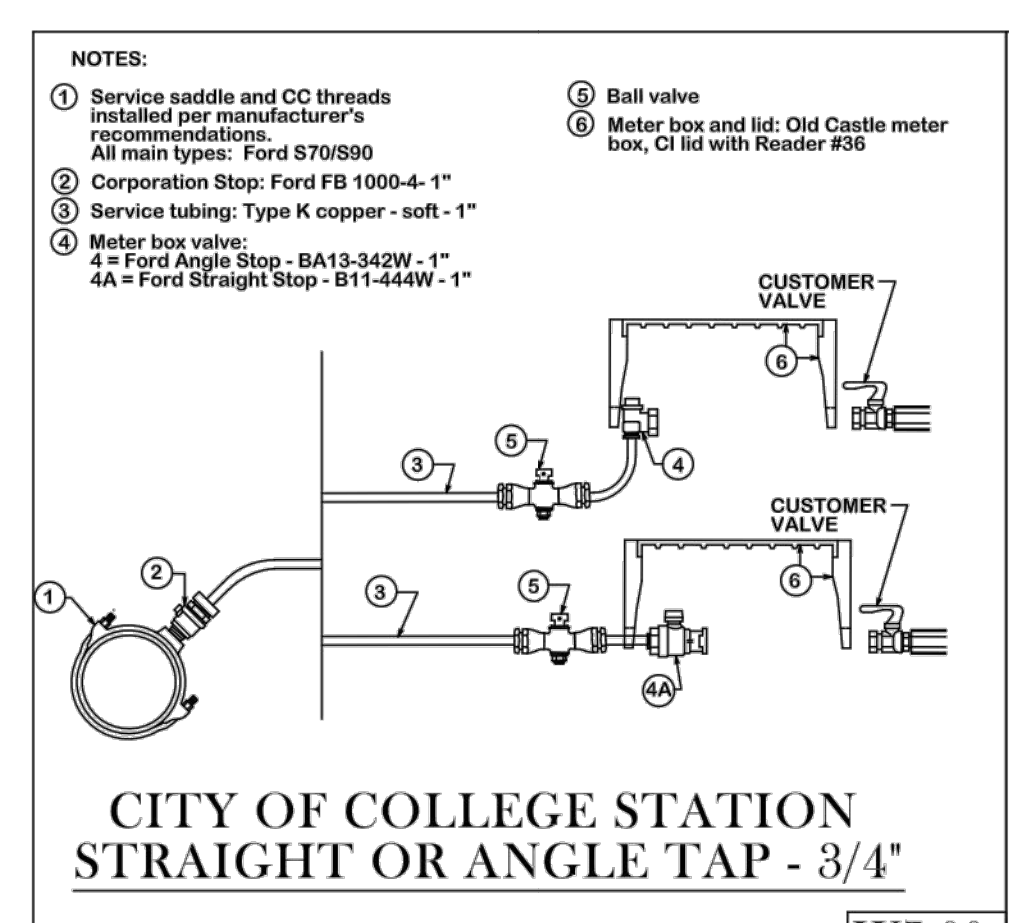
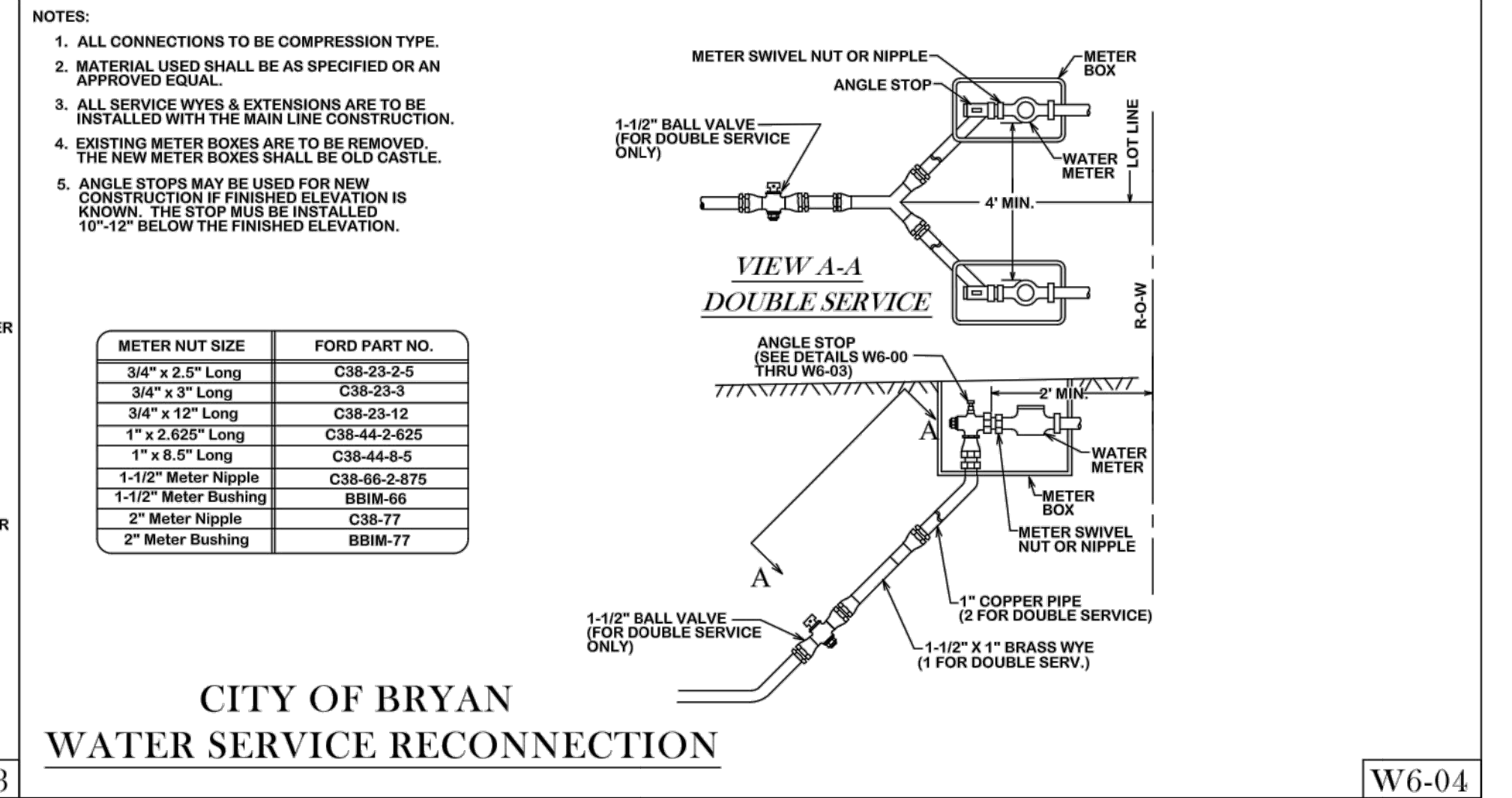
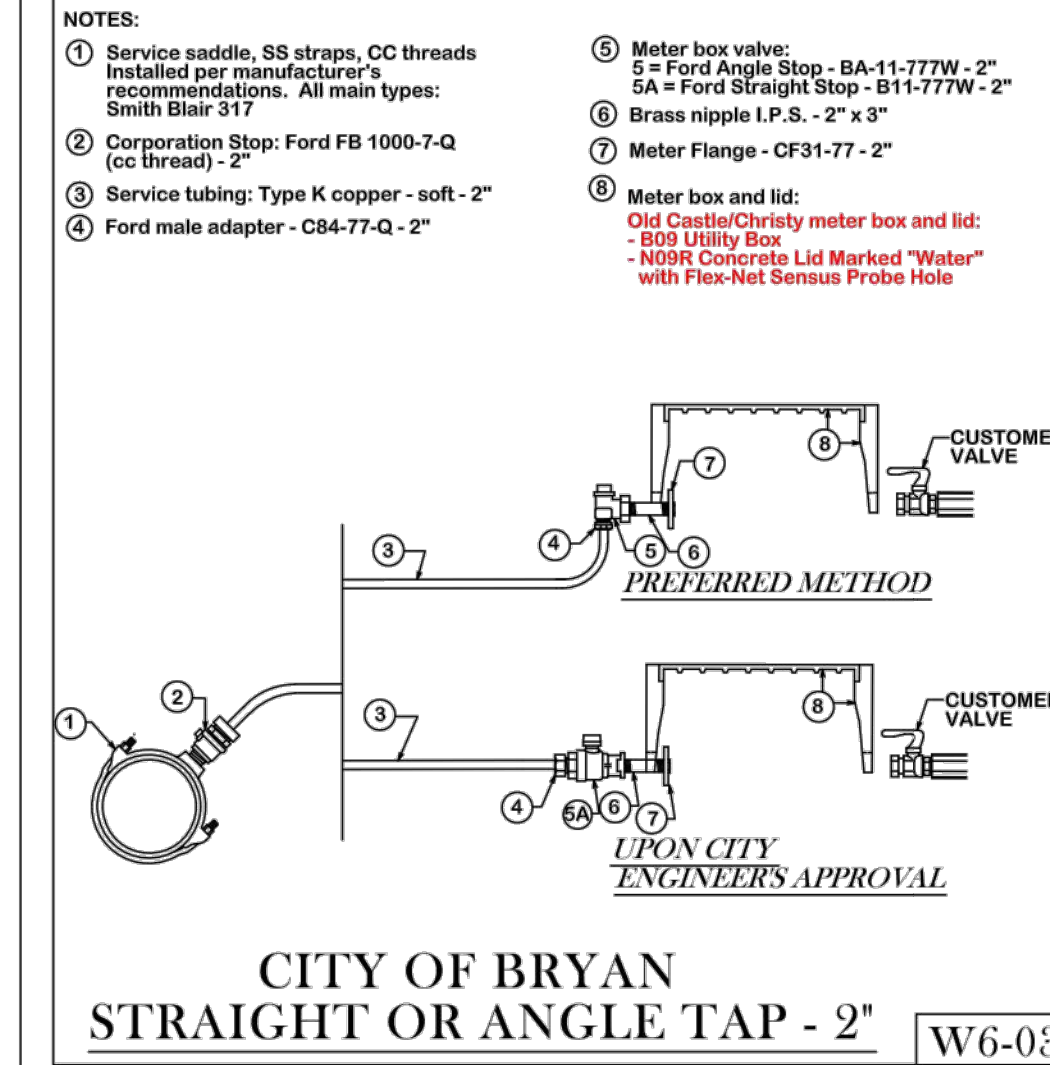
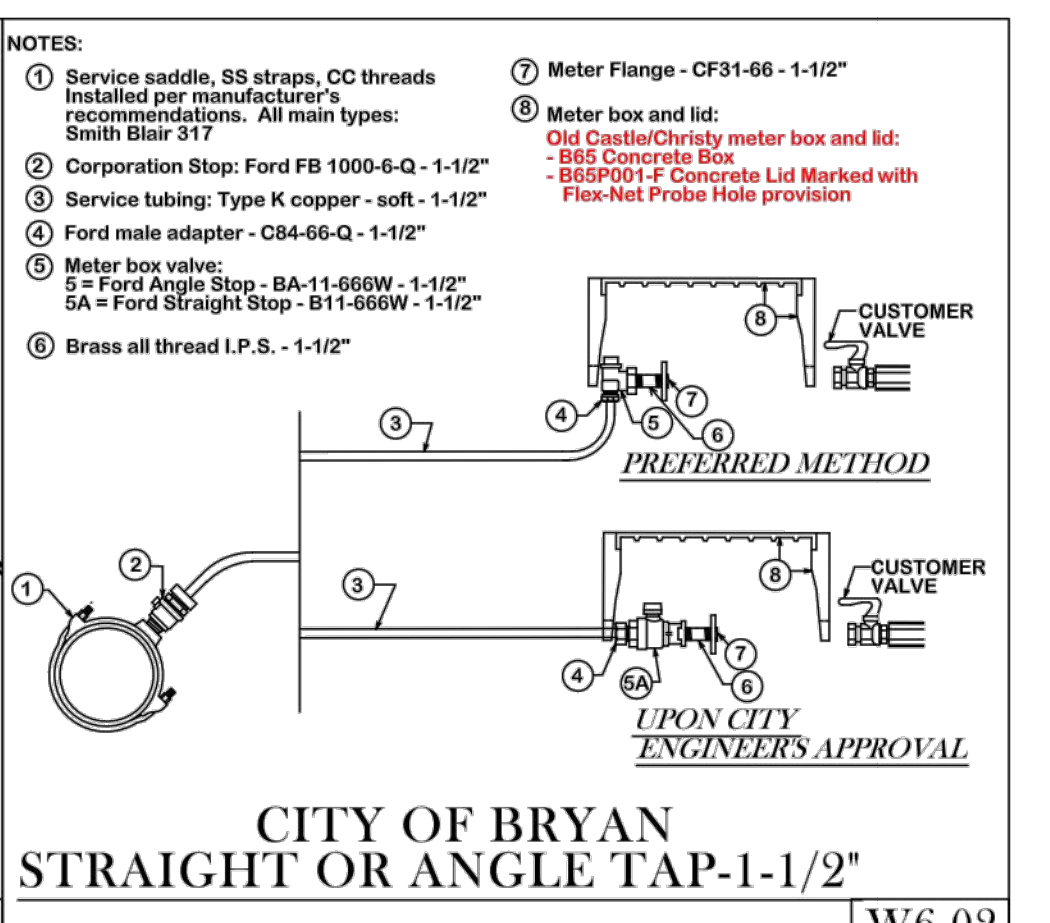
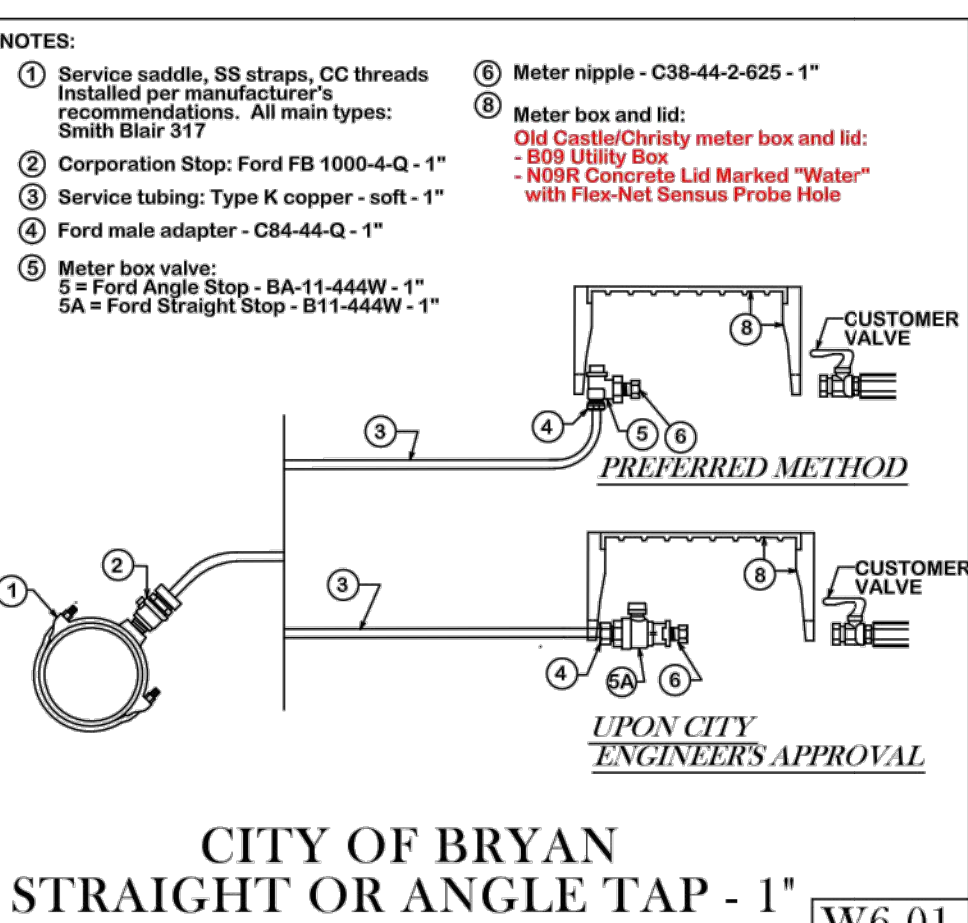
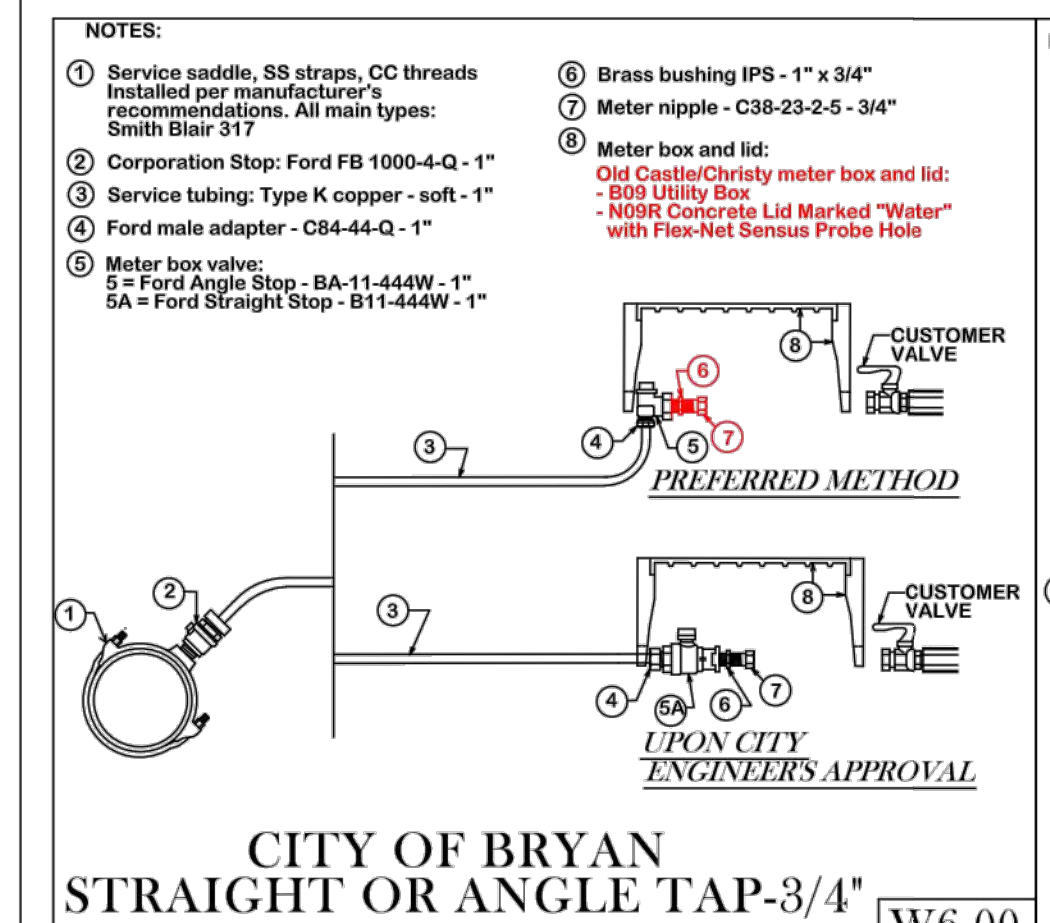
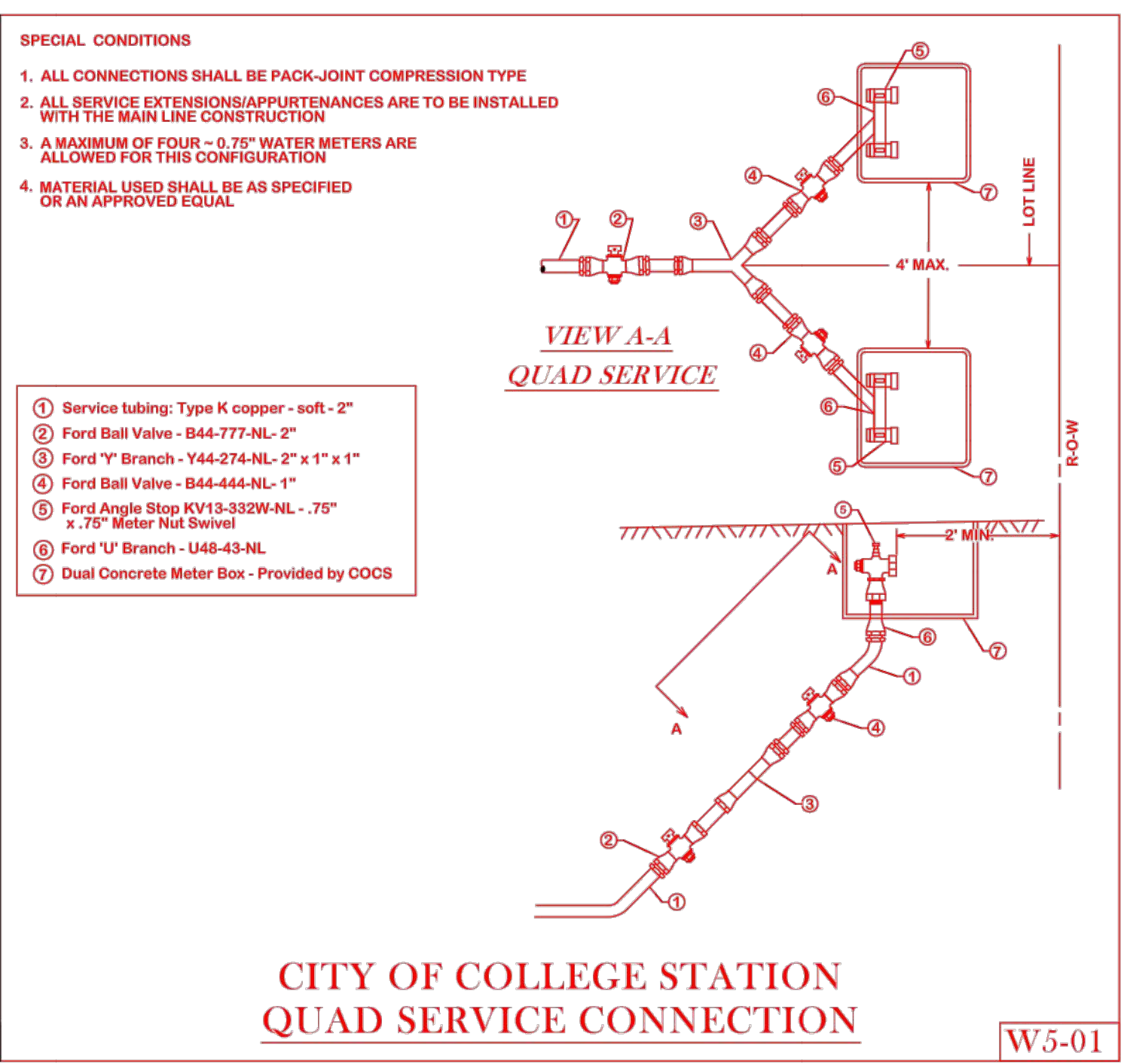
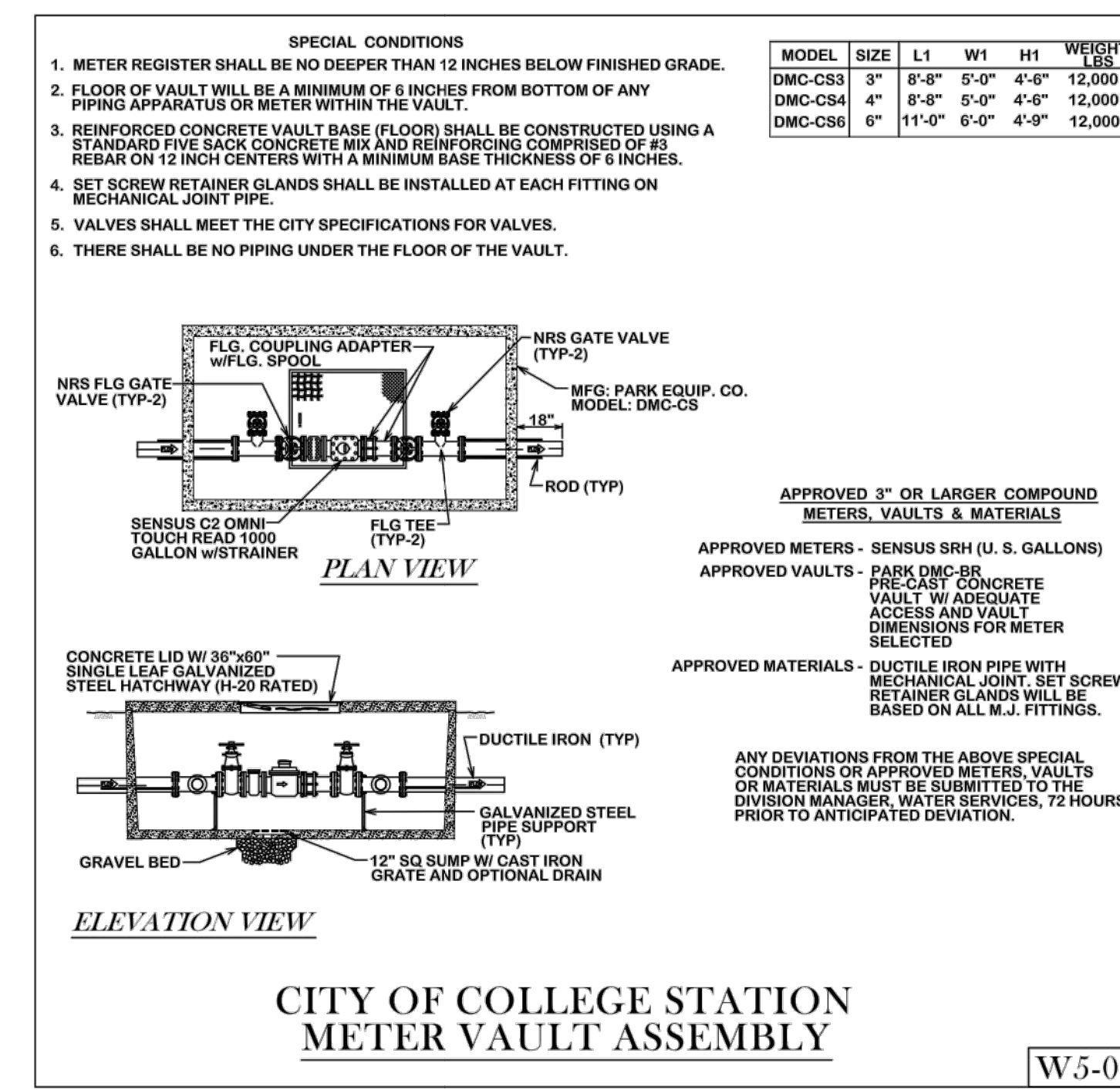
**BRYAN - COLLEGE STATION
 STANDARD WATER DETAILS**



DRAWN BY: B.I.
 DATE: 12/2020
 SCALE: N.T.S.
 APPROVED: W.P.K.

FIGURE:
W2

SHEET 2 OF 2



CHECKED BY: TC

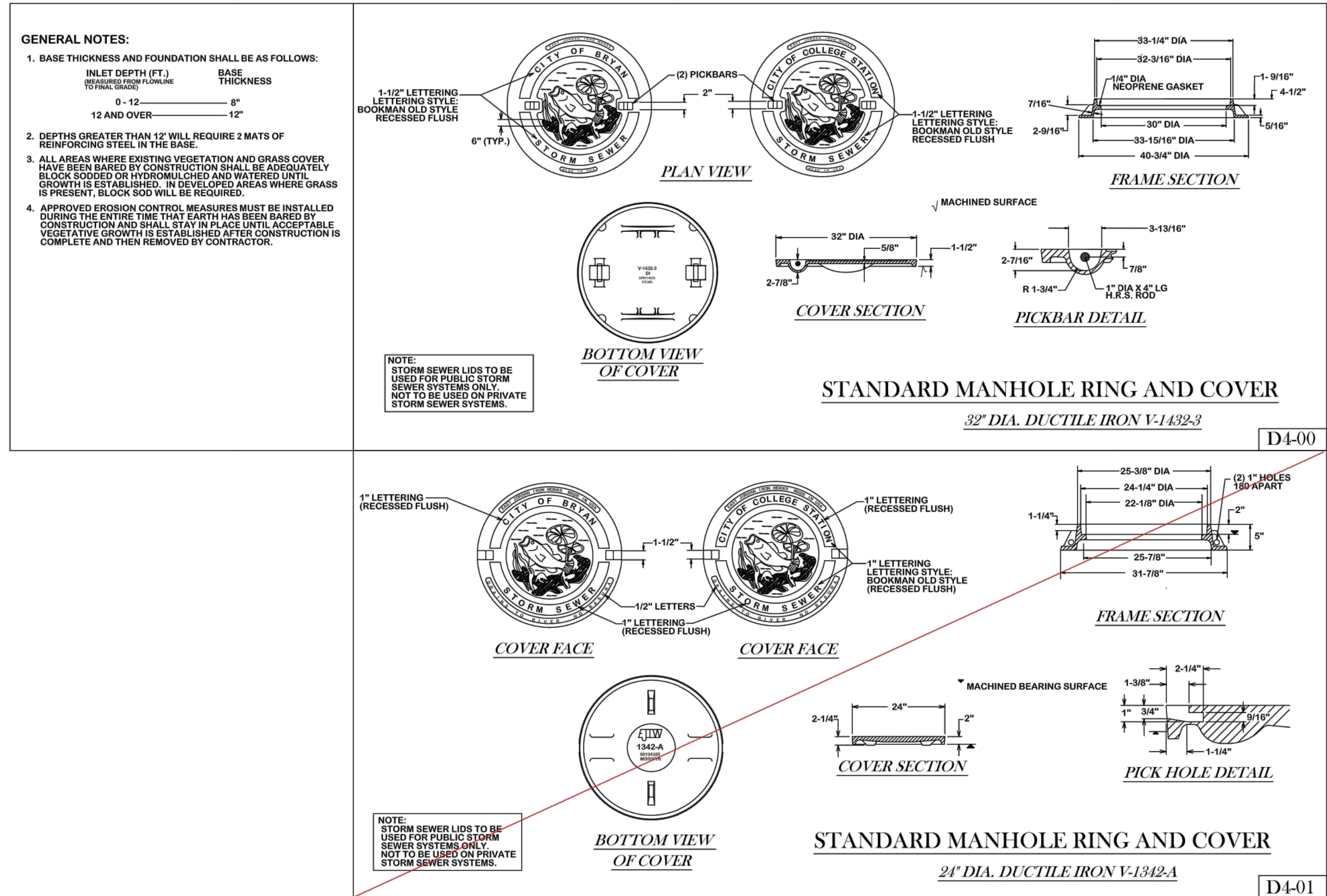
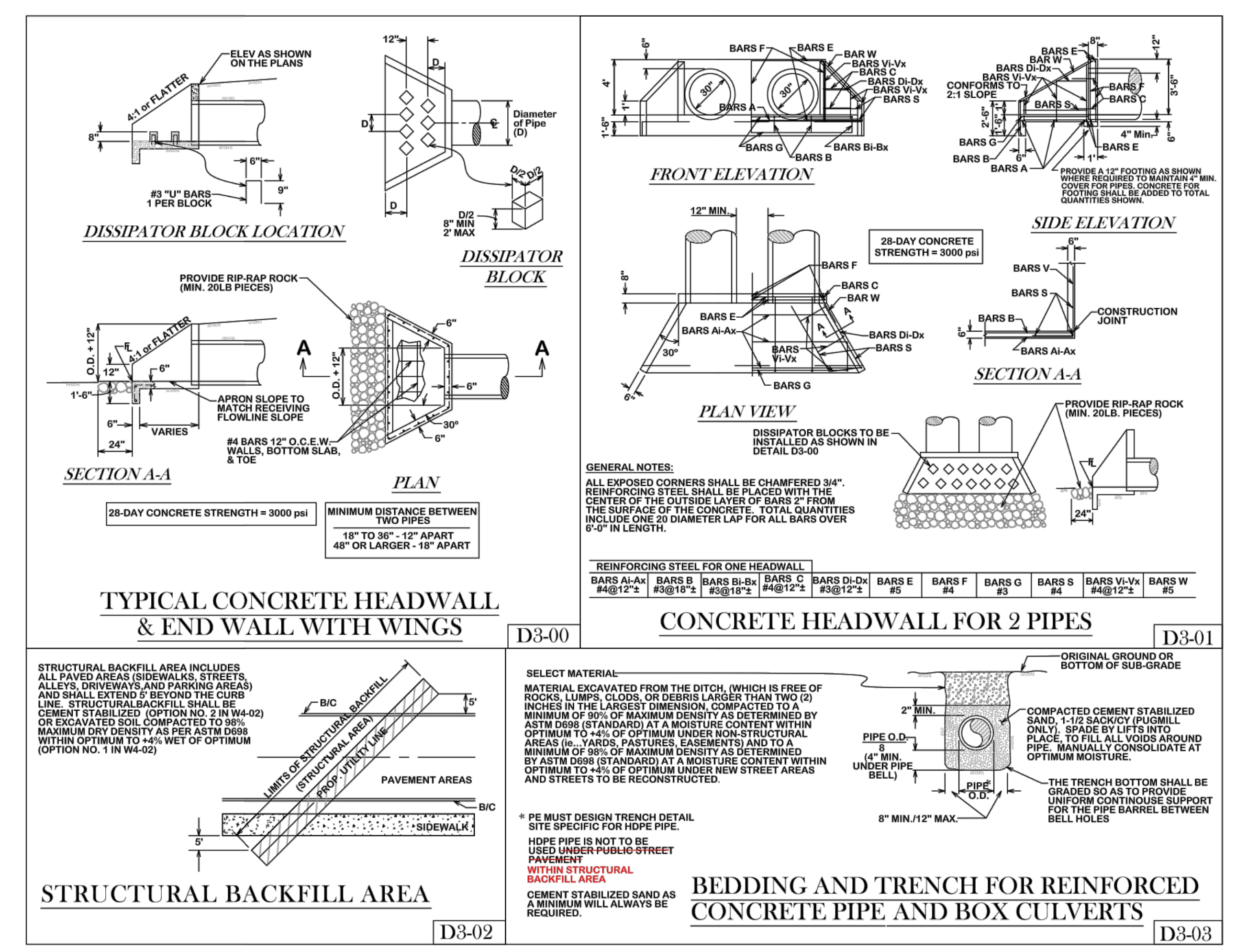
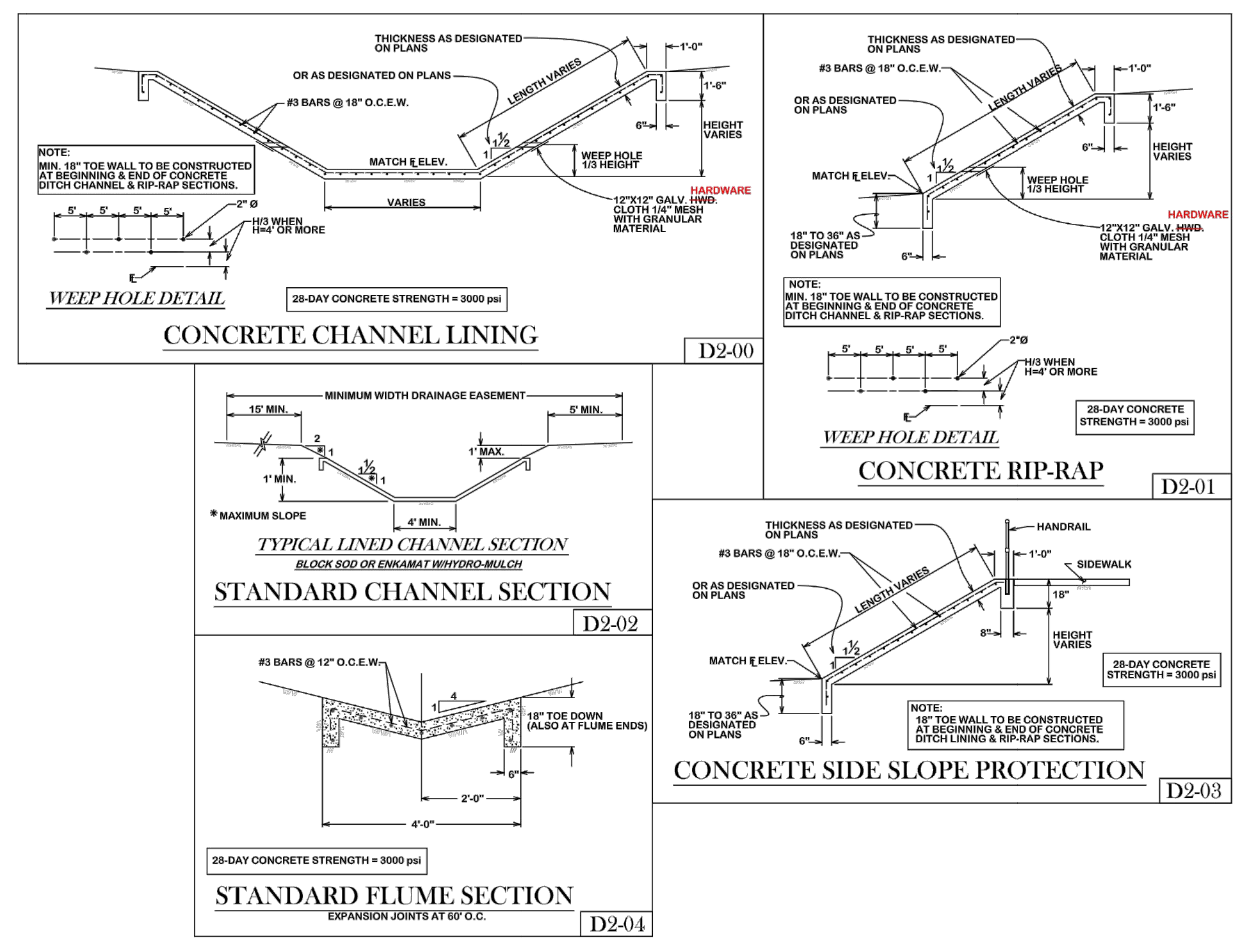
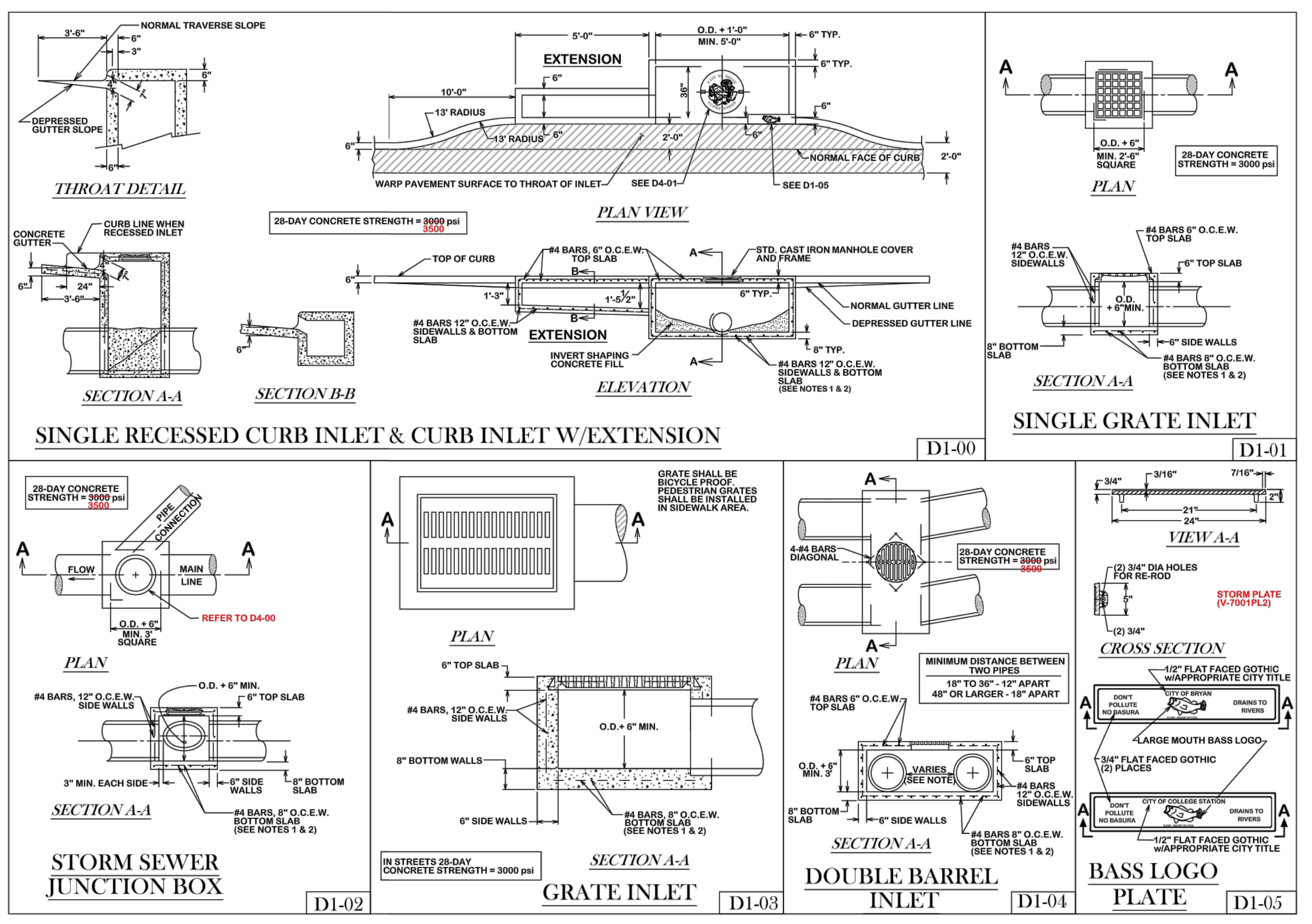
DRAWN BY: SG

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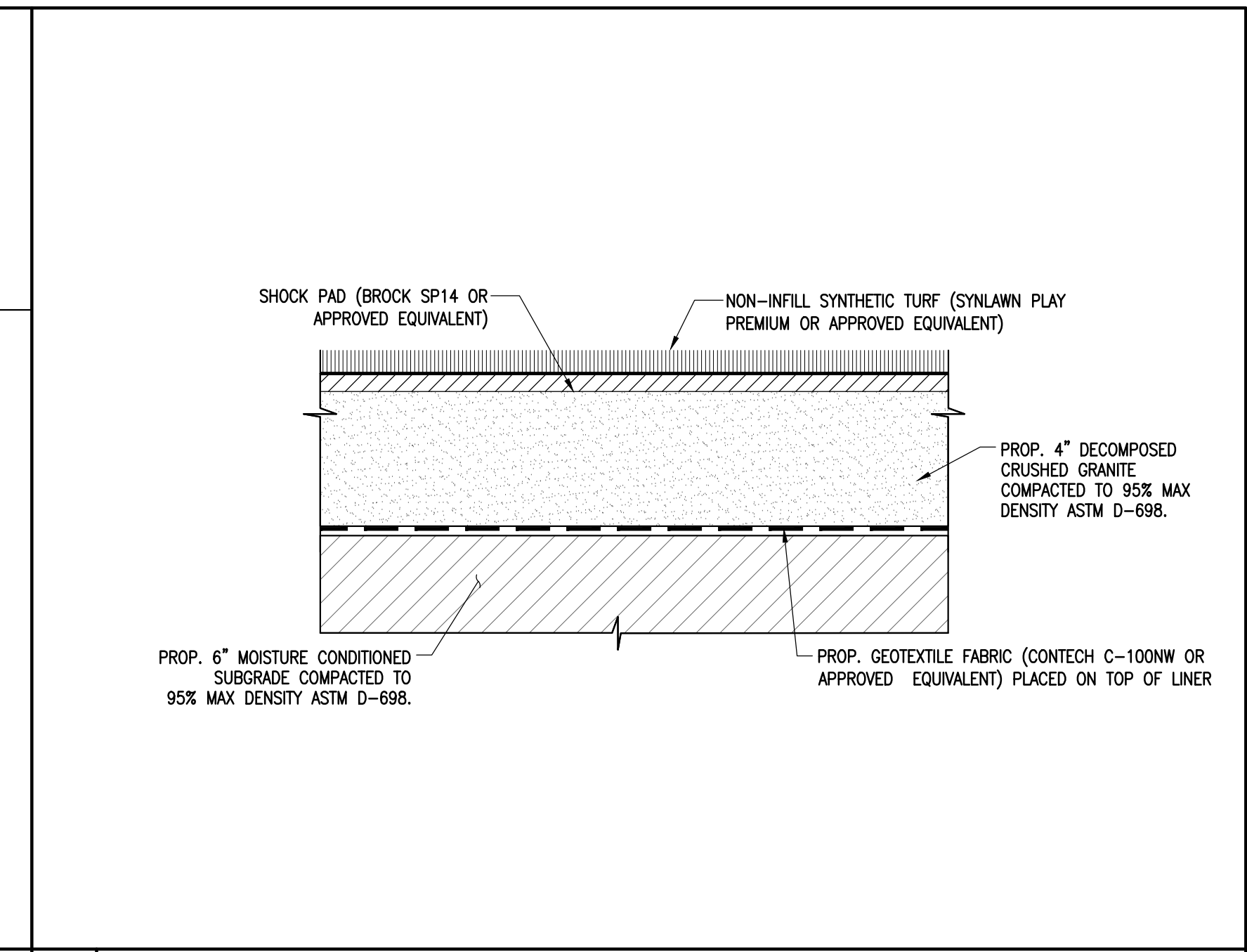
**BRYAN - COLLEGE STATION
 STANDARD DRAINAGE DETAILS**



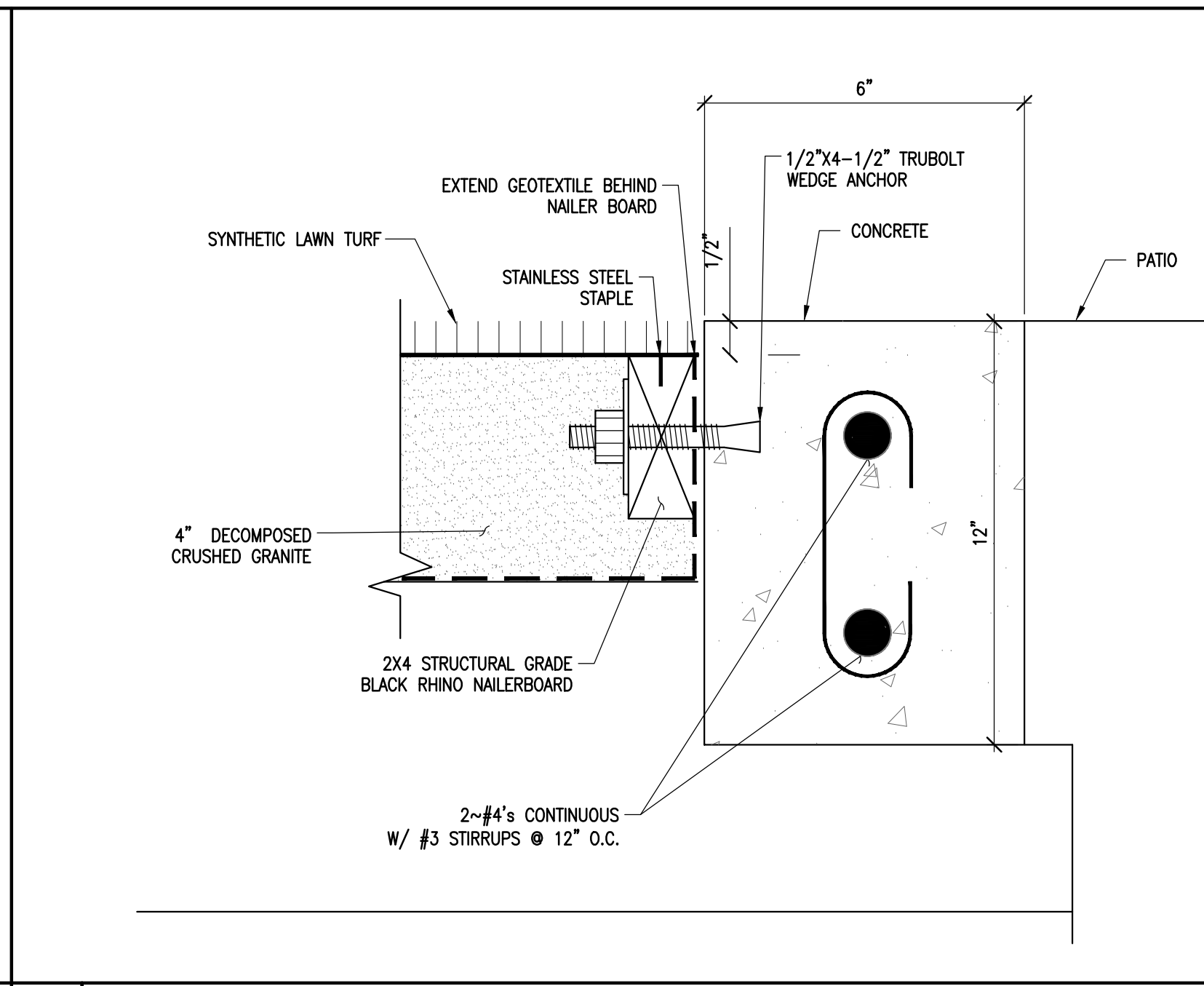
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 SCALE: NTS
 APPROVED: W. P. K.
 FIGURE:
D
 SHEET 1 OF 1



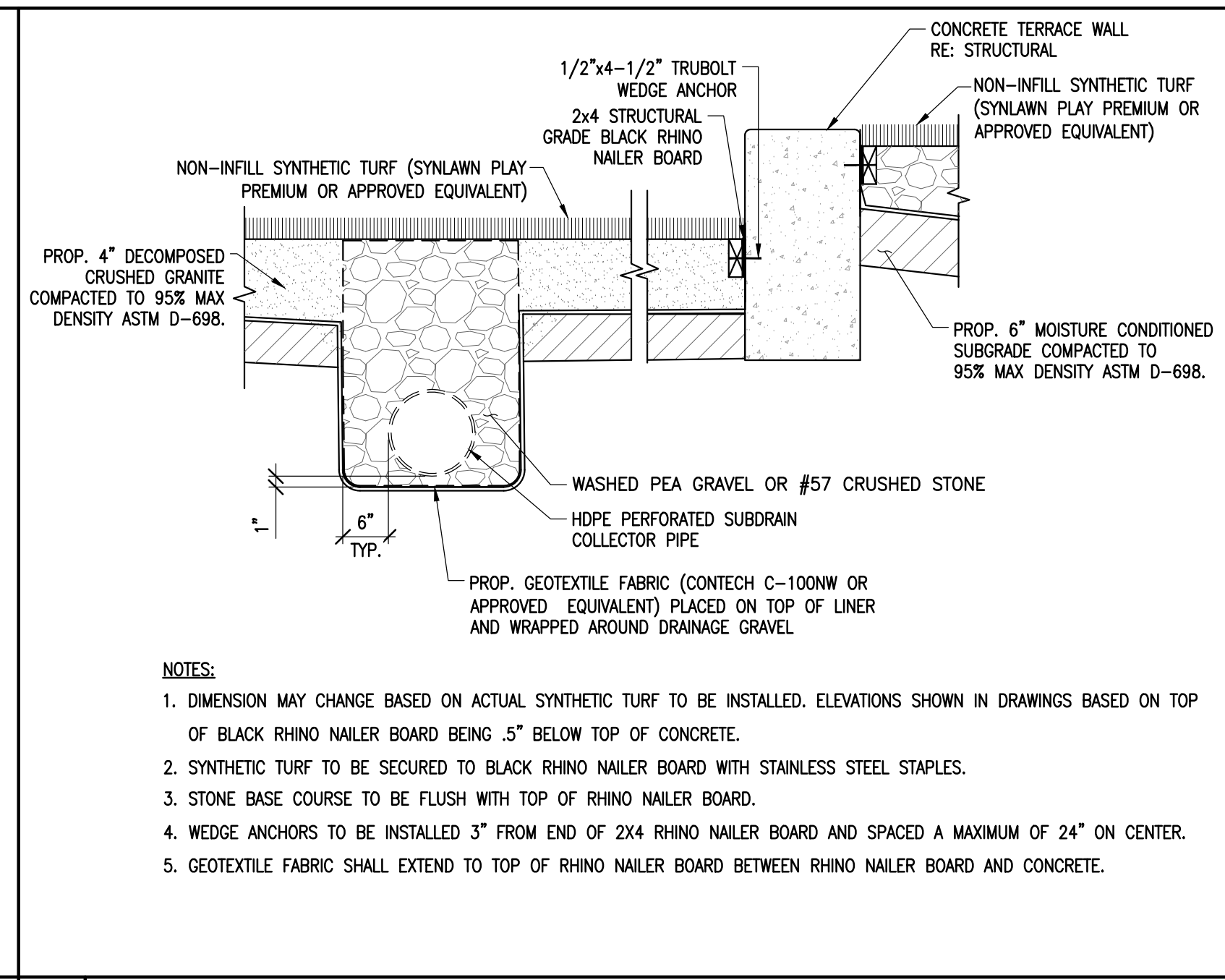
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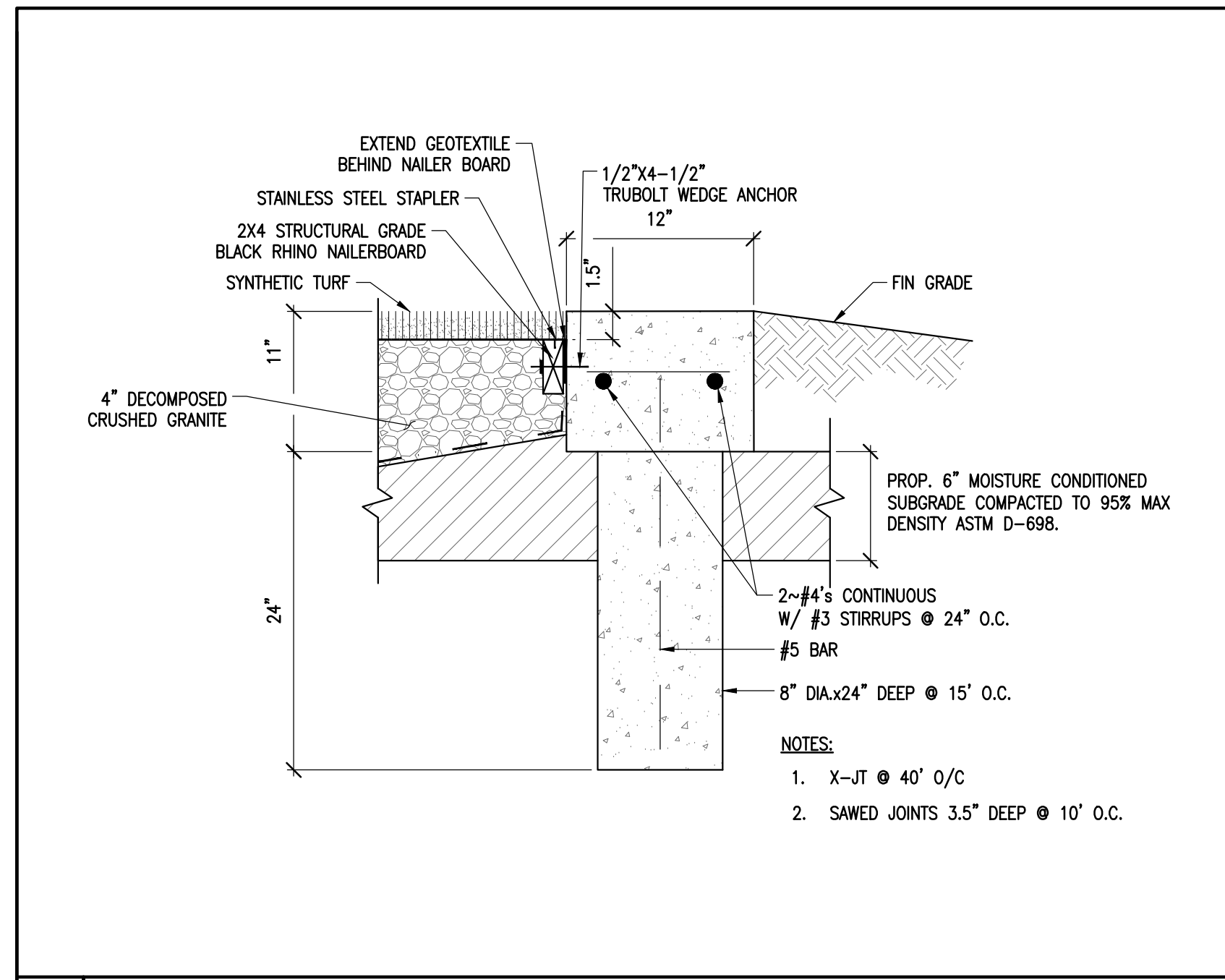
9 NON-FILLED SYNTHETIC TURF SECTION



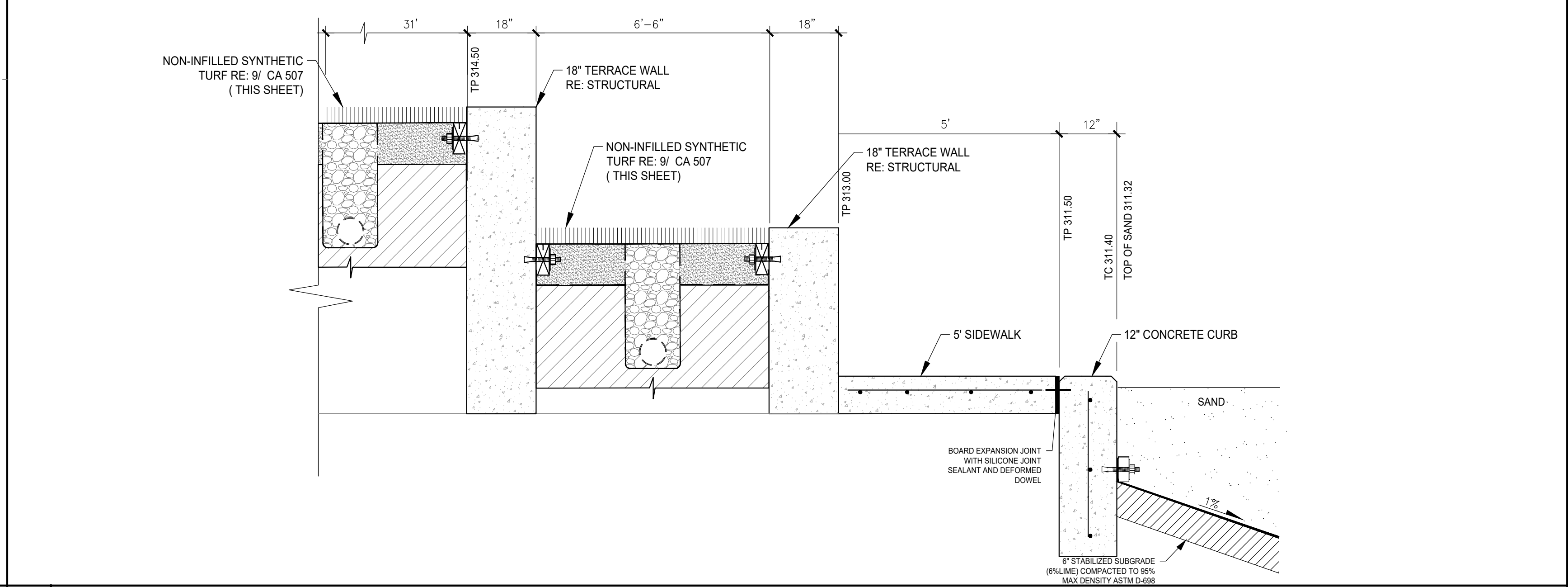
10 6" CONCRETE CURB AT SYNTHETIC TURF TERRACE



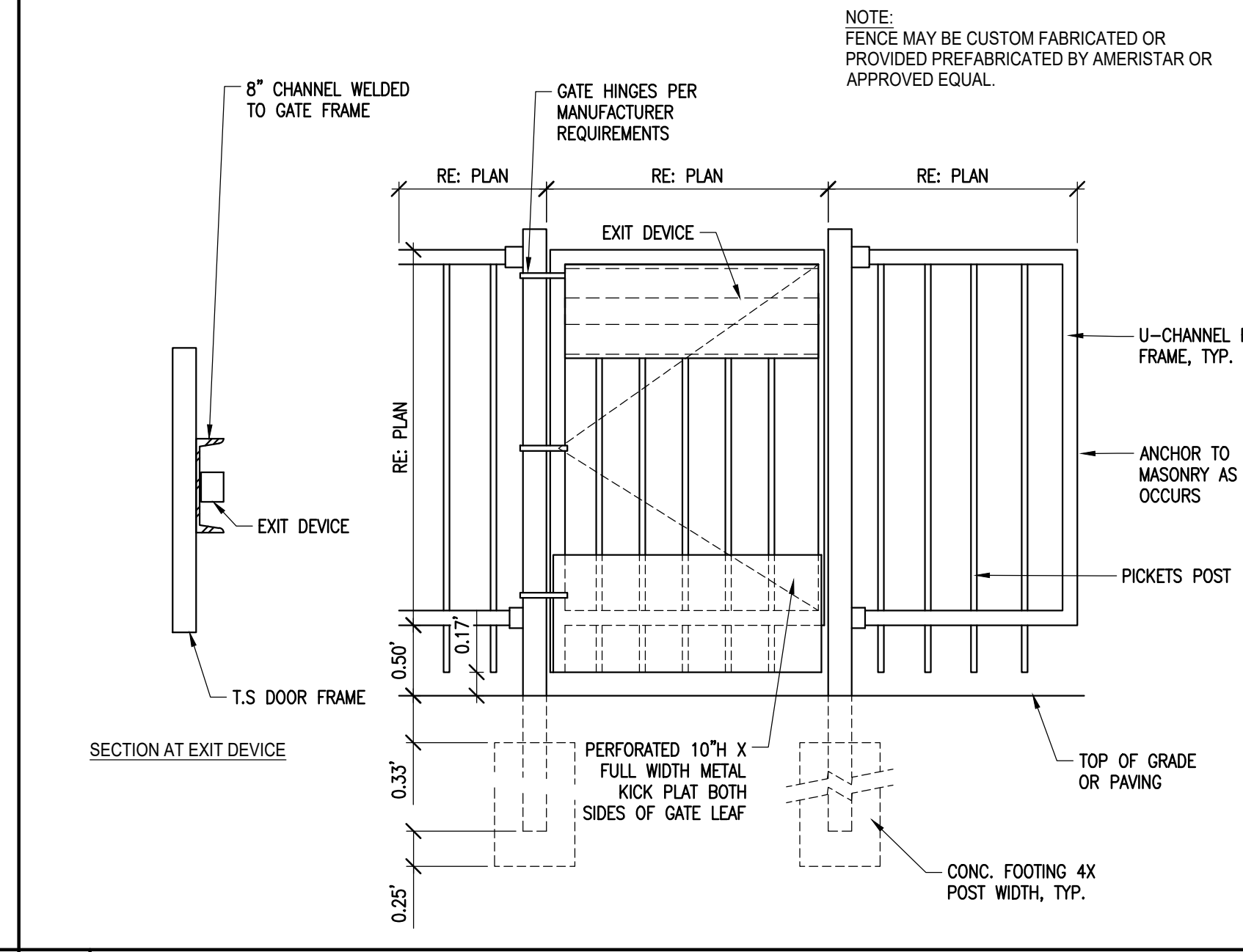
11 CRUSHED GRANITE LAWN TURF SUBDRAIN TRENCH



12 12" CONCRETE CURB AT SYNTHETIC TURF TERRACE



6 SECTION



7 42" ORNAMENTAL FENCE

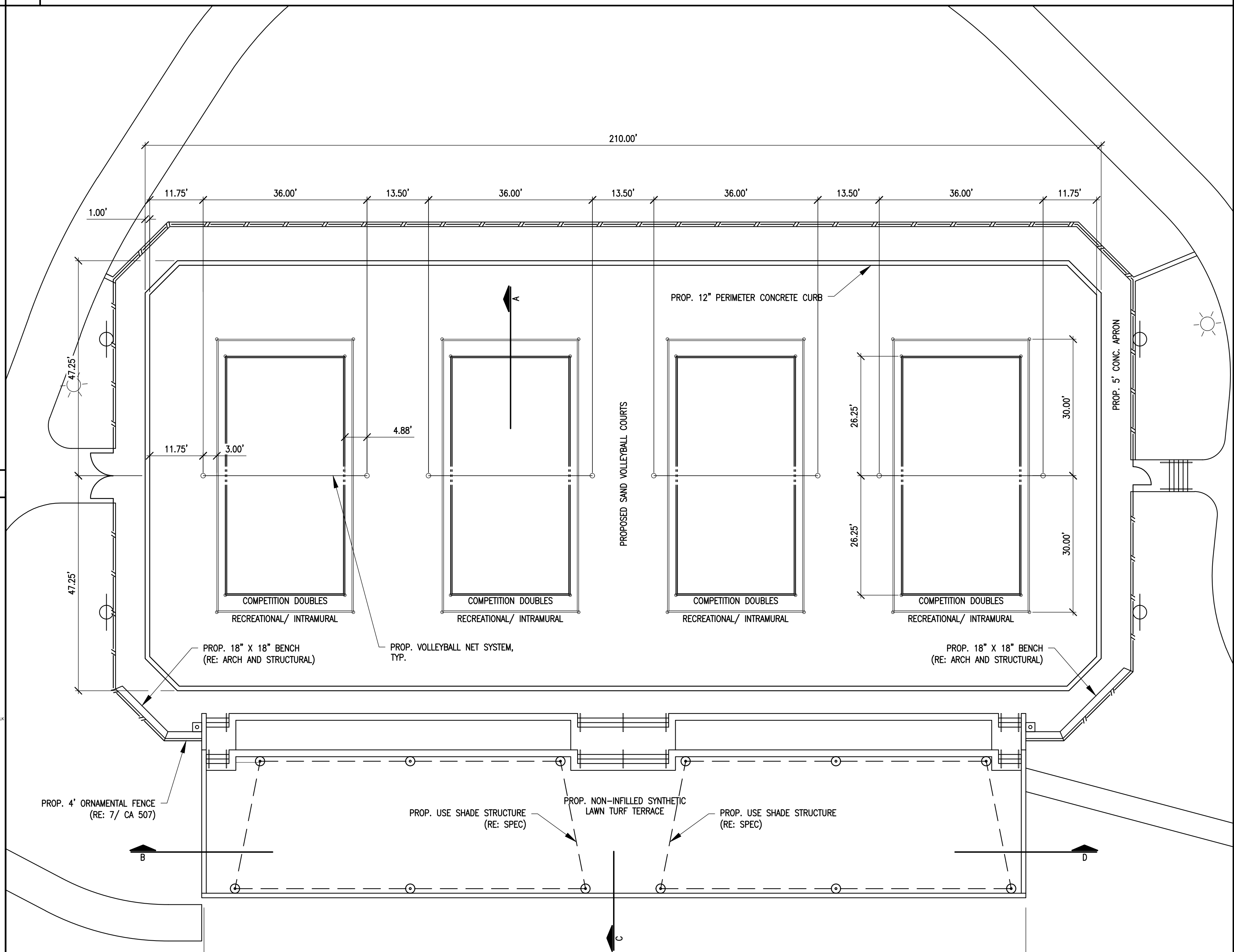
PARTICLE SIZE CRITERIA FOR SAND VOLLEYBALL COURT SAND

| USDA Particle Name | U.S. Standard Sieve Number | Diameter of Particle (mm) | Allowable Range % Retained | |
|--------------------|----------------------------|---------------------------|----------------------------|--|
| Gravel | 6 | 3.35 | 0 | No more than 10% combined. |
| Fine Gravel | 10 | 2.00 - 3.35 | 0-3% | |
| Very Coarse Sand | 18 | 1.00 - 2.00 | 0-10% | |
| Coarse Sand | 35 | 0.05 - 1.00 | >60% | A Minimum of 80% in these combined sand fractions. |
| Medium Sand | 60 | 0.25 - 0.50 | <35% | |
| Fine Sand | 100 | 0.10 - 0.25 | <5% | |
| Very Fine Sand | 270 | 0.05 - 0.25 | 5-15% | No More than 15% very fine sand/silt/clay |
| Silt | | 0.002 - 0.05 | <3% | |
| Clay | | < 0.002 | <3% | |

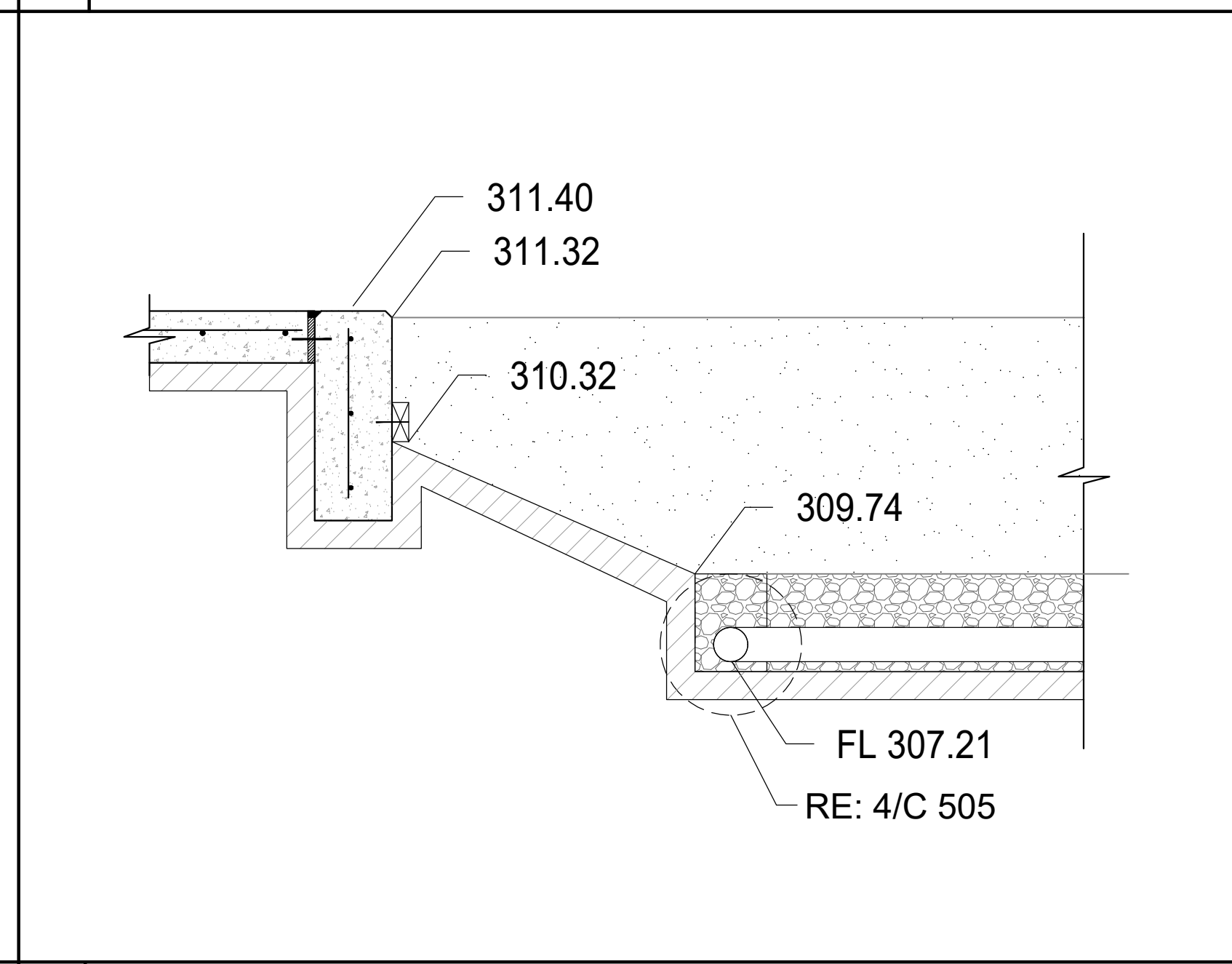
PHYSICAL PERFORMANCE CRITERIA FOR SAND VOLLEYBALL COURT SAND

| | |
|-----------------------------------|----------------|
| Total Porosity: | 35% - 55% |
| Air Filled Porosity: | 15% - 30% |
| Capillary Porosity: | 15% - 25% |
| Saturated Hydraulic Conductivity: | 6" - 24" /hour |

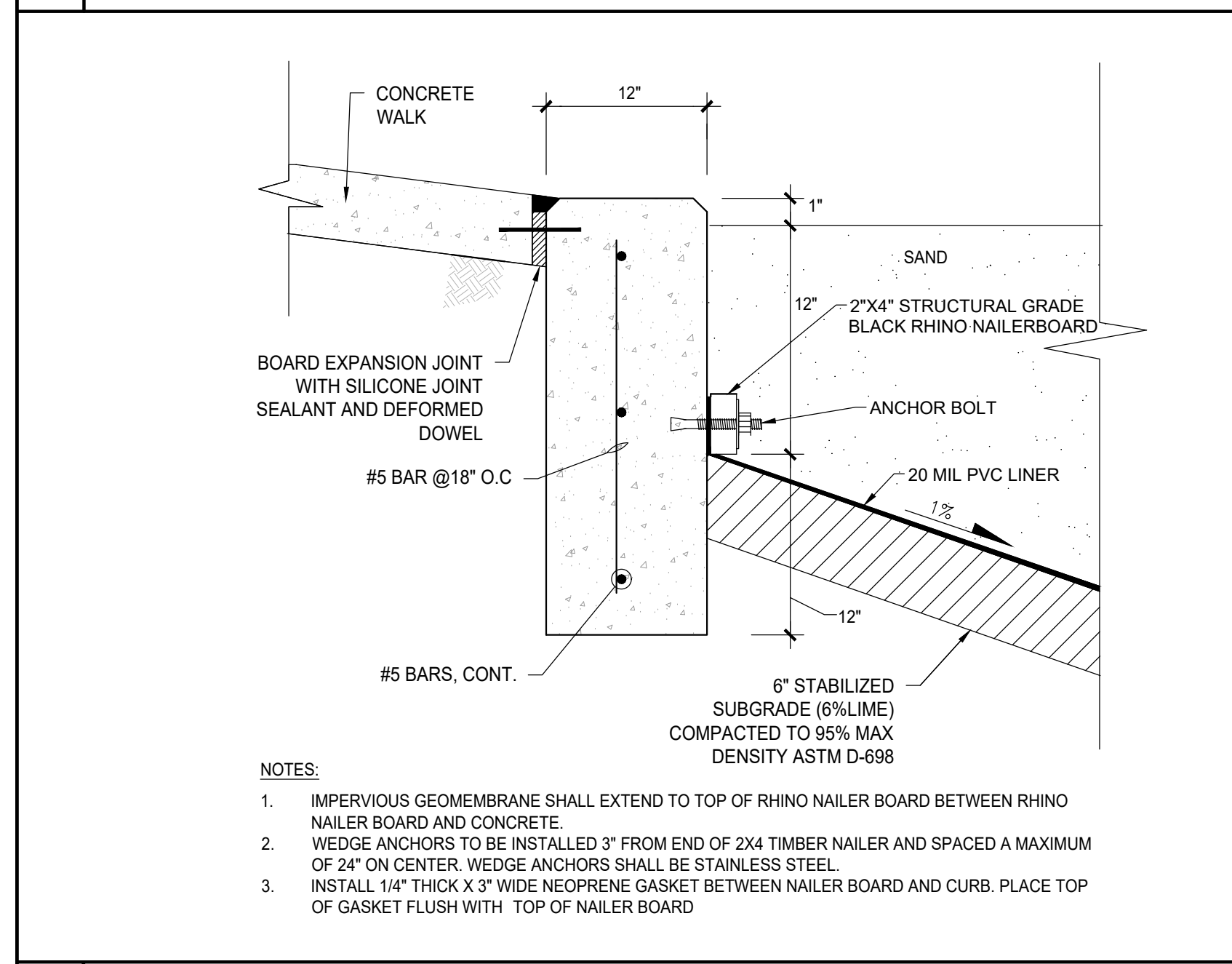
8 SAND GRADATION



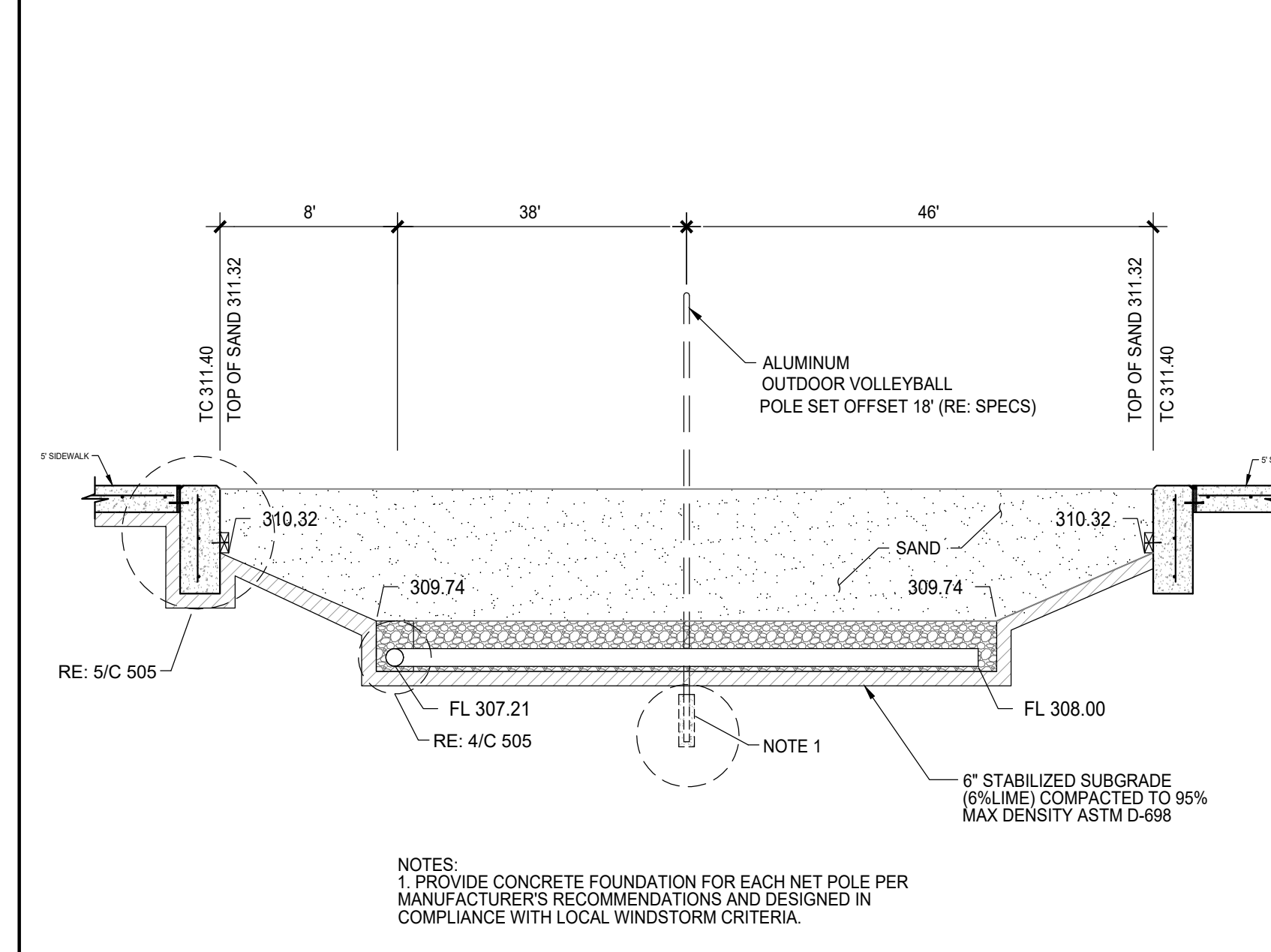
1 VOLLEYBALL SAND COURT LAYOUT



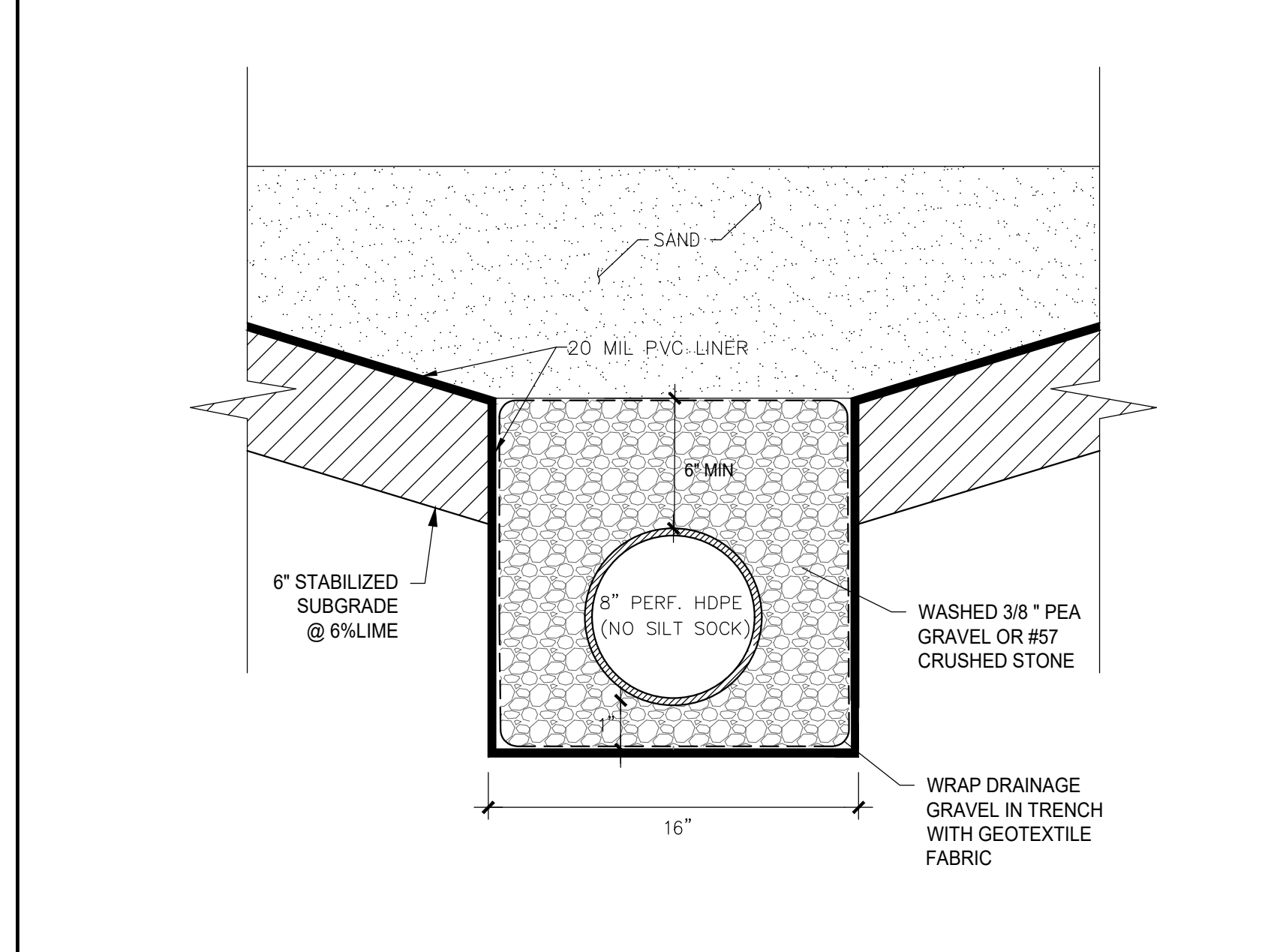
2 SECTION 'A-A' (BLOW UP)



3 VOLLEYBALL COURT CURB DETAIL



4 PERF. HDPE SECTION

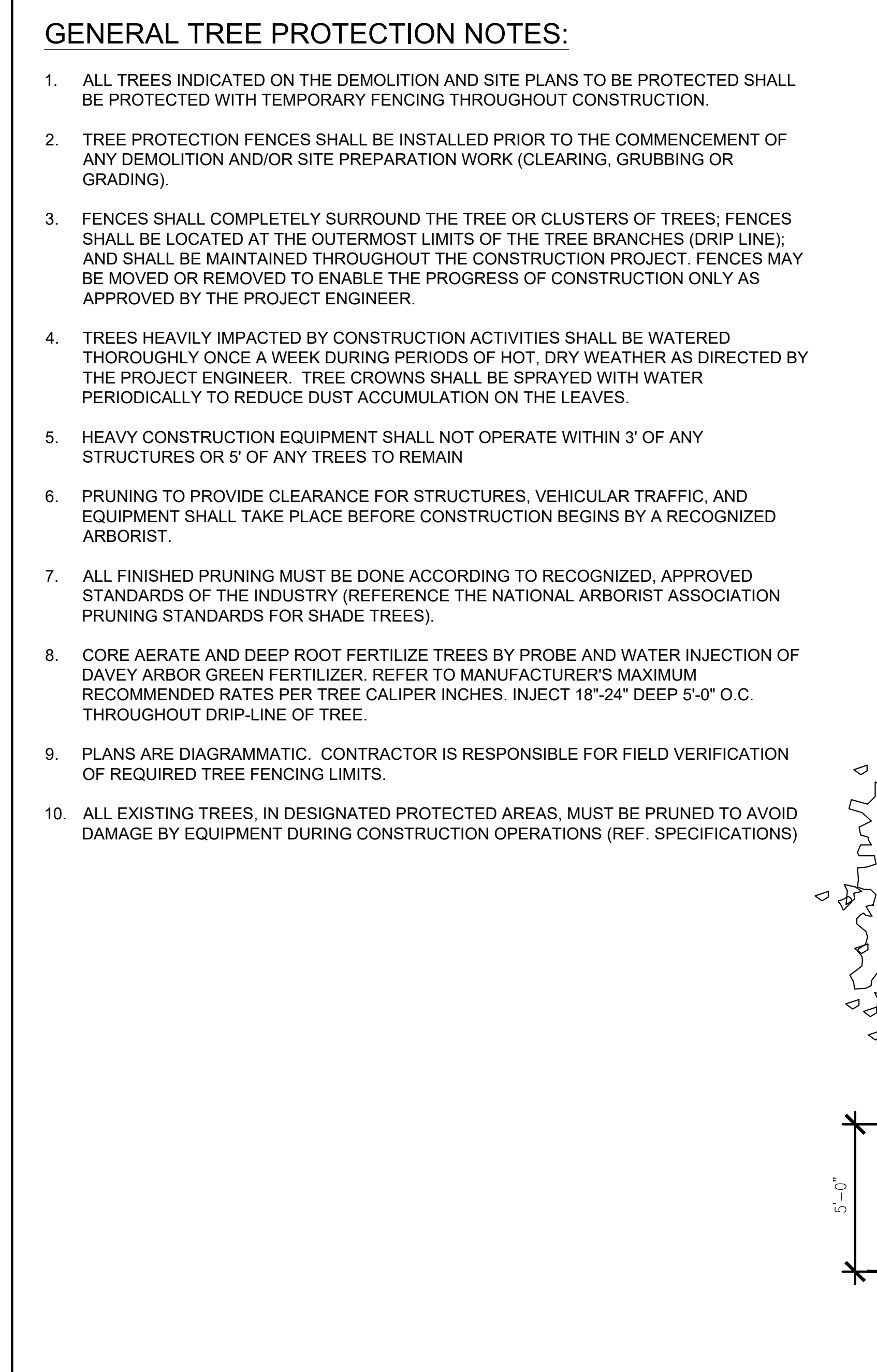
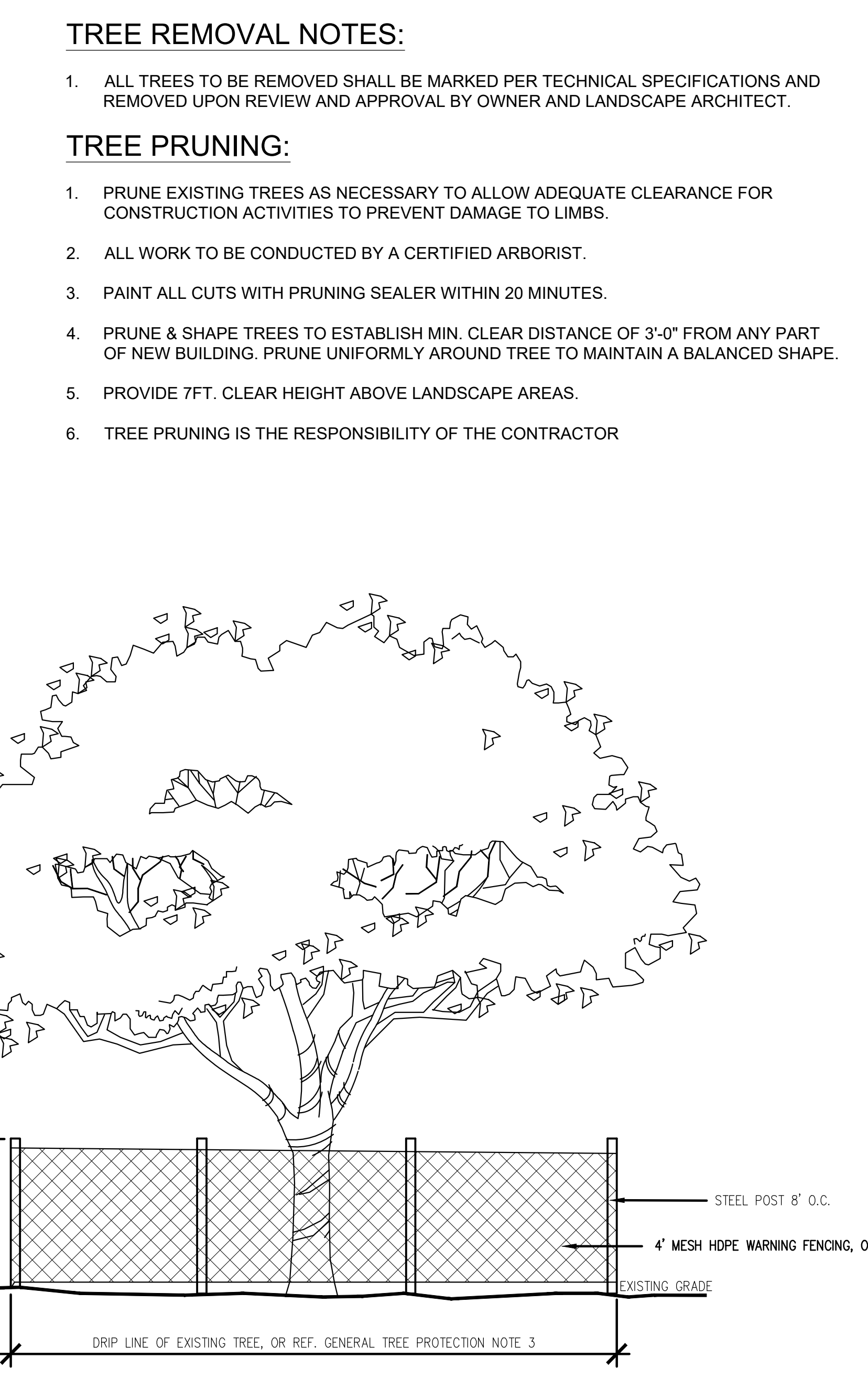
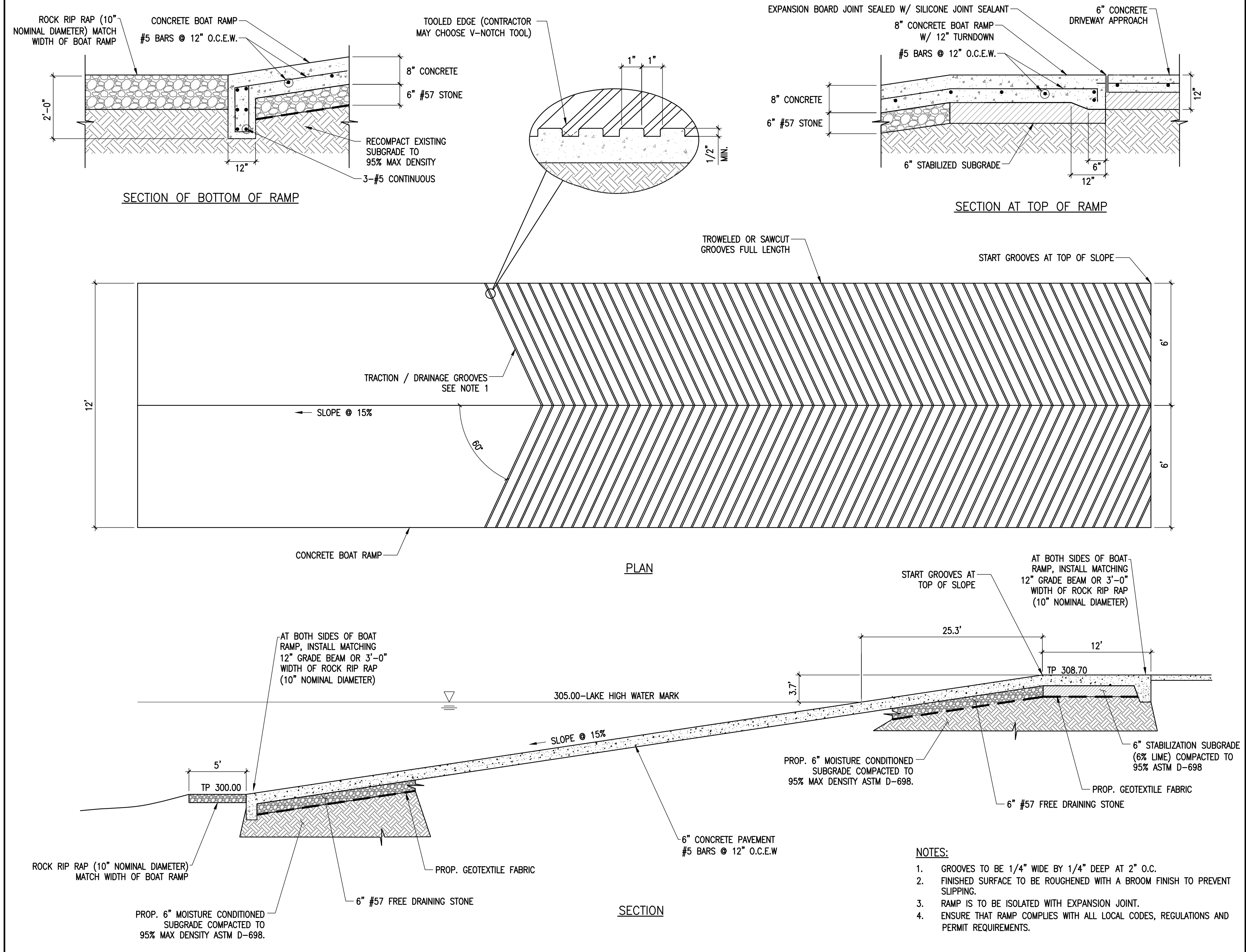
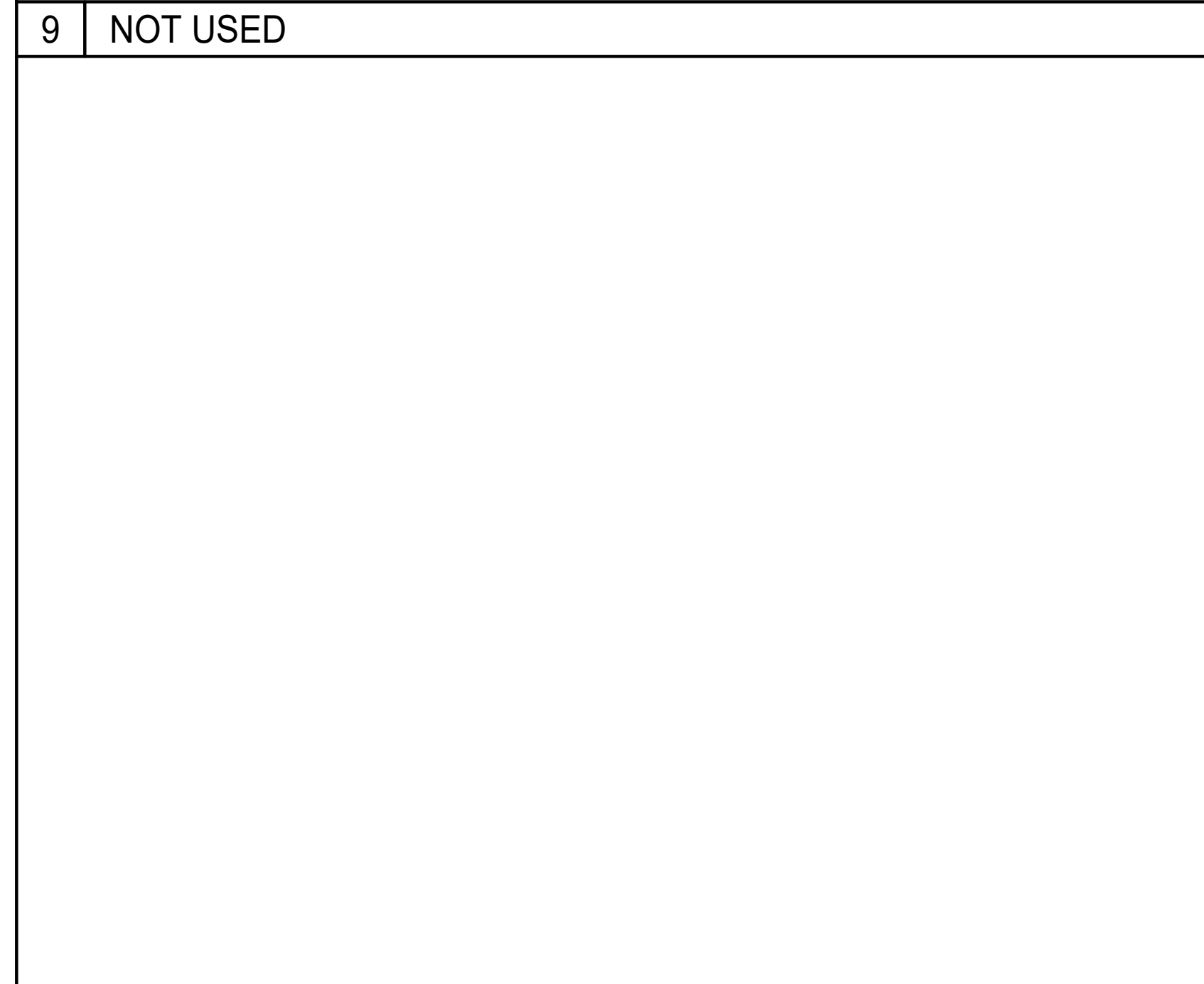
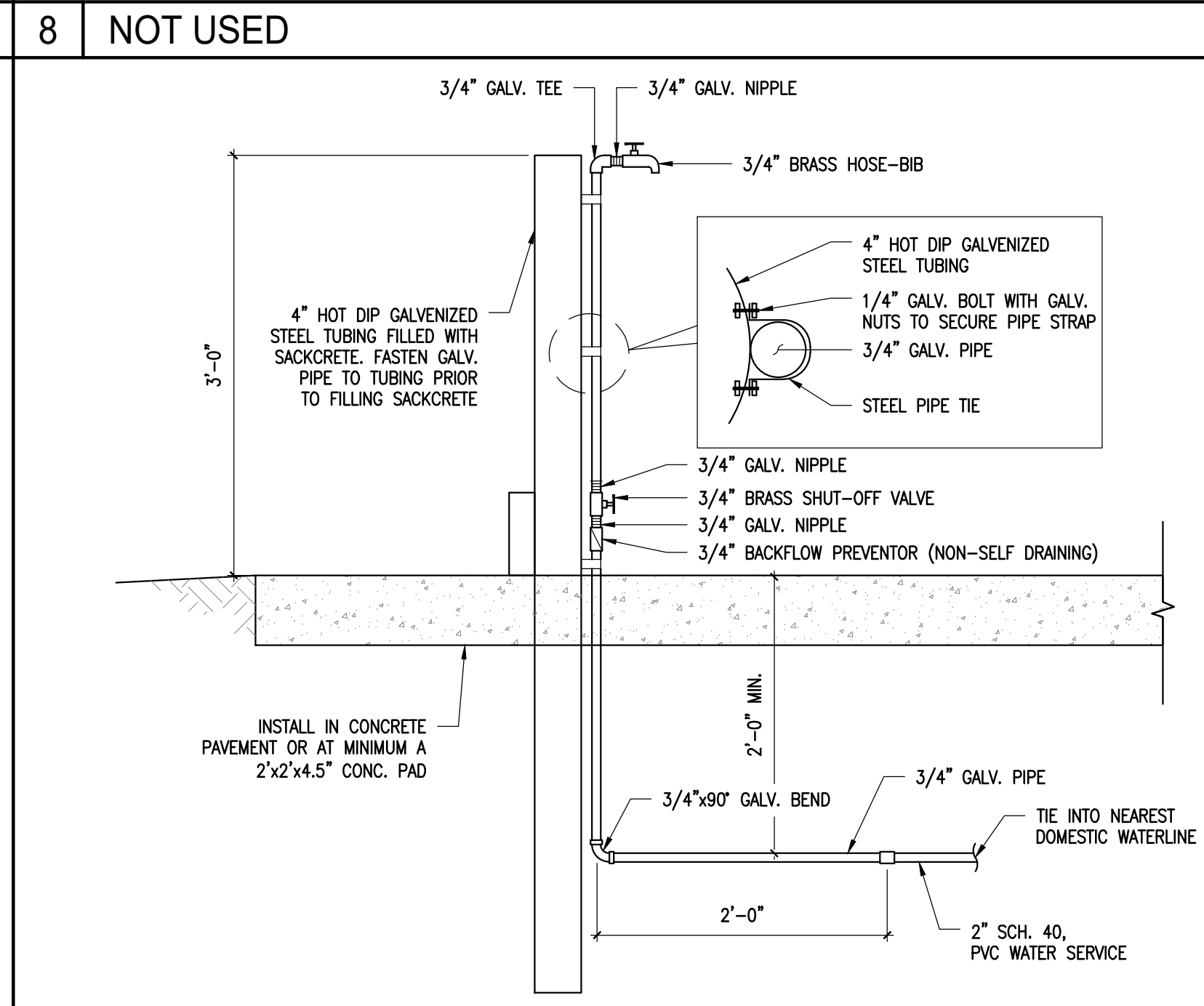
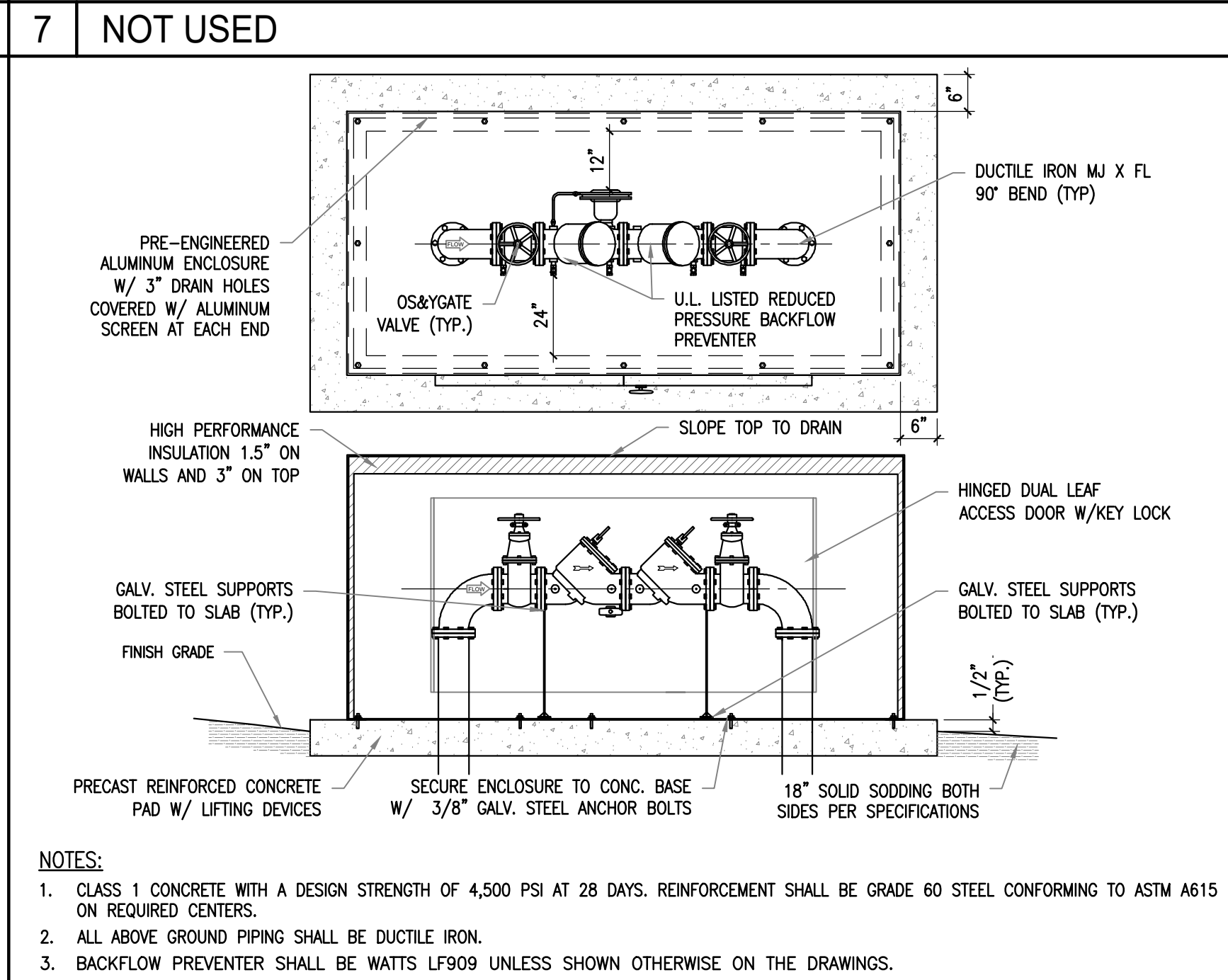
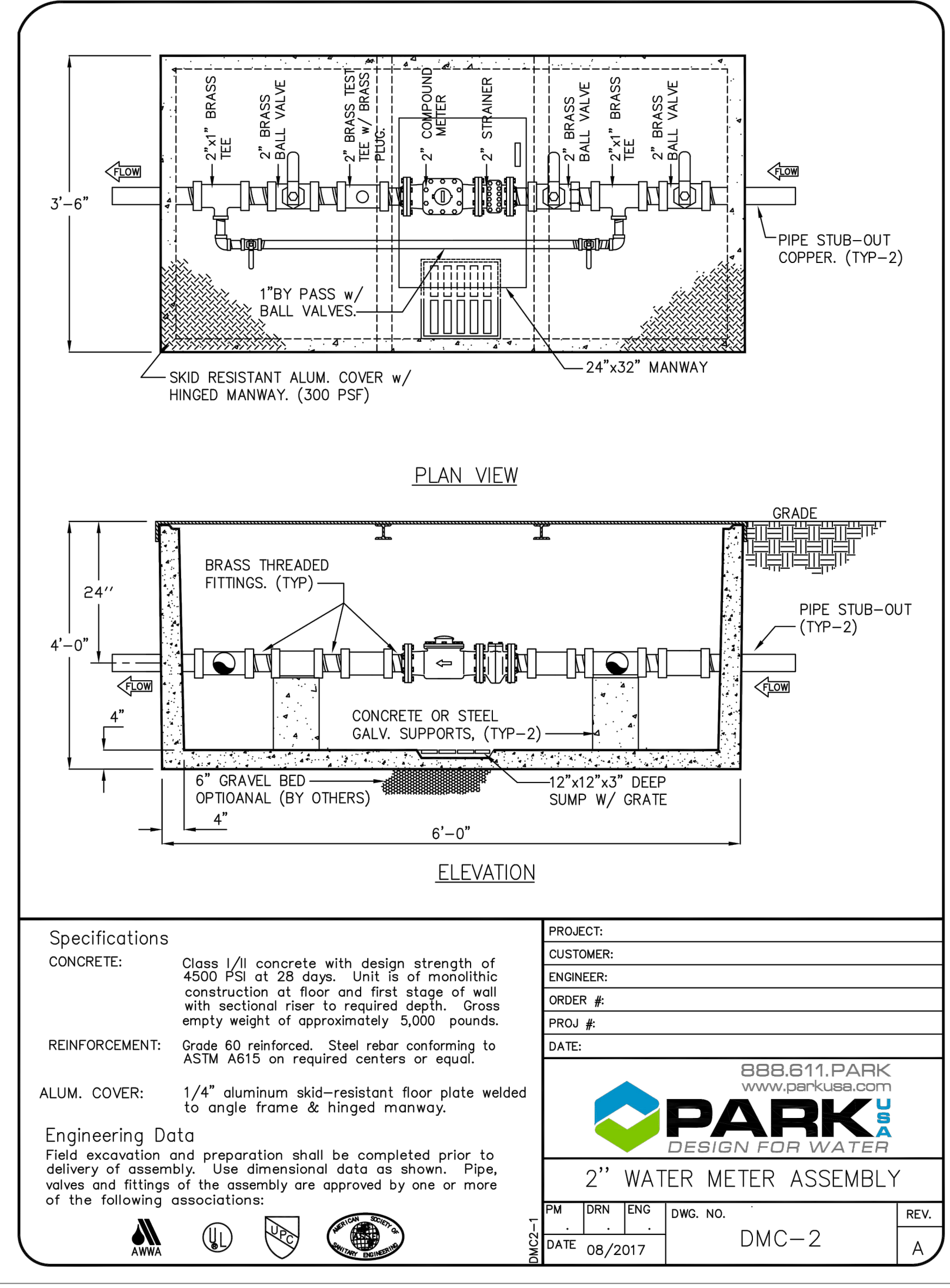


5 VOLLEYBALL COURT CURB DETAIL

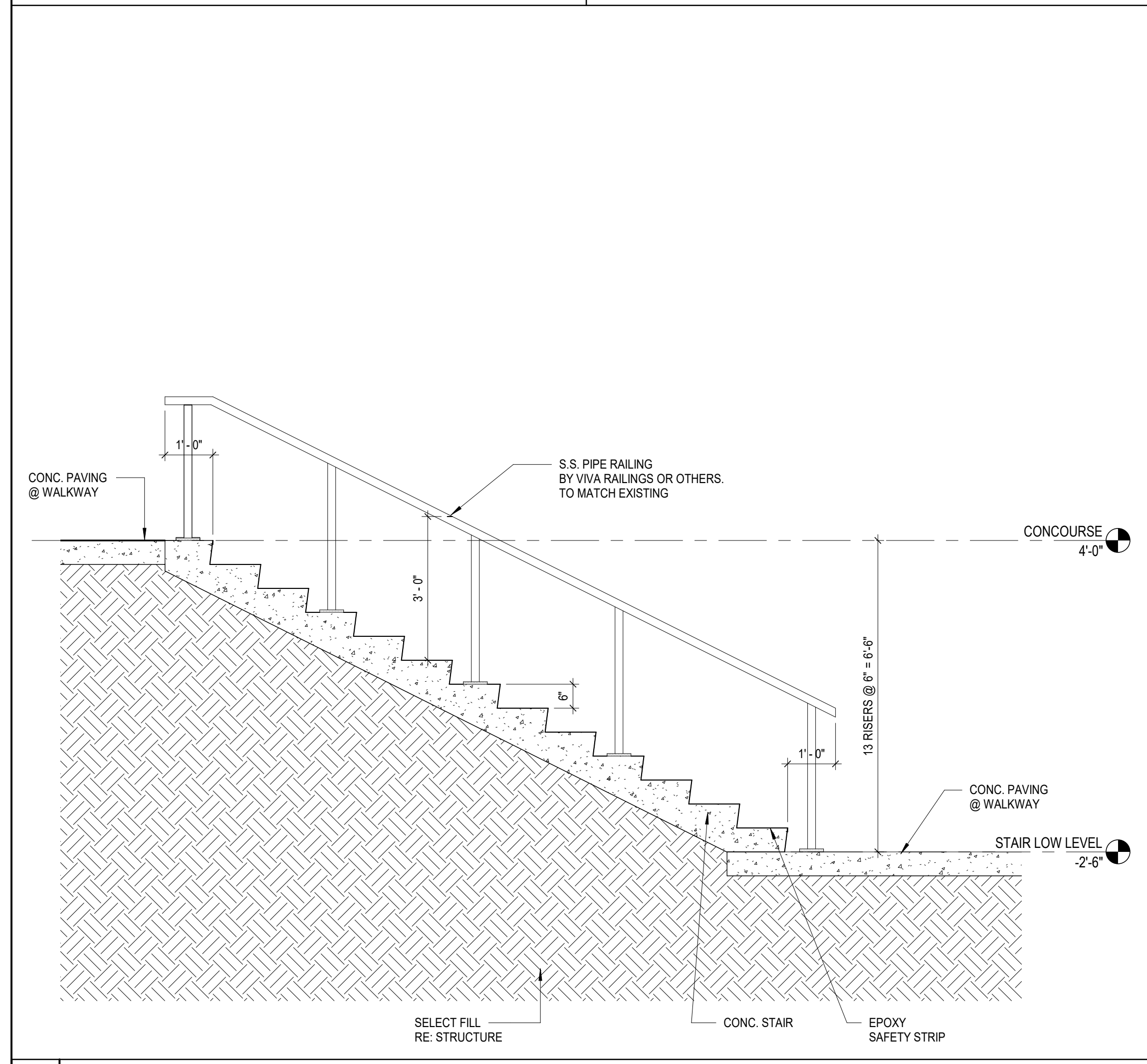
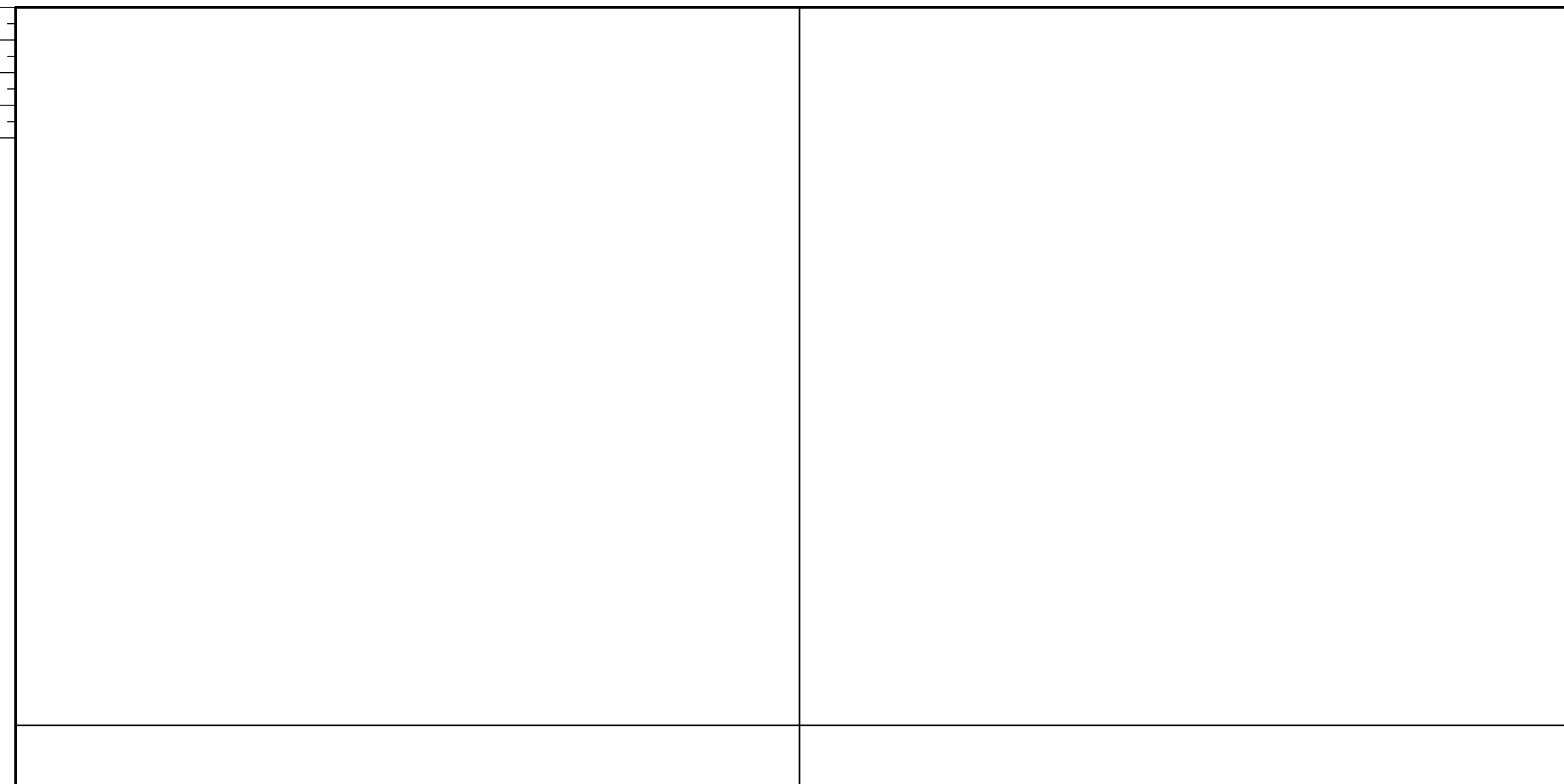
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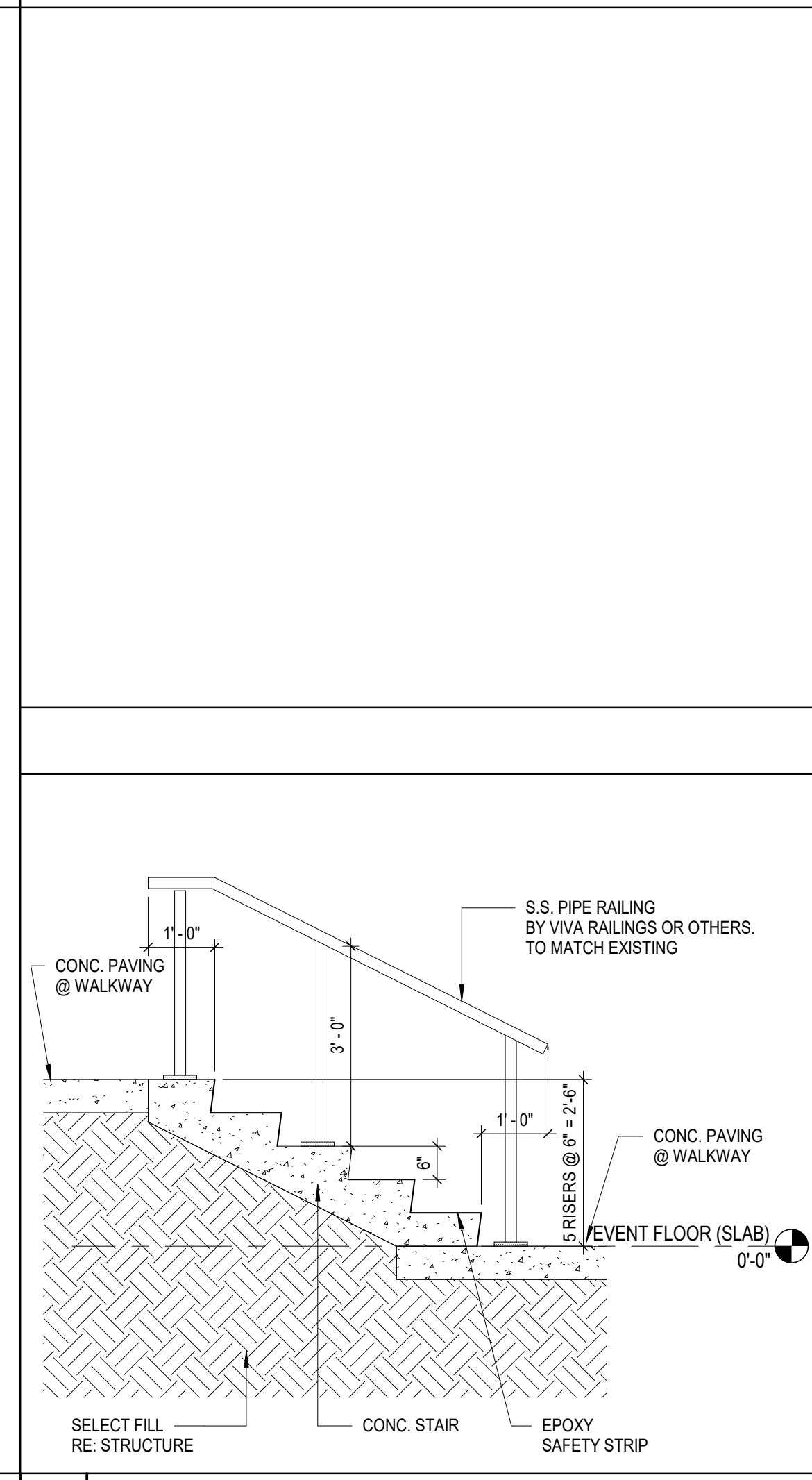
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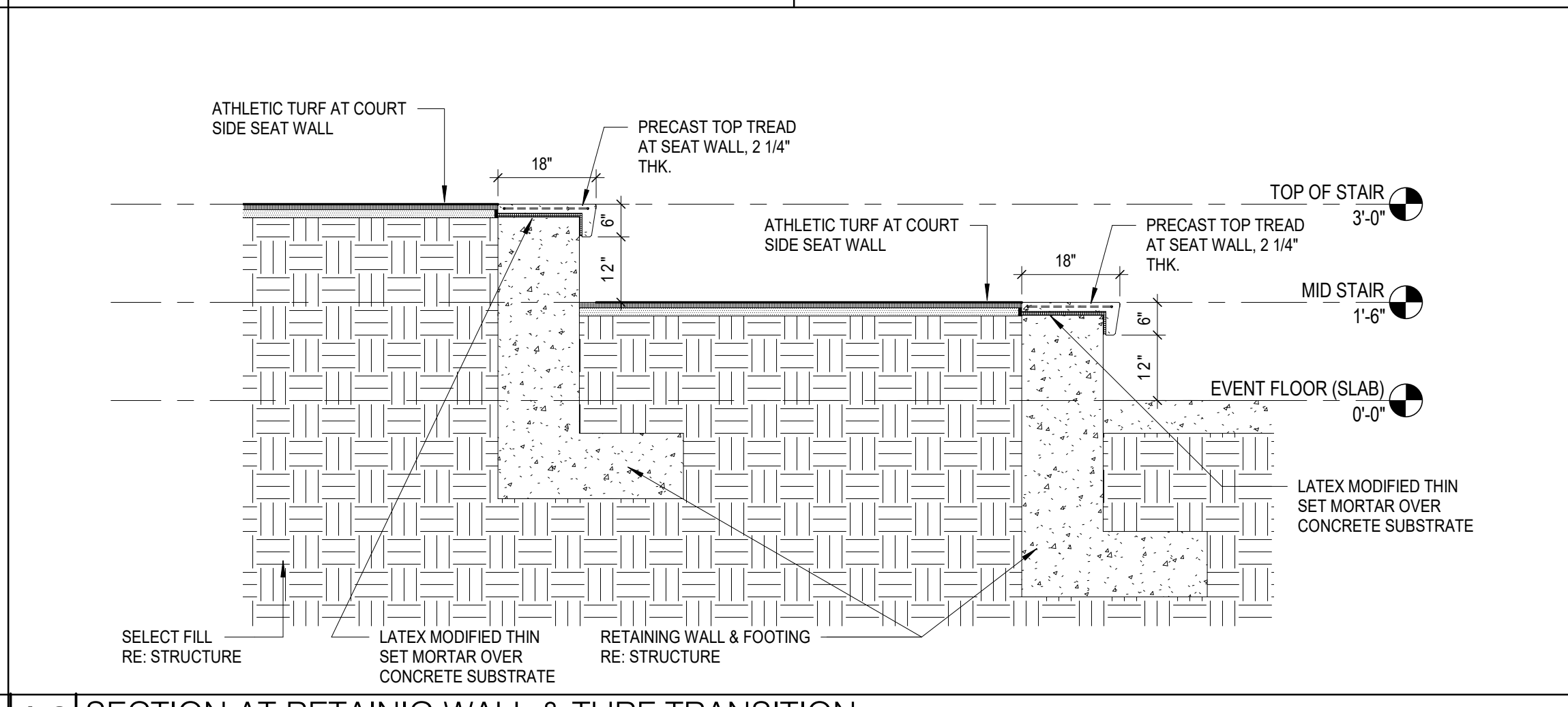
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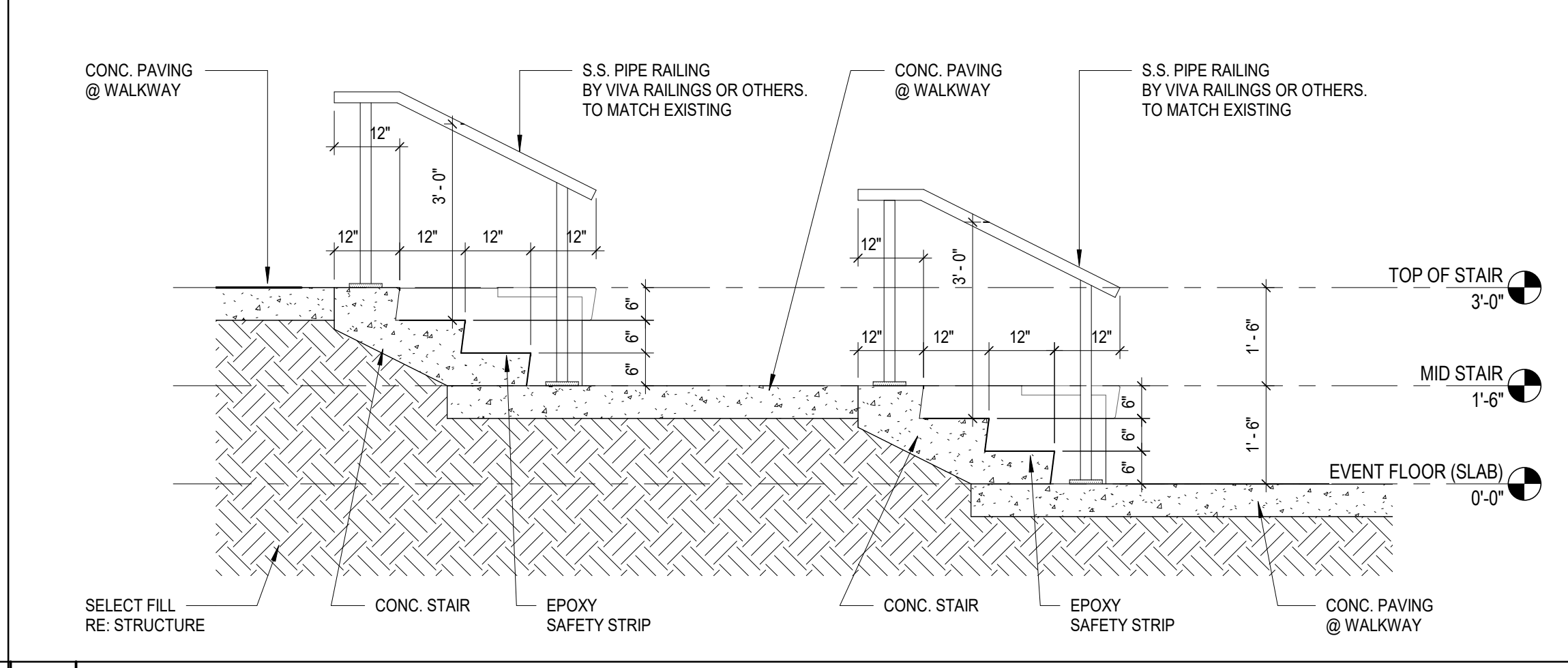
8 STAIR SECTION AT CONCOURSE
 1/2" = 1'-0"



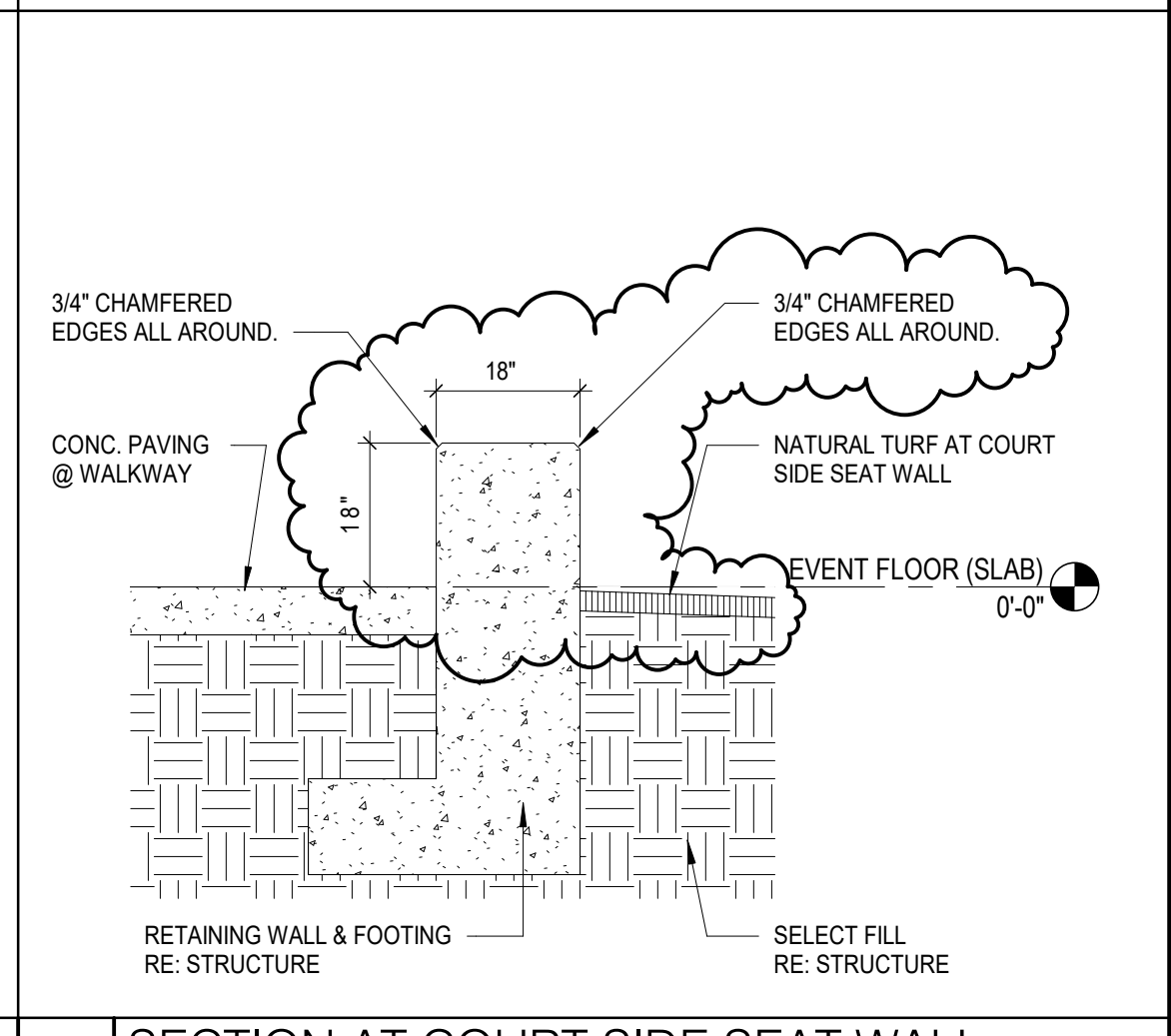
7 STAIR SECTION AT VOLLEYBALL COURTS
 1/2" = 1'-0"



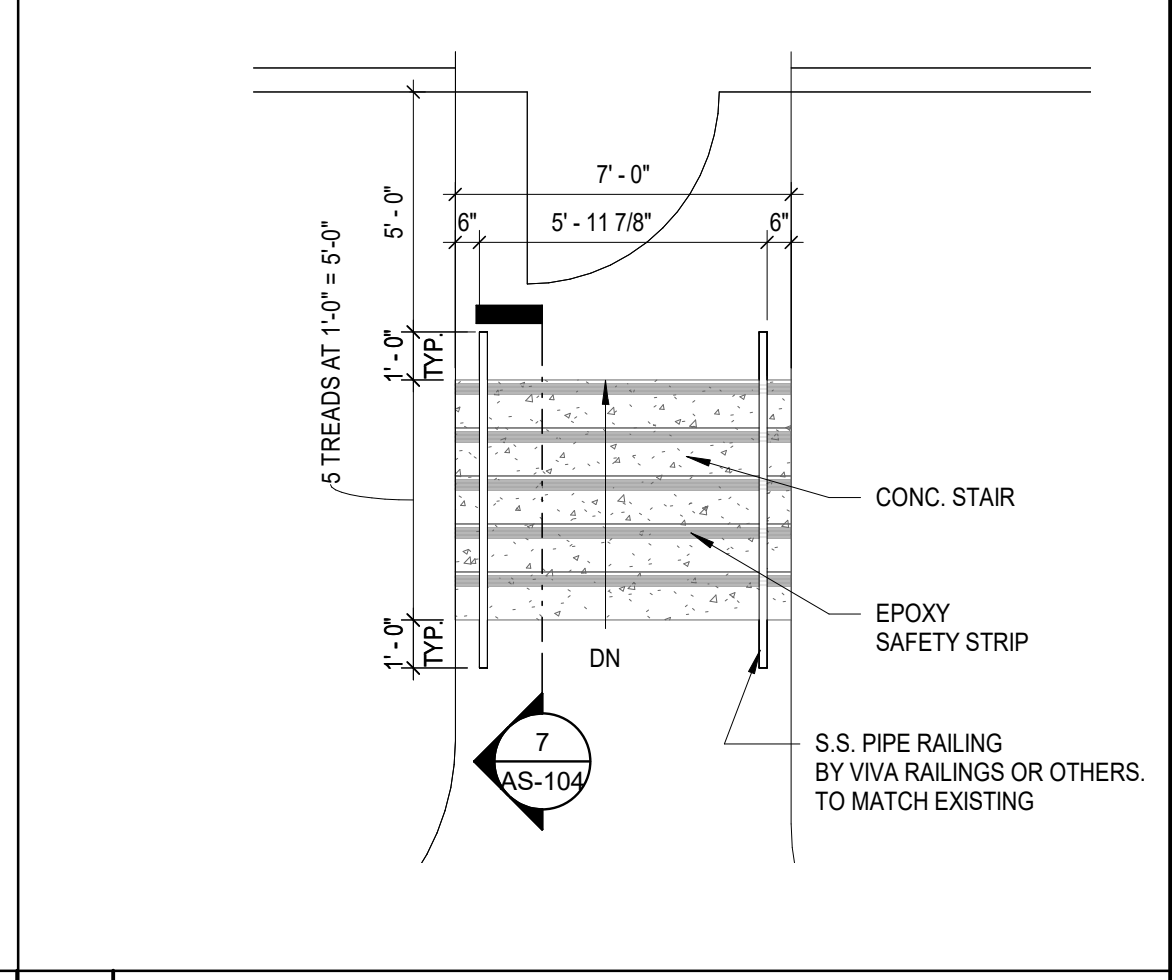
10 SECTION AT RETAINING WALL & TURF TRANSITION
 1/2" = 1'-0"



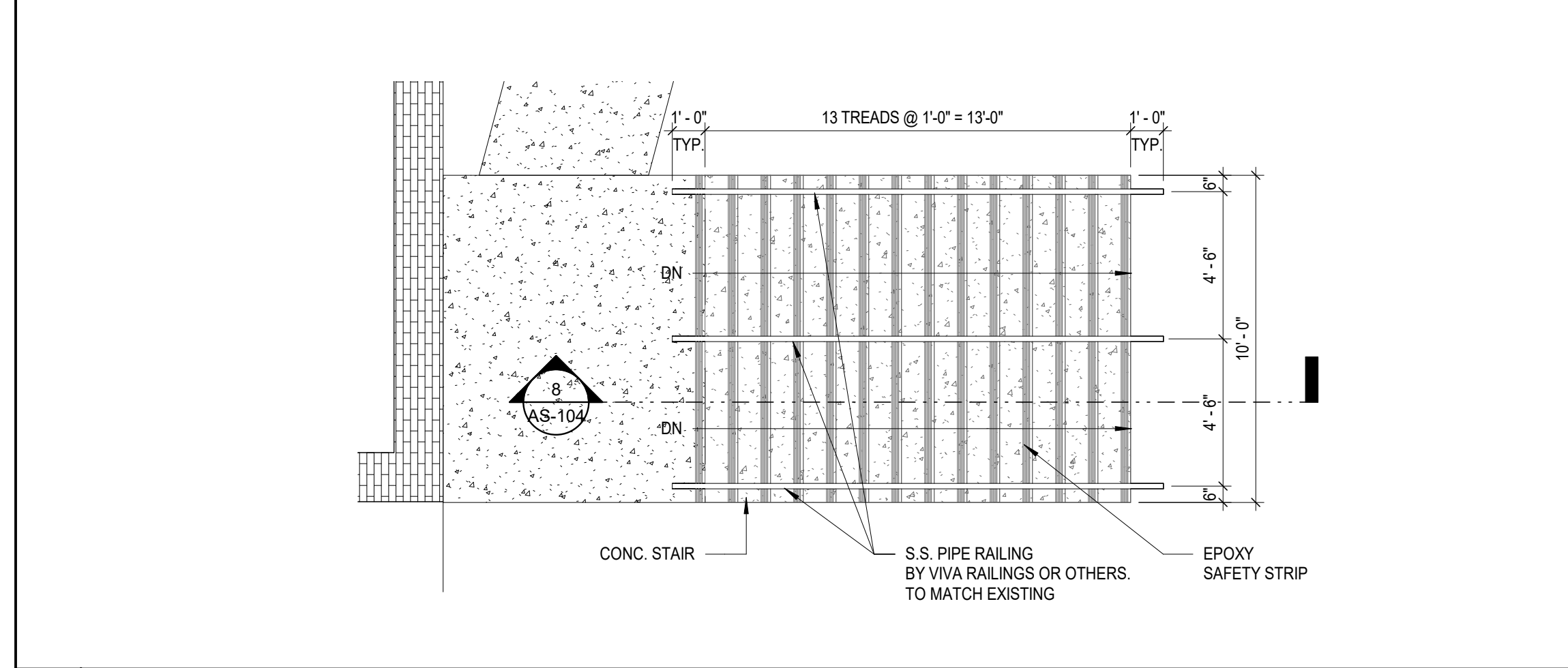
6 STAIR SECTION AT ATHLETIC TURF AT SEAT WALL
 1/2" = 1'-0"



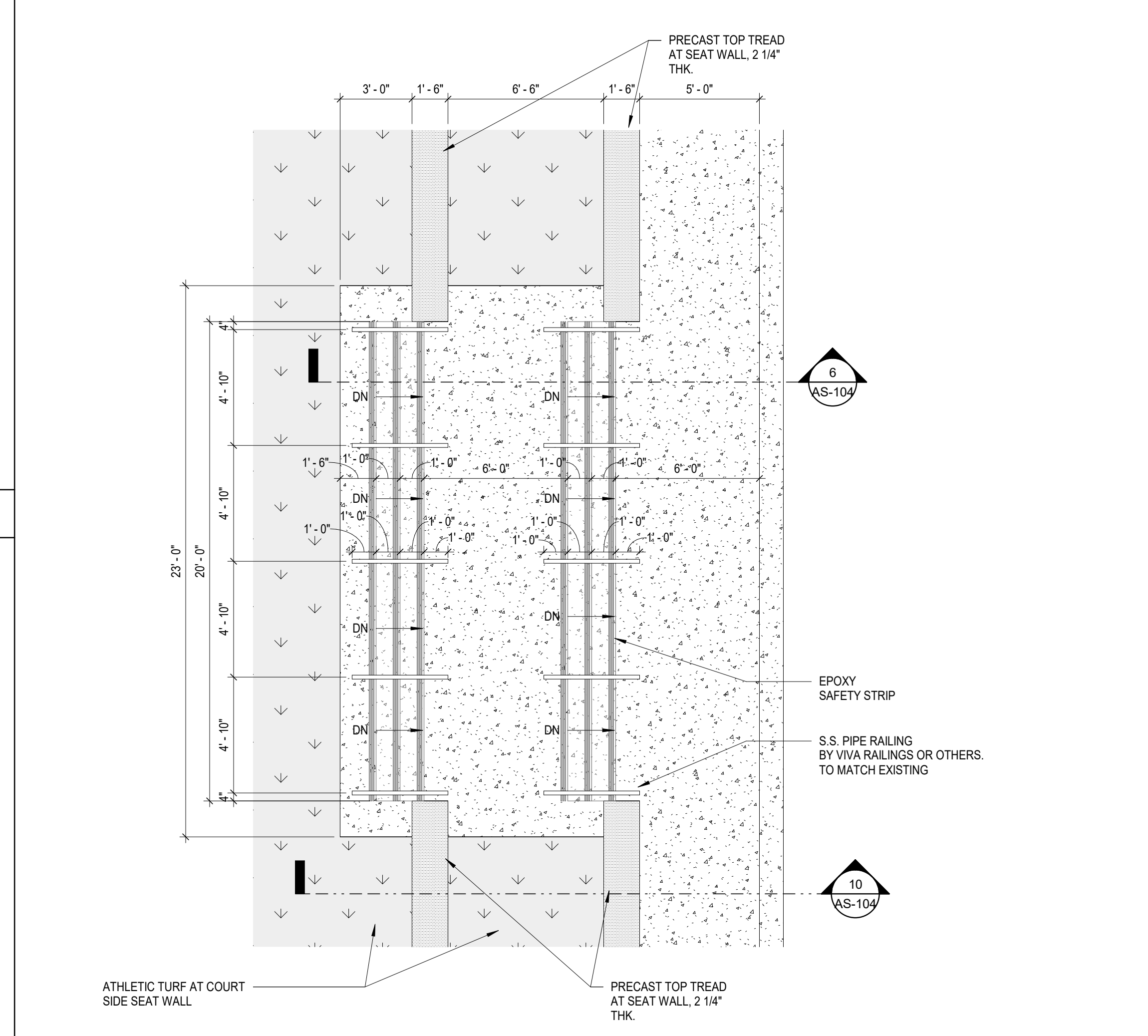
9 SECTION AT COURT SIDE SEAT WALL
 1/2" = 1'-0"



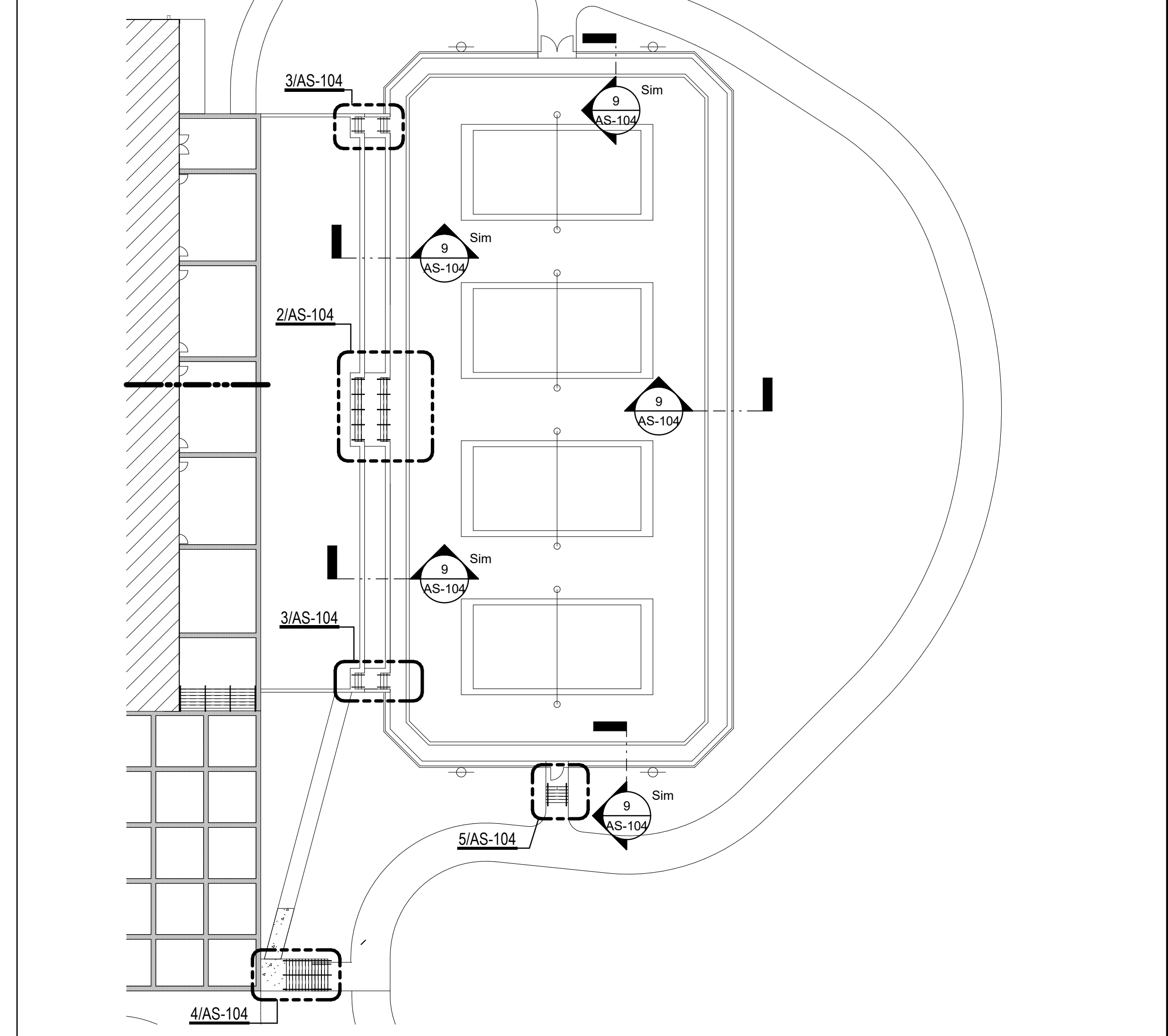
5 STAIR PLAN AT VOLLEYBALL COURTS
 1/4" = 1'-0"



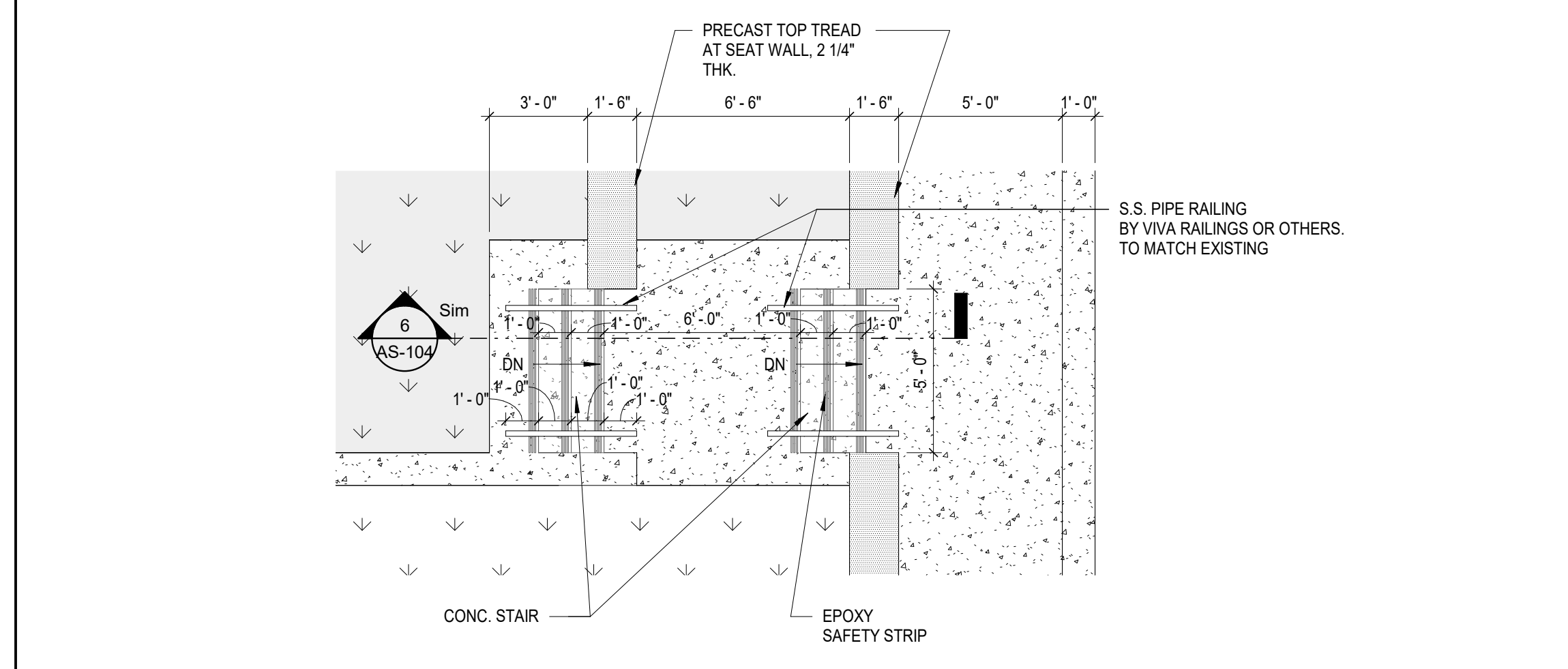
4 STAIR PLAN AT CONCOURSE
 1/4" = 1'-0"



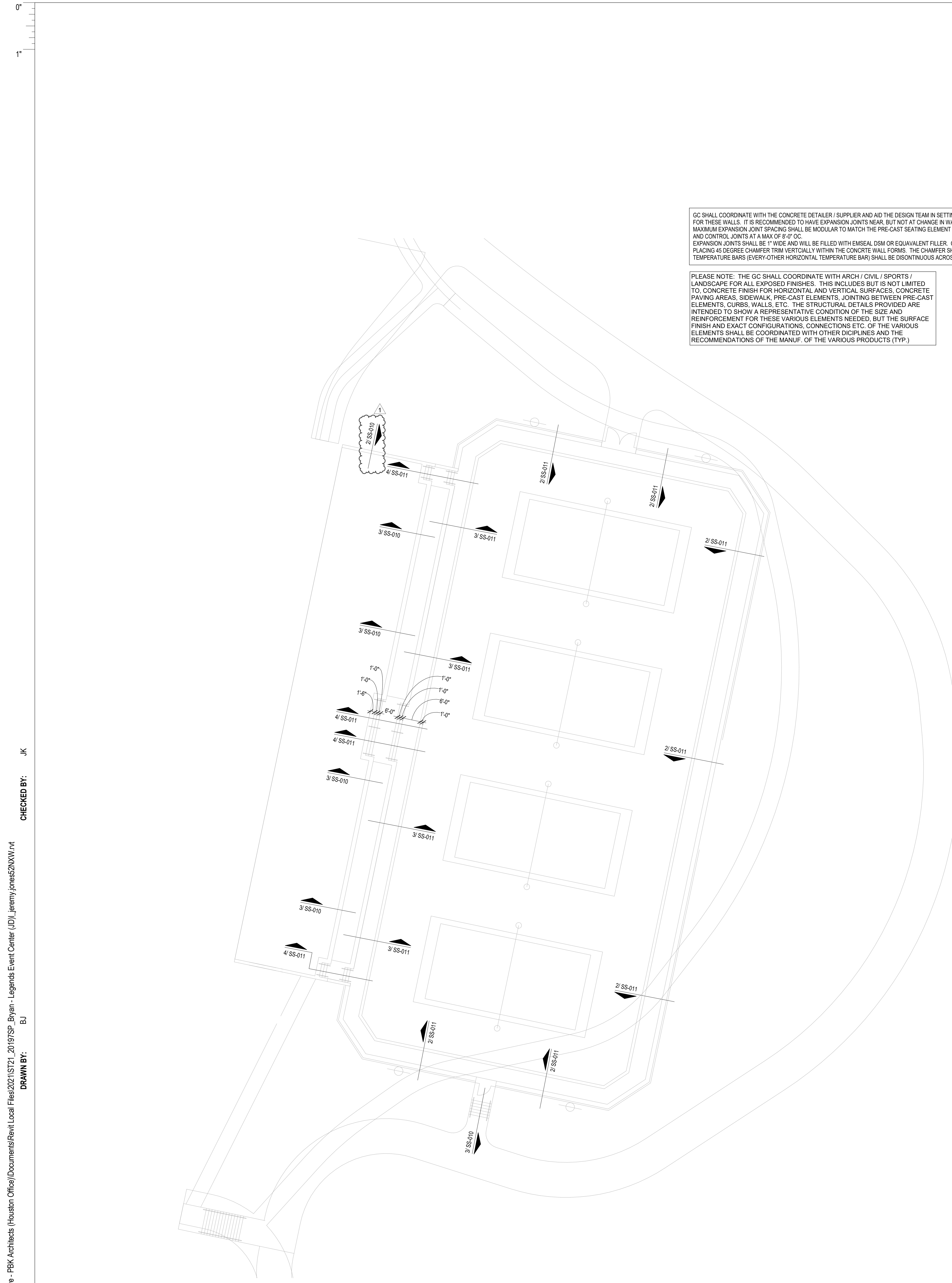
2 STAIR PLAN AT ATHLETIC TUFT AT SEAT WALL (A)
 1/4" = 1'-0"



1 ENLARGED SITE PLAN AT VOLLEYBALL COURTS
 1" = 30'-0"



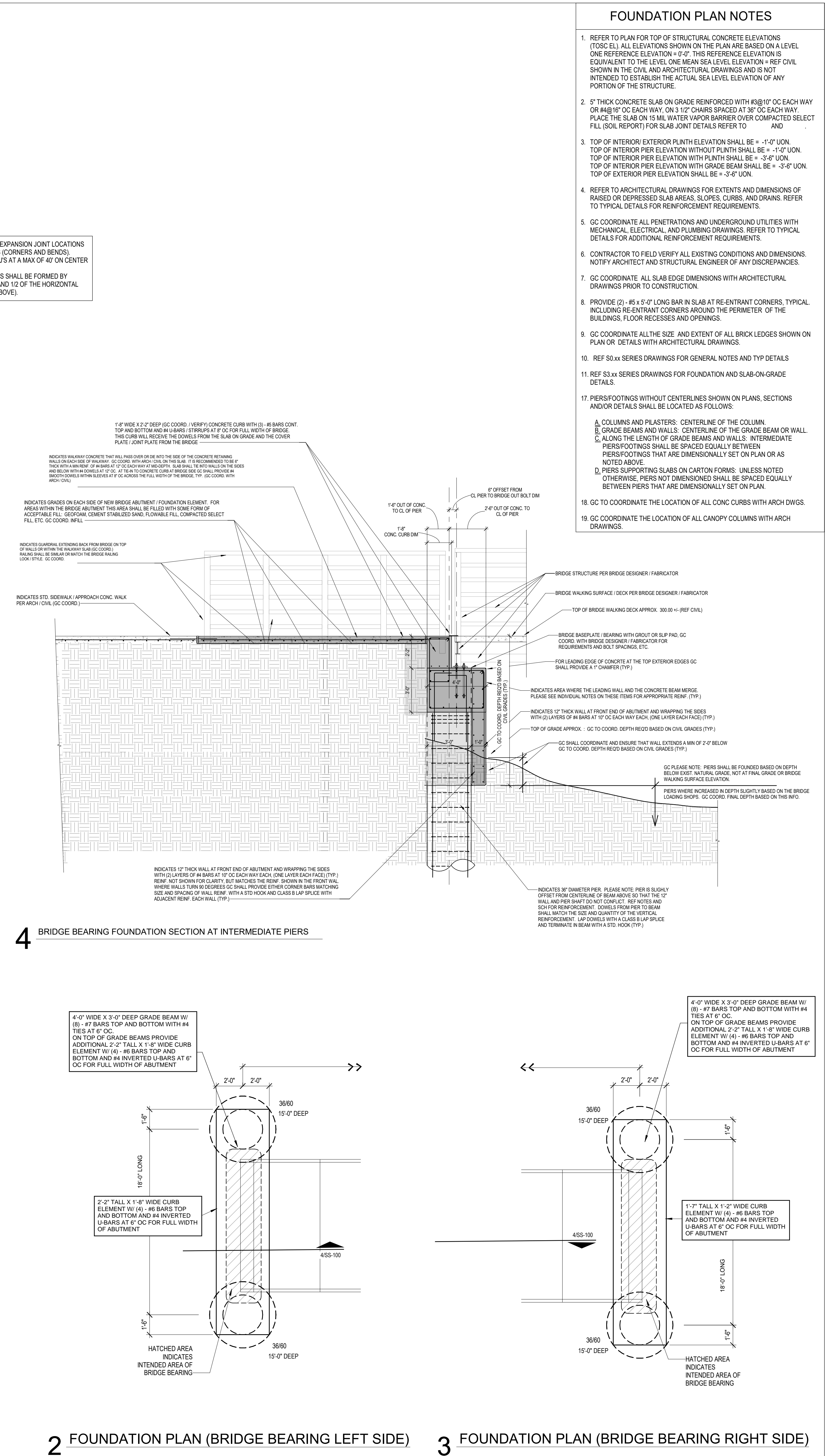
3 STAIRS PLAN ATHLETIC TURF AT SEAT WALL (B)
 1/4" = 1'-0"



GC SHALL COORDINATE WITH THE CONCRETE DETAILER / SUPPLIER AND AID THE DESIGN TEAM IN SETTING SOME TRUE EXPANSION JOINT LOCATIONS FOR THESE WALLS. IT IS RECOMMENDED TO HAVE EXPANSION JOINTS NEAR, BUT NOT AT CHANGE IN WALL DIRECTIONS (CORNERS AND BENDS) MAXIMUM EXPANSION JOINT SPACING SHALL BE MODULAR TO MATCH THE PRE-CAST SEATING ELEMENT BEING USED. EJS AT A MAX OF 40' ON CENTER AND CONTROL JOINTS AT A MAX OF 8'-0" OC.

EXPANSION JOINTS SHALL BE 1" WIDE AND WILL BE FILLED WITH EMBASEL DSM OR EQUIVALENT FILLER. CONTROL JOINTS SHALL BE FORMED BY PLACING 45 DEGREE CHAMFER TRIM VERTICALLY WITHIN THE CONCRETE WALL FORMS. THE CHAMFER SHALL BE 1" X 1" AND 1/2 OF THE HORIZONTAL TEMPERATURE BARS (EVERY-OTHER HORIZONTAL TEMPERATURE BAR) SHALL BE DISCONTINUOUS ACROSS JOINT. (SEE ABOVE).

PLEASE NOTE: THE GC SHALL COORDINATE WITH ARCH / CIVIL / SPORTS / LANDSCAPE FOR ALL EXPOSED FINISHES. THIS INCLUDES BUT IS NOT LIMITED TO: CONCRETE FINISH FOR HORIZONTAL AND VERTICAL SURFACES, CONCRETE PAVING AREAS, SIDEWALK, PRE-CAST ELEMENTS, JOINTING BETWEEN PRE-CAST ELEMENTS, CURBS, WALLS, ETC. THE STRUCTURAL DETAILS PROVIDED ARE INTENDED TO SHOW A REPRESENTATIVE CONDITION OF THE SIZE AND REINFORCEMENT FOR THESE VARIOUS ELEMENTS NEEDED, BUT THE SURFACE FINISH AND EXACT CONFIGURATIONS, CONNECTIONS ETC. OF THE VARIOUS ELEMENTS SHALL BE COORDINATED WITH OTHER DISCIPLINES AND THE RECOMMENDATIONS OF THE MANUF. OF THE VARIOUS PRODUCTS (TYP.)



- ### FOUNDATION PLAN NOTES
- REFER TO PLAN FOR TOP OF STRUCTURAL CONCRETE ELEVATIONS (TOSS ELL ALL ELEVATIONS SHOWN ON THE PLAN ARE BASED ON A LEVEL ONE REFERENCE ELEVATION = 0'-0". THIS REFERENCE ELEVATION IS EQUIVALENT TO THE LEVEL ONE MEAN SEA LEVEL ELEVATION + REF CIVIL SHOWN IN THE CIVIL AND ARCHITECTURAL DRAWINGS AND IS NOT INTENDED TO ESTABLISH THE ACTUAL SEA LEVEL ELEVATION OF ANY PORTION OF THE STRUCTURE.
 - 5" THICK CONCRETE SLAB ON GRADE REINFORCED WITH #3@10" OC EACH WAY OR #4@8" OC EACH WAY ON 3" TYP CHAIRS SPACED AT 2' OC EACH WAY. PLACE THE SLAB ON 15 ML WATER VAPOR BARRIER OVER COMPACTED SELECT FILL (SOIL REPORT) FOR SLAB JOINT DETAILS REFER TO AND
 - TOP OF INTERIOR/ EXTERIOR PLINTH ELEVATION SHALL BE = -1'-0" UON. TOP OF INTERIOR PIER ELEVATION WITHOUT PLINTH SHALL BE = -1'-0" UON. TOP OF INTERIOR PIER ELEVATION WITH PLINTH SHALL BE = -3'-0" UON. TOP OF INTERIOR PIER ELEVATION WITH GRADE BEAM SHALL BE = -3'-0" UON. TOP OF EXTERIOR PIER ELEVATION SHALL BE = -3'-0" UON.
 - REFER TO ARCHITECTURAL DRAWINGS FOR EXTENTS AND DIMENSIONS OF RAISED OR DEPRESSED SLAB AREAS, SLOPES, CURBS, AND DRAINS. REFER TO TYPICAL DETAILS FOR REINFORCEMENT REQUIREMENTS.
 - GC COORDINATE ALL PENETRATIONS AND UNDERGROUND UTILITIES WITH MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS. REFER TO TYPICAL DETAILS FOR ADDITIONAL REINFORCEMENT REQUIREMENTS.
 - CONTRACTOR TO FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS. NOTIFY ARCHITECT AND STRUCTURAL ENGINEER OF ANY DISCREPANCIES.
 - GC COORDINATE ALL SLAB EDGE DIMENSIONS WITH ARCHITECTURAL DRAWINGS PRIOR TO CONSTRUCTION.
 - PROVIDE (2) - #5 X 5'-0" LONG BAR IN SLAB AT RE-ENTRANT CORNERS, TYPICAL INCLUDING RE-ENTRANT CORNERS AROUND THE PERIMETER OF THE BUILDINGS, FLOOR RECESSES AND OPENINGS.
 - GC COORDINATE ALL THE SIZE AND EXTENT OF ALL BRICK LEDGES SHOWN ON PLAN OR DETAILS WITH ARCHITECTURAL DRAWINGS.
 - REF 50.xx SERIES DRAWINGS FOR GENERAL NOTES AND TYP DETAILS
 - REF 52.xx SERIES DRAWINGS FOR FOUNDATION AND SLAB-ON-GRADE DETAILS.
 - PIERS/FOOTINGS WITHOUT CENTERLINES SHOWN ON PLANS, SECTIONS AND/OR DETAILS SHALL BE LOCATED AS FOLLOWS:
 - A. COLUMNS AND PILASTERS: CENTERLINE OF THE COLUMN
 - B. GRADE BEAMS AND WALLS: CENTERLINE OF THE GRADE BEAM OR WALL
 - C. ALONG THE LENGTH OF GRADE BEAMS AND WALLS: INTERMEDIATE PIERS/FOOTINGS SHALL BE SPACED EQUALLY BETWEEN PIERS/FOOTINGS THAT ARE DIMENSIONALLY SET ON PLAN OR AS NOTED ABOVE.
 - D. PIERS SUPPORTING SLABS ON CARTON FORMS, UNLESS NOTED OTHERWISE, PIERS NOT DIMENSIONED SHALL BE SPACED EQUALLY BETWEEN PIERS THAT ARE DIMENSIONALLY SET ON PLAN.
 - GC TO COORDINATE THE LOCATION OF ALL CONC CURBS WITH ARCH DWGS.
 - GC COORDINATE THE LOCATION OF ALL CANOPY COLUMNS WITH ARCH DRAWINGS.

ARCHITECT: HOUSTON PBK Architects, Inc. PBK.com
11 Greenway Plaza, 22nd Floor
Houston, TX 77046
713-965-0688 P
TX Form BR 1608

DESIGNER: HOUSTON
1113 305 0688
STRUCTURAL: HOUSTON
1113 305 0688
ARCHITECT: HOUSTON
1113 305 0688
THE ARCHITECTURE FIRM, INC.
1113 305 0688
REVIT: HOUSTON
1113 305 0688
CLEAR: HOUSTON
1113 305 0688

LEGENDS EVENT CENTER AMENITIES

2633 MIDTOWN PARK BLVD.
BRYAN, TX
77801

ISSUE FOR GMP

The Good Life, Texas Style.™

STATE OF TEXAS
JOHN R. KUBALA
106120
05/01/2023
Kubala Engineers
F-23612

CLIENT: CITY OF BRYAN
DATE: 05/01/2023 PROJECT NUMBER: 20197SP

| No. | Description | Date |
|-----|-------------|------------|
| 1 | PR 001 | 05/01/2023 |

ISSUE FOR GMP

OVERALL SCOPE SHEET

SS-100

Kubala ENGINEERS
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TX REG. NO. F-23612

CONCRETE MIX:
1. CONCRETE SPECIFICATIONS SHALL BE AS FOLLOWS:

| USAGE | CONCRETE MIX DESIGN SCHEDULE | | | | | | | | | | |
|--|------------------------------|------|-------------------------|------------|---------------|------------------------|-------------|------------------------------------|------------------|---------------------------|--|
| | 28 DAY STRENGTH (PSI) | | MAX AGGREGATE SIZE (IN) | SLUMP (IN) | MAX W/C RATIO | MAX CURE DENSITY (PCF) | CEMENT TYPE | MAX ALLOWABLE % FLY ASH (EACH CMS) | % AIR ENTRAPMENT | 28 DAY STRENGTH (PSI) | |
| 3000 | 3500 | 4000 | | | | | | | | 5000 | |
| 1. PIERS | | | 1 1/2 | 6-8 | 0.55 | 150 | I/II | 40 | - | | |
| 2. FOOTINGS | | | 1 | 3-5 | 0.50 | 150 | I/II | 30 | 5 | | |
| 3. SLAB-ON-GRADE ** | | | 1 | 3-5 | 0.50 | 150 | I/II | 20 | - | | |
| 5. GRADE BEAMS AND PLINTHS ** | | | 1 | 3-5 | 0.50 | 150 | I/II | 20 | - | | |
| 6. COLUMNS | | | 1 | 3-5 | 0.50 | 150 | I/II | 20 | - | | |
| 7. BEAMS | | | 1 | 3-5 | 0.50 | 150 | I/II | 20 | - | | |
| 8. WALLS ** | | | 1 | 6-8 | 0.50 | 150 | I/II | 30 | 5 | | |
| 9. BASEMENT WALLS ** | | | 1 | 6-8 | 0.50 | 150 | I/II | 30 | - | | |
| 10. RETAINING WALLS ** | | | 1 | 6-8 | 0.50 | 150 | I/II | 20 | 3-5 | | |
| 11. TILT-UP PANELS ** | | | 3/4" | 3-5 | 0.50 | 150 | I/II | 15 | 2-4 | | |
| 12. NORMAL WEIGHT SLAB ON COMPOSITE METAL DECK | | | 1 | 3-5 | 0.45 | 150 | I/II | 20 | - | | |
| 13. LIGHT WEIGHT SLAB ON COMPOSITE METAL DECK | | | 1 | 3-5 | 0.45 | 117 ± 3 | I/II | 20 | 5.5 | | |
| 14. SLAB-ON-VOID FORMS ** | | | 1 | 3-5 | 0.50 | 150 | I/II | 20 | - | | |
| 15. SLAB FOR EQUIPMENT PADS | | | 1 | 3-5 | 0.45 | 150 | I/II | 20 | - | 5-7 IF EXPOSED TO WEATHER | |
| 16. MASS CONCRETE/ALSO REFER TO MASS CONCRETE NOTES AT 56 DAYS | | | 1 | 3-5 | 0.40 | 150 | II | 40 | - | | |
| 17. NON-COMPOSITE TOPPING SLAB | | | 1 | 5-7 | 0.45 | 150 | I/II | - | - | | |

** SPECIAL GC NOTE FOR CONCRETE WHICH IS PART OF A DEPRESSED AREA. SEE CONCRETE MIX NOTE 10.

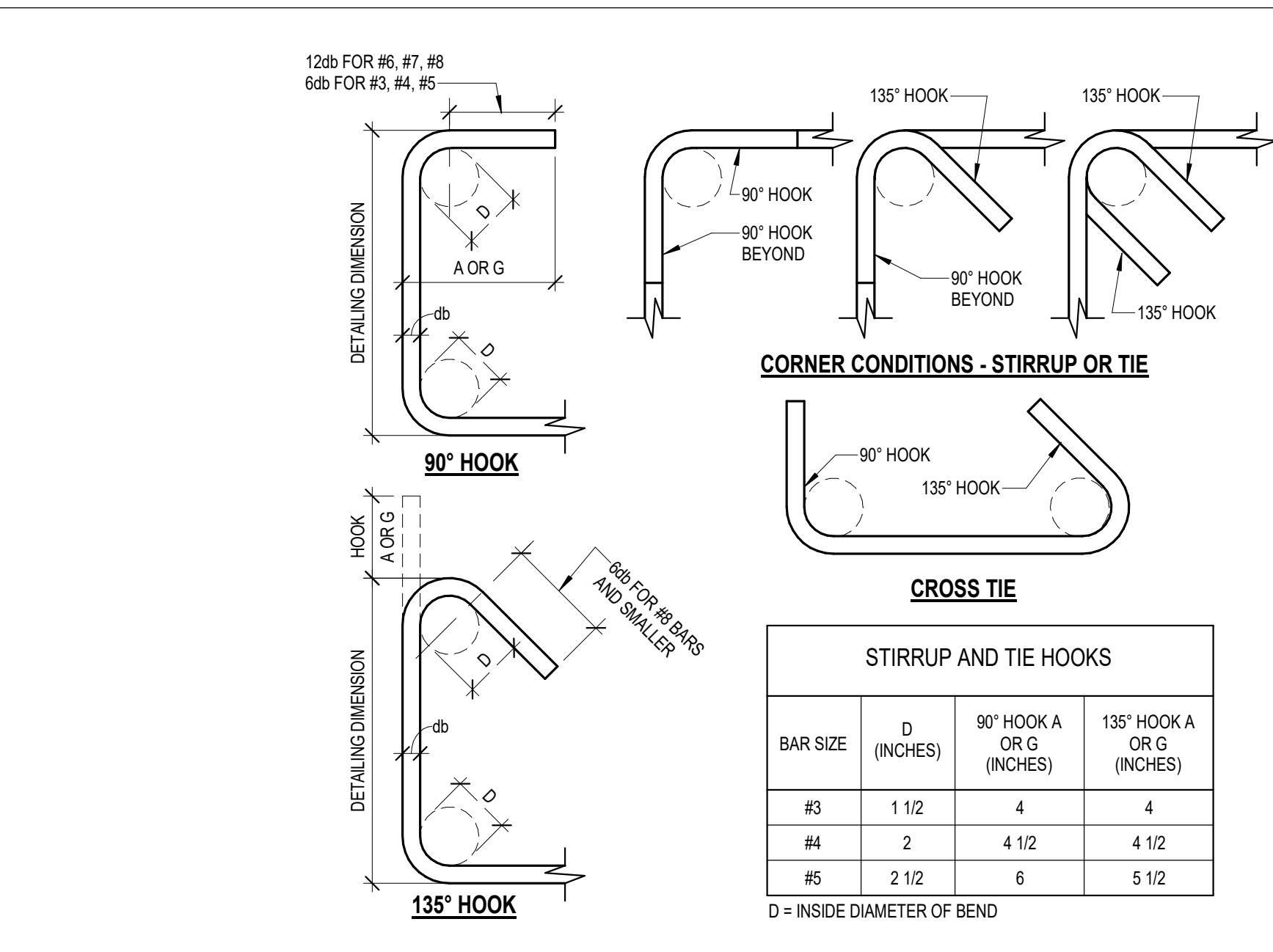
2. PORTLAND CEMENT SHALL BE TYPE I OR TYPE II (CONFORM TO ASTM C150), EXCEPT AS FOLLOWS:
MASS CONCRETE ONLY CEMENT TYPE II
NORMAL WEIGHT AGGREGATE SHALL CONFORM TO ASTM C33. LIGHT WEIGHT AGGREGATE SHALL CONFORM TO ASTM C330. ALL AGGREGATE SHALL BE FROM A SINGLE SOURCE.
3. FLY ASH MAY NOT BE PERMITTED IN ARCHITECTURALLY EXPOSED CONCRETE. FLY ASH MAY BE USED ELSEWHERE, WITHIN THE SPECIFIED PROPORTION LIMITS, BUT THE CONTRACTOR SHALL FIRST VERIFY COMPATIBILITY WITH CURING COMPOUNDS, SEALERS, BOND BREAKER, FLOORING ADHESIVES AND OTHER MATERIALS PROPOSED TO BE IN CONTACT WITH THE CONCRETE.
4. CONCRETE MIX DESIGNS SHALL BE SUBMITTED FOR REVIEW A MINIMUM OF 7 DAYS PRIOR TO THE START OF THE WORK FOR ENGINEER AND OWNERS TESTING LABORATORY APPROVAL, PRIOR TO THE PLACEMENT OF CONCRETE. MIX DESIGNS MUST INDICATE CONFORMANCE WITH ACI 318 LATEST EDITION, CHAPTER 5, SECTION 5.3.
5. AT THE POINT OF DISCHARGE SLUMP TESTS, CONFORMING TO ASTM C143, SHALL BE TAKEN. SEE CONCRETE NOTE NO. 5 BELOW FOR RATE OF TESTS.
6. AIR CONTENT TESTS CONFORMING TO ASTM C173 (VOLUMETRIC METHOD FOR LIGHTWEIGHT OR NORMAL WEIGHT CONCRETE; ASTM C231 PRESSURE METHOD FOR NORMAL WEIGHT CONCRETE) SHALL BE TAKEN FOR EACH DAY'S POUR FOR ALL TYPES OF AIR-ENTRAINED CONCRETE BEING USED.
7. CONCRETE TEMPERATURE SHALL BE TESTED HOURLY WHEN THE AIR TEMPERATURE IS 40 DEG F AND BELOW, 80 DEG F AND ABOVE AND EACH TIME A SET OF COMPRESSION TEST SPECIMENS ARE MADE.
8. ONE SET OF FOUR COMPRESSION TEST SPECIMENS CONFORMING TO ASTM C31 SHALL BE MOLDED AND STORED FOR LABORATORY-CURED SPECIMENS. COMPRESSIVE STRENGTH TESTS SHALL CONFORM TO ASTM C39 AND SHALL CONSIST OF ONE SET FOR EACH DAY'S POUR EXCEEDING 5 CU YDS. PLUS ADDITIONAL SETS FOR EACH 50 CU YDS. MORE THAN THE FIRST 25 CU YDS OF EACH CONCRETE CLASS PLACED IN ANY ONE DAY. ONE SPECIMEN SHALL BE TESTED AT 7 DAYS, TWO SPECIMENS SHALL BE TESTED AT 28 DAYS, AND ONE SPECIMEN SHALL BE RETAINED FOR LATER TESTING AS REQUIRED.
9. VERIFY THAT POST INSTALLED ANCHORS ARE INSTALLED PER THE MANUFACTURER'S RECOMMENDATIONS AND REQUIREMENTS.
10. SPECIAL GC NOTE FOR CONCRETE WHICH IS PART OF A DEPRESSED AREA.
- A. AT ALL DEPRESSIONS GREATER THAN OR EQUAL TO MINUS 6 INCHES FROM THE MAIN FINISH FLOOR THE GC SHALL PROVIDE XYPEX C-1000 ADMIXTURE (AT AN ASSUMED MINIMUM RATE OF 15 LBS/CU YD) INTO ALL OF THE CONCRETE. THE ADMIXTURE SHALL BE PLACED INTO THE MIX AT THE TIME OF BATCHING AT THE PLANT. DO NOT ADD DRY BAG MIX TO THE WET CONCRETE TRUCK ON-SITE. THE GC SHALL STRICTLY FOLLOW ALL MANUFACTURER'S INSTRUCTIONS FOR ADDITION, USE, HANDLING, ETC. THE ADD MIXTURE SHALL BE ADDED TO ALL OF THE CONCRETE WHICH MAKES UP ANY DEPRESSION GREATER THAN OR EQUAL TO MINUS 6 INCHES FROM THE MAIN FINISH FLOOR. THIS INCLUDES BUT IS NOT LIMITED TO DEPRESSED SLABS (FULL THICKNESS), ALL VERTICAL STEM WALLS (FULL THICKNESS) AND/OR ANY GRADE BEAMS (FULL DEPTH AND THICKNESS) WHICH FORM ANY PORTION OF THE VERTICAL DROP AND ALL HORIZONTAL SLAB FOR THE DEPRESSED AREA. THIS DOES NOT INCLUDE OR REVISE ANY WATERPROOFING TREATMENTS, LAYERS OR SUBSTRATES THAT ARE CURRENTLY REQUIRED BY THE STRUCTURAL, ARCHITECTURAL, AND/OR OTHER CONSULTANT DRAWINGS. THIS IS IN ADDITION TO THOSE CURRENT MEASURES. THE COST FOR THIS ADD MIXTURE SHALL BE ACCOUNTED FOR WITHIN THE BASE BID AND SHALL INCLUDE, BUT IS NOT LIMITED TO, ALL AREAS ARCHITECTURALLY LABELED AS FLOORING, GROUSTRIP, PIT, ALL ELEVATOR PITS, AND THE BELOW GRADE FLY-OFF RIGGING PIT. PLEASE NOTE: XYPEX C-1000 HAS BEEN CHOSEN AS A NEUTRAL MIX ADDITIVE THAT IS NOT INTENDED TO CHANGE THE CURRENTLY PLANNED CONCRETE SET TIME. IF FOR SOME REASON THE SET TIME IS DESIRED TO BE INCREASED OR DECREASED XYPEX DOES HAVE ALTERNATIVE FORMULATIONS WHICH MAY BE USED; HOWEVER, THE GC MUST GET WRITTEN APPROVAL FROM THE GCOR PRIOR TO ANY CHANGE. THE XYPEX C-1000 FORMULATION. THE XYPEX C-1000 IS AN ADDITIONAL MOISTURE MITIGATION MEASURE THAT IS REQUIRED IN ADDITION TO THE SPECIFIED WATERSTOPS NOTED IN THE OTHER GENERAL NOTES AND DETAILS RELATED TO CONCRETE COLD-JOISTS AND OTHER CONCRETE TRANSITIONS OF PLANE.

CAST-IN-PLACE CONCRETE:

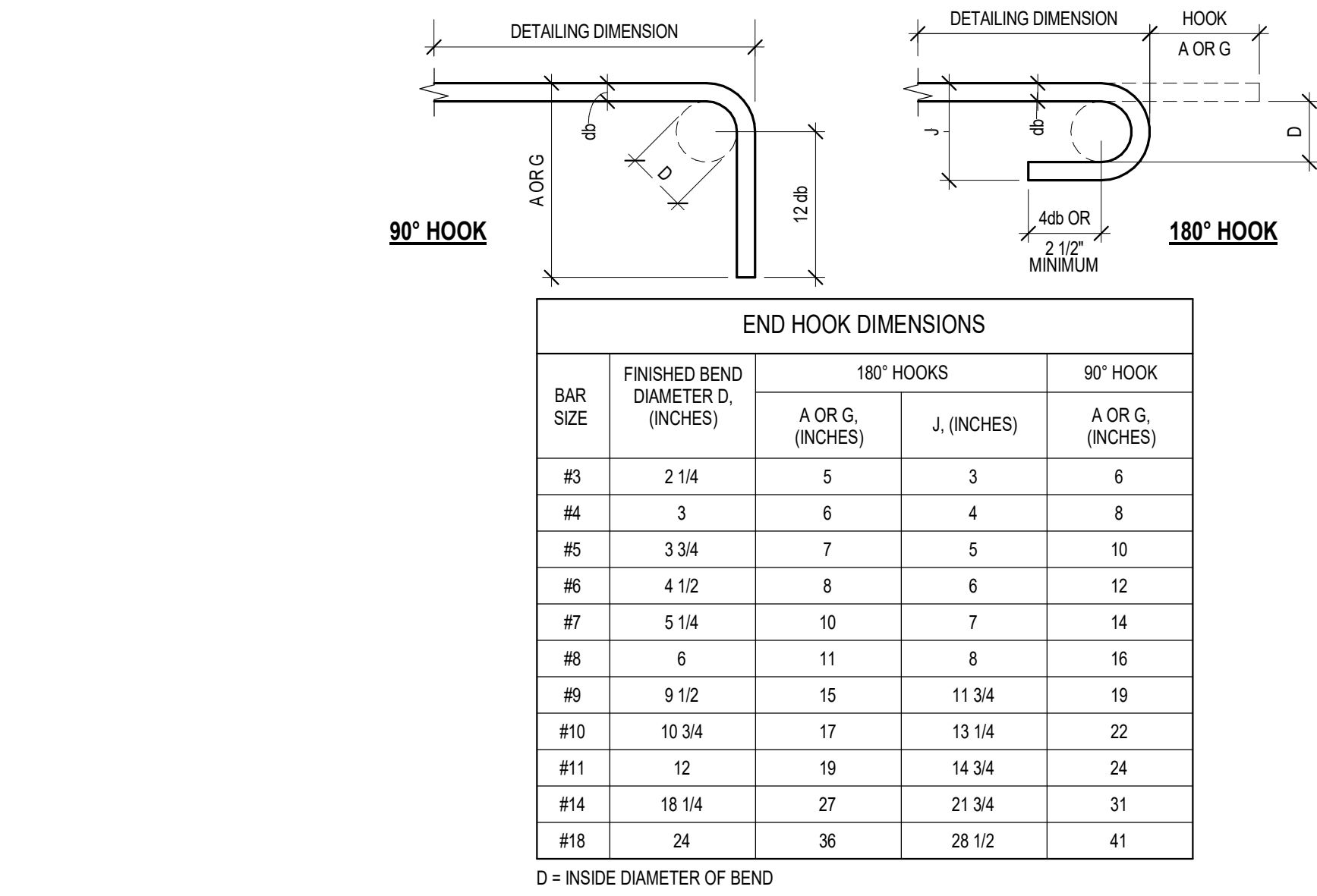
1. CONCRETE SUPPLIER SHALL BE AWARE OF CEMENTS THAT CAN CAUSE LATE ETTRINGITE FORMATION IN THE CEMENT PASTE AND BE PREPARED TO SHOW THAT THE CEMENTS USED WILL NOT CAUSE THIS PROBLEM.
2. ALL MIXING, TRANSPORTING, PLACING AND CURING OF CONCRETE SHALL BE DONE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE AMERICAN CONCRETE INSTITUTE, ACI 301 AND ACI 318, LATEST EDITIONS.
3. NO HORIZONTAL JOINTS WILL BE PERMITTED IN CONCRETE EXCEPT WHERE THEY NORMALLY OCCUR OR WHERE SHOWN ON THE DETAILS. VERTICAL JOINTS SHALL OCCUR AT CENTER SPANS OR AT LOCATIONS APPROVED BY THE STRUCTURAL ENGINEER.
4. ALL MIXING, TRANSPORTING, PLACING AND CURING OF CONCRETE SHALL BE DONE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE AMERICAN CONCRETE INSTITUTE, ACI 301 AND ACI 318, LATEST EDITIONS.
5. ALL BASE PLATES AND ANCHOR BOLTS SHALL BE PROTECTED WITH 3" (MIN.) OF CONCRETE. ANCHOR BOLTS SHALL BE FABRICATED FROM FULL BODIED ASTM F1554, GRADE 36 LOW CARBON STEEL RODS HAVING THE SAME DIAMETER AS THE BOLT DIAMETER AND USING CUT THREADS. ROLLED THREADS ARE NOT ACCEPTABLE. BOLTS SHALL BE SET USING RIGID TEMPLATES.
6. AT HORIZONTAL CONCRETE FRAMING, FORMS SHALL NOT BE REMOVED UNTIL THE CONCRETE HAS REACHED 70 PERCENT OF THE 28-DAY COMPRESSIVE STRENGTH INDICATED. FLOOR SLABS AND BEAMS SHALL REMAIN SHORED UNTIL THE UPPER MOST LEVEL OF CONCRETE HAS REACHED 70 PERCENT OF THE 28-DAY COMPRESSIVE STRENGTH. FOR BUILDINGS WITH MORE THAN THREE STORES IN HEIGHT, SHORING SHALL BE MAINTAINED FOR THREE LEVELS BELOW, UNTIL THE UPPER MOST LEVEL HAS REACHED 70 PERCENT OF THE SPECIFIED 28-DAY COMPRESSIVE STRENGTH.
7. ALL CONDUITS AND PIPES EMBEDDED IN CONCRETE SHALL COMPLY WITH ALL PROVISIONS SPECIFIED IN ACI 318 SECTION 6.3, WITH THE FOLLOWING SPECIFIC REQUIREMENTS:
- A. THE MAXIMUM OUTSIDE DIAMETER OF THE CONDUITS AND PIPES SHALL BE 1 1/2". NONE PERMITTED IN SLABS THINNER THAN 4 1/2".
- B. THE MINIMUM CLEAR DISTANCE BETWEEN CONDUITS AND PIPES SHALL BE 1 1/2".
- C. NONE PERMITTED IN SLABS-ON-GRADE WHICH WILL BE PERMANENTLY EXPOSED OR SCHEDULED TO RECEIVE THIS SET. PLACE ALL PIPES AND CONDUITS IN THE FILL BENEATH THE VAPOR RETARDER, RE-COMPACT AS SPECIFIED.
- D. IN NON-EXPOSED SLABS-ON-GRADE, LIMIT SIZE TO 1" O.D. IN 5" SPACED SLAB 12" APART AND TIE TO UNDERSIDE OF REINFORCING MAT. WHERE LINES CONVERGE AT SOURCE, DOUBLE UP THE SLAB REINFORCING IN THE CONVERGENCE ZONE AND 3'-0" BEYOND. PLACE ALL LARGER LINES IN THE FILL BENEATH THE VAPOR RETARDER.
- E. NONE PERMITTED IN COLUMNS WITHOUT PRIOR APPROVAL.
- F. DO NOT DISPLACE REINFORCING STEEL FROM ITS PROPER POSITION.
8. PROVIDE SHEAR KEYS IN ALL CONSTRUCTION JOINTS IN BEAMS AND WALLS. IN ACCORDANCE WITH THE TYPICAL CONCRETE DETAILS.
9. PLACE WATERSTOPS IN ALL EXTERIOR CONSTRUCTION JOINTS BELOW GRADE AND ELSEWHERE AS CALLED FOR.
10. FLOORS ARE NOT DESIGNED TO SUPPORT FORMWORK AND WET CONCRETE WEIGHT OF NEXT LEVEL. CONTRACTOR SHALL DESIGN AND PROVIDE RE-SHORING TO PREVENT OVERSTRESSING THE STRUCTURE.
11. SET FORMS TO FOLLOW SLOPES AND FORMS DEFINED ON PLAN, KEEPING MEMBER DEPTHS CONSTANT AT DEPTHS DETAILED OR SCHEDULED, UNLESS NOTED OTHERWISE. SLOPE UNIFORMLY BETWEEN ELEVATIONS GIVEN. BUILD IN CAMBER WHERE SPECIFIED.
12. CONSTRUCTION JOINTS PERMITTED ONLY WHERE INDICATED ON DRAWINGS. WHERE NOT SPECIFICALLY INDICATED ON DRAWINGS, LOCATE THE JOINTS AS FOLLOWS:
- A. LOCATE JOINTS NOT INDICATED TO LEAST MPAR STRENGTH AND APPEARANCE OF STRUCTURE. LOCATE VERTICAL JOINTS IN MIDDLE THIRD OF SPANS OF NON-POST-TENSIONED SLABS, BEAMS OR GIRDERS, UNLESS A BEAM INTERSECTS A GIRDER AT MIDDLE LOCATION, IN WHICH CASE OFFSET JOINTS IN GIRDERS TWICE WIDTH OF BEAM. LOCATE VERTICAL JOINTS WITHIN THE END THIRD OF SPANS OF POST-TENSIONED CONTINUOUS SLAB, BEAMS OR GIRDERS WHERE TENDON PROFILES ARE AT OR NEAR THE CENTROID OF THE CONCRETE CROSS SECTION.
- B. LOCATE HORIZONTAL JOINTS IN WALLS AND COLUMNS AT UNDERSIDE OF SUPPORTED ELEMENTS AT THE TOP OF THE WALL OR COLUMN AND AT THE TOP OF FOOTINGS OR FLOOR SLABS AT THE BOTTOM OF THE WALL OR COLUMN. ROUGHEN SURFACE OF HORIZONTAL OR NEARLY HORIZONTAL CONSTRUCTION JOINTS SO THAT AGGREGATE SHALL BE EXPOSED UNIFORMLY, LEAVING NO LAITANCE, LOOSESED PARTICLES OR DAMAGED CONCRETE.
- C. REFER TO PLANS FOR JOINTS IN GRADE SUPPORTED SLABS.
- D. JOINTS ARE NOT ALLOWED BETWEEN PLASTER AND BEAM/WALL THAT ARE MONOLITHIC.
- E. SUBMIT CONSTRUCTION JOINT LAYOUT PLANS FOR APPROVAL BY THE ENGINEER PRIOR TO CONSTRUCTION.

CONCRETE REINFORCEMENT:

1. REINFORCING STEEL SHALL CONFORM TO ASTM A615. BARS SHALL BE NEW OR RECYCLED DOMESTIC BILLET STEEL OR A DOMESTIC MANUFACTURE. REINFORCING BARS SIZE #3 THROUGH #11 SHALL BE GRADE 60. REINFORCING BARS SIZE #11 THROUGH #18 SHALL BE GRADE 75.
2. DEFORMED BAR ANCHORS SHALL CONFORM TO ASTM A498, GRADE 70.
3. ALL WELDED WIRE FABRIC SHALL BE SMOOTH WIRE FABRIC CONFORMING TO ASTM A185, AND SHALL BE FURNISHED IN FLAT SHEETS.
4. CONCRETE COVERAGE AROUND REINFORCEMENT SHALL CONFORM TO THE REQUIREMENTS OF ACI 318 SECTION 7.7, LATEST EDITION, AND MEET REQUIREMENTS BELOW. THE REINFORCING STEEL DETAILER SHALL ADJUST REINFORCING STEEL COVER SIZES AT INTERSECTING REINFORCING REQUIREMENTS AS REQUIRED TO ALLOW CLEARANCE FOR INTERSECTING BARS. SLAB ON GRADE REINFORCEMENT SHALL BE SUPPORTED AT EVERY THIRD BAR, NOT TO EXCEED 45-INCH INTERVALS.
5. DETAILING OF CONCRETE REINFORCEMENT AND ACCESSORIES SHALL CONFORM TO ACI 315, LATEST EDITION. ALL HOOKED BARS SHOWN SHALL HAVE STANDARD HOOKS, UNLESS NOTED OTHERWISE.
6. REINFORCING SHALL NOT BE WELDED WITHOUT APPROVAL FROM THE STRUCTURAL ENGINEER.
7. BOTTOM REINFORCING BARS SHALL BE SPLICED AT SUPPORTS AND CONTINUOUS TOP BARS SHALL BE SPLICED AT MID-SPAN.
8. ALL CONTINUOUS REINFORCEMENT SHALL BE LAPPED 56 BAR DIAMETERS AT SPLICE LOCATIONS.
9. WHERE BAR TYPES FROM THE BAR BENDING DIAGRAM ARE SPECIFIED, PROVIDE BARS ACCORDINGLY. OTHERWISE, DETAIL BARS IN BEAMS, COLUMNS, SLABS, AND WALLS AS FOLLOWS:
- A. RUN TOP AND BOTTOM BARS CONTINUOUS, WITH SPLICES AND HOOKS AS DESCRIBED BELOW.
- B. PROVIDE STANDARD 90 DEGREE HOOK ON TOP BARS AT CANTILEVER ENDS.
- C. SPLICE TOP AND INTERMEDIATE BARS AT THE CENTER LINE BETWEEN MEMBER SUPPORTS, UNLESS NOTED OTHERWISE.
- D. SPLICE BOTTOM BARS DIRECTLY OVER MEMBER SUPPORTS, UNLESS NOTED OTHERWISE.
- E. CENTER BARS NOTED AS "AT SUPPTS." OVER MEMBER SUPPORTS, AND CENTER BARS NOTED AS "BTWN. SUPPTS." BETWEEN SUPPORTS.
- F. PLACE BARS NOTED AS "2ND LAYER" BELOW THE PRIMARY TOP BARS (OR ABOVE THE PRIMARY BOTTOM BARS) AND PROVIDE #11 SPACER BARS PLACED AT INTERVALS OF 4'-0" BETWEEN THE TWO LAYERS OF BARS.
- G. ALL BAR SPLICES IN BEAMS, AND SLABS SHALL BE 30 BAR DIAMETERS. EXCEPT THAT SPLICES IN HORIZONTAL WALL BARS AND INTERMEDIATE BEAM BARS SHALL BE 36 BAR DIAMETERS.
- H. PROVIDE CORNER BARS FOR EACH HORIZONTAL BAR AT THE INSIDE AND OUTSIDE FACIES OF INTERSECTING BEAMS OR WALLS. REFER TO TYPICAL CORNER BAR DETAIL ON.



1 TYPICAL STIRRUP AND TIE HOOK TYPES NO SCALE



3 TYPICAL END HOOK TYPE NO SCALE

BEAM AND GIRDER TENSION DEVELOPMENT AND LAP SPLICE LENGTHS
GRADE 60 REINFORCEMENT, NORMALWEIGHT CONCRETE

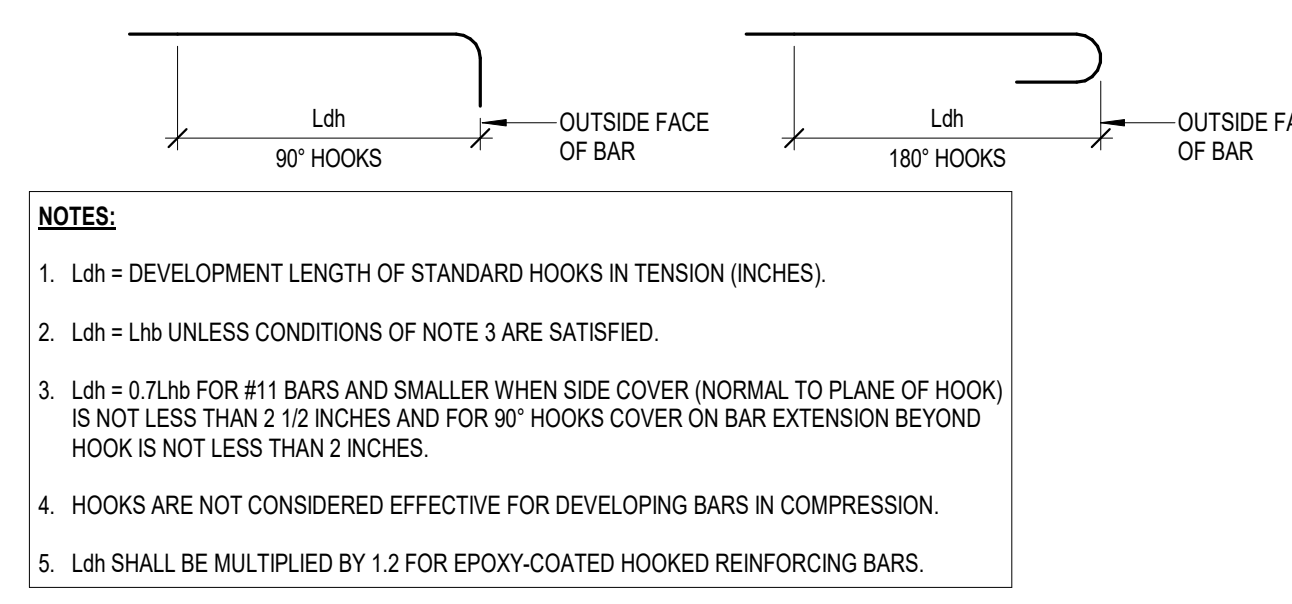
| BAR SIZE | LAP CLASS | fc = 3000 PSI | | fc = 4000 PSI | | fc = 5000 PSI | |
|----------|-----------|---------------|------------|---------------|------------|---------------|------------|
| | | BOTTOM BARS | OTHER BARS | BOTTOM BARS | OTHER BARS | BOTTOM BARS | OTHER BARS |
| #3 | A | 12 | 13 | 12 | 12 | 12 | 12 |
| #3 | B | 16 | 17 | 16 | 16 | 16 | 16 |
| #4 | A | 16 | 20 | 14 | 18 | 12 | 16 |
| #4 | B | 21 | 26 | 19 | 24 | 16 | 21 |
| #5 | A | 23 | 29 | 20 | 25 | 18 | 23 |
| #5 | B | 30 | 38 | 26 | 33 | 24 | 30 |
| #6 | A | 31 | 40 | 27 | 35 | 24 | 31 |
| #6 | B | 41 | 52 | 36 | 46 | 32 | 41 |
| #7 | A | 46 | 60 | 40 | 52 | 36 | 46 |
| #7 | B | 60 | 78 | 52 | 68 | 47 | 60 |
| #8 | A | 60 | 78 | 52 | 67 | 46 | 60 |
| #8 | B | 78 | 102 | 68 | 88 | 60 | 78 |
| #9 | A | 64 | 84 | 56 | 72 | 50 | 65 |
| #9 | B | 84 | 110 | 73 | 94 | 65 | 85 |
| #10 | A | 72 | 93 | 62 | 81 | 56 | 72 |
| #10 | B | 94 | 121 | 81 | 106 | 73 | 94 |
| #11 | A | 85 | 110 | 74 | 96 | 66 | 86 |
| #11 | B | 111 | 143 | 97 | 125 | 86 | 112 |

- NOTES:**
- ALL SPLICE LENGTHS ARE IN INCHES.
 - THIS TABLE SHALL BE USED FOR BEAMS AND GIRDERS ONLY. REFER TO OTHER DEVELOPMENT LENGTH TABLES FOR OTHER MEMBERS.
 - THE TENSION DEVELOPMENT LENGTH (Ld) IS EQUAL TO THE SCHEDULED "CLASS A" LAP SPLICE LENGTH.
 - A BOTTOM BAR IS DEFINED AS ANY BAR THAT DOES NOT HAVE MORE THAN 12" OF FRESH CONCRETE BELOW THE BAR.
 - OTHER BARS INCLUDE TOP BARS, FACE BARS, AND ALL OTHER BARS THAT HAVE MORE THAN 12" OF FRESH CONCRETE BELOW THE BAR.
 - FOR EPOXY-COATED BARS, MULTIPLY THE TABULATED SPLICE LENGTHS OF BOTTOM BARS BY 1.5 AND THE TABULATED SPLICE LENGTHS OF OTHER BARS BY 1.3.
 - WHEN LAP SPLICING BARS OF DIFFERENT SIZES, THE LAP LENGTH IS DETERMINED BY THE SMALLER BAR BUT MAY NOT BE LESS THAN THE "CLASS A" SPLICE LENGTH OF THE LARGER BAR.
 - FOR CONCRETE STRENGTHS IN BETWEEN THOSE TABULATED HERE, USE DEVELOPMENT AND LAP SPLICE LENGTHS OF LOWER CONCRETE STRENGTH.

5 TYPICAL BEAM AND GIRDER TENSION DEVELOPMENT AND LAP SPLICE LENGTHS NO SCALE

DEVELOPMENT LENGTHS OF STANDARD HOOKS IN TENSION
GRADE 60 REINFORCEMENT, NORMALWEIGHT CONCRETE

| BAR SIZE | fc=3000 PSI | | fc=4000 PSI | | fc=5000 PSI | | BAR SIZE |
|----------|-------------|---------|-------------|---------|-------------|---------|----------|
| | Ldb | 0.7 Ldb | Ldb | 0.7 Ldb | Ldb | 0.7 Ldb | |
| #3 | 9 | 7 | 8 | 6 | 7 | 6 | #3 |
| #4 | 11 | 8 | 10 | 7 | 9 | 7 | #4 |
| #5 | 14 | 10 | 12 | 9 | 11 | 8 | #5 |
| #6 | 17 | 12 | 15 | 11 | 13 | 10 | #6 |
| #7 | 20 | 14 | 17 | 12 | 15 | 11 | #7 |
| #8 | 22 | 16 | 19 | 14 | 17 | 12 | #8 |
| #9 | 25 | 18 | 22 | 16 | 20 | 14 | #9 |
| #10 | 28 | 20 | 25 | 18 | 22 | 16 | #10 |
| #11 | 31 | 22 | 27 | 19 | 24 | 17 | #11 |
| #14 | 38 | - | 33 | - | 29 | - | #14 |
| #18 | 50 | - | 43 | - | 39 | - | #18 |



7 TYPICAL DEVELOPMENT LENGTHS OF STANDARD HOOKS IN TENSION NO SCALE

SLAB TENSION DEVELOPMENT AND LAP SPLICE LENGTHS
GRADE 60 REINFORCEMENT, NORMALWEIGHT CONCRETE

| BAR SIZE | LAP CLASS | fc = 3000 PSI | | fc = 4000 PSI | | fc = 5000 PSI | |
|----------|-----------|---------------|------------|---------------|------------|---------------|------------|
| | | BOTTOM BARS | OTHER BARS | BOTTOM BARS | OTHER BARS | BOTTOM BARS | OTHER BARS |
| #3 | A | 12 | 13 | 12 | 12 | 12 | 12 |
| #3 | B | 16 | 17 | 16 | 16 | 16 | 16 |
| #4 | A | 17 | 22 | 15 | 19 | 13 | 17 |
| #4 | B | 23 | 29 | 20 | 25 | 17 | 23 |
| #5 | A | 25 | 32 | 21 | 28 | 19 | 25 |
| #5 | B | 33 | 42 | 28 | 37 | 25 | 33 |
| #6 | A | 33 | 43 | 29 | 37 | 26 | 34 |
| #6 | B | 43 | 56 | 38 | 49 | 34 | 45 |
| #7 | A | 53 | 69 | 46 | 60 | 42 | 54 |
| #7 | B | 69 | 90 | 60 | 78 | 55 | 71 |
| #8 | A | 66 | 86 | 57 | 74 | 51 | 67 |
| #8 | B | 86 | 112 | 75 | 97 | 67 | 88 |
| #9 | A | 80 | 104 | 69 | 90 | 62 | 81 |
| #9 | B | 104 | 136 | 90 | 117 | 81 | 106 |

- NOTES:**
- ALL SPLICE LENGTHS ARE IN INCHES.
 - THIS TABLE SHALL BE USED FOR SLABS ONLY. REFER TO OTHER DEVELOPMENT LENGTH TABLES FOR OTHER MEMBERS.
 - THE TENSION DEVELOPMENT LENGTH (Ld) IS EQUAL TO THE SCHEDULED "CLASS A" LAP SPLICE LENGTH.
 - A BOTTOM BAR IS DEFINED AS ANY BAR THAT DOES NOT HAVE MORE THAN 12" OF FRESH CONCRETE BELOW THE BAR.
 - OTHER BARS INCLUDE TOP BARS AND ALL OTHER BARS THAT HAVE MORE THAN 12" OF FRESH CONCRETE BELOW THE BAR FOR TOP REINFORCEMENT IN SLABS THAT ARE 12" THICK OR LESS. TABULATED SPLICE LENGTHS FOR BOTTOM BARS SHALL BE USED.
 - FOR EPOXY-COATED BARS, MULTIPLY THE TABULATED SPLICE LENGTHS OF BOTTOM BARS BY 1.5 AND THE TABULATED SPLICE LENGTHS OF OTHER BARS BY 1.3.
 - WHEN LAP SPLICING BARS OF DIFFERENT SIZES, THE LAP LENGTH IS DETERMINED BY THE SMALLER BAR BUT MAY NOT BE LESS THAN THE "CLASS A" SPLICE LENGTH OF THE LARGER BAR.

2 TYPICAL SLAB TENSION DEVELOPMENT AND LAP SPLICE LENGTHS NO SCALE

WALL HORIZONTAL BAR TENSION DEVELOPMENT AND LAP SPLICE LENGTHS
GRADE 60 REINFORCEMENT, NORMALWEIGHT CONCRETE

| BAR SIZE | LAP CLASS | fc = 3000 PSI | | fc = 4000 PSI | | fc = 5000 PSI | |
|----------|-----------|---------------|------------|---------------|------------|---------------|------------|
| | | BOTTOM BARS | OTHER BARS | BOTTOM BARS | OTHER BARS | BOTTOM BARS | OTHER BARS |
| #3 | A | 13 | 12 | 12 | 12 | | |
| #3 | B | 17 | 16 | 16 | 16 | | |
| #4 | A | 22 | 19 | 17 | 17 | | |
| #4 | B | 29 | 25 | 23 | 23 | | |
| #5 | A | 32 | 28 | 25 | 25 | | |
| #5 | B | 42 | 37 | 33 | 33 | | |
| #6 | A | 43 | 37 | 34 | 34 | | |
| #6 | B | 56 | 49 | 45 | 45 | | |
| #7 | A | 69 | 60 | 54 | 54 | | |
| #7 | B | 90 | 78 | 71 | 71 | | |
| #8 | A | 86 | 74 | 67 | 67 | | |
| #8 | B | 112 | 97 | 88 | 88 | | |
| #9 | A | 104 | 90 | 81 | 81 | | |
| #9 | B | 136 | 117 | 106 | 106 | | |

- NOTES:**
- ALL SPLICE LENGTHS ARE IN INCHES.
 - THIS TABLE SHALL BE USED FOR WALL HORIZONTAL BARS ONLY. REFER TO OTHER DEVELOPMENT LENGTH TABLES FOR WALL VERTICAL BARS AND OTHER MEMBERS.
 - THE TENSION DEVELOPMENT LENGTH (Ld) IS EQUAL TO THE SCHEDULED "CLASS A" LAP SPLICE LENGTH.
 - FOR EPOXY-COATED BARS, MULTIPLY THE TABULATED SPLICE LENGTHS BY 1.3.
 - WHEN LAP SPLICING BARS OF DIFFERENT SIZES, THE LAP LENGTH IS DETERMINED BY THE SMALLER BAR BUT MAY NOT BE LESS THAN THE "CLASS A" SPLICE LENGTH OF THE LARGER BAR.

4 TYPICAL WALL HORIZONTAL BAR TENSION DEVELOPMENT AND LAP SPLICE LENGTHS NO SCALE

WALL VERTICAL BAR TENSION DEVELOPMENT AND LAP SPLICE LENGTHS
GRADE 60 REINFORCEMENT, NORMALWEIGHT CONCRETE

| BAR SIZE | LAP CLASS | fc = 3000 PSI | |
|----------|-----------|---------------|--|
|----------|-----------|---------------|--|

STRUCTURAL STATEMENT OF SPECIAL INSPECTIONS & TESTING

- SPECIAL INSPECTIONS AND STRUCTURAL TESTING SHALL BE PROVIDED BY AN INDEPENDENT AGENCY EMPLOYED BY THE OWNER FOR THE ITEMS IDENTIFIED IN THIS SECTION AND IN OTHER AREAS OF THE APPROVED CONSTRUCTION PLANS AND SPECIFICATIONS. (SEE BC CHAPTER 17).
- THE NAMES AND CREDENTIALS OF THE SPECIAL INSPECTORS TO BE USED SHALL BE SUBMITTED TO THE BUILDING OFFICIAL FOR APPROVAL. DUDLEY ENGINEERING CAN BE SOLICITED TO PROVIDE SPECIAL INSPECTIONS. WE RECOMMEND THAT THE PROJECT GEOLOGICAL ENGINEER BE SOLICITED TO PROVIDE SPECIAL INSPECTIONS FOR THE SOILS AND TESTING FOR THE SOILS AND CONCRETES.
- DUTIES OF THE SPECIAL INSPECTOR:
 - THE SPECIAL INSPECTOR SHALL REVIEW ALL WORK LISTED BELOW FOR CONFORMANCE WITH THE APPROVED CONSTRUCTION PLANS AND SPECIFICATIONS AND THE BC.
 - THE SPECIAL INSPECTOR SHALL FURNISH SPECIAL INSPECTION REPORTS TO THE OWNER, CONTRACTOR, OWNER AND BUILDING OFFICIAL ON A WEEKLY BASIS, OR MORE FREQUENTLY AS REQUIRED BY THE BUILDING OFFICIAL. ALL ITEMS NOT IN COMPLIANCE SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION, AND IF UNCORRECTED, TO THE OWNER AND THE BUILDING OFFICIAL.
 - ONCE CORRECTIONS HAVE BEEN MADE BY THE CONTRACTOR, THE SPECIAL INSPECTOR SHALL SUBMIT A FINAL SIGNED REPORT TO THE BUILDING OFFICIAL STATING THAT THE WORK REQUIRING SPECIAL INSPECTION WAS TO THE BEST OF THE SPECIAL INSPECTOR'S KNOWLEDGE, IN CONFORMANCE WITH THE APPROVED CONSTRUCTION PLANS AND SPECIFICATIONS AS WELL AS THE APPLICABLE WORKMANSHIP PROVISIONS OF THE BC.
- DUTIES AND RESPONSIBILITIES OF THE CONTRACTOR:
 - THE CONTRACTOR SHALL SUBMIT A WRITTEN STATEMENT OF RESPONSIBILITY TO THE OWNER AND THE BUILDING OFFICIAL PRIOR TO THE COMMENCEMENT OF WORK. IN ACCORDANCE WITH BC 1704.4, THE STATEMENT OF RESPONSIBILITY SHALL CONTAIN ACKNOWLEDGEMENT OF THE SPECIAL INSPECTION REQUIREMENTS CONTAINED WITHIN THIS STATEMENT OF SPECIAL INSPECTIONS.
 - THE CONTRACTOR SHALL NOTIFY THE RESPONSIBLE SPECIAL INSPECTOR THAT WORK IS READY FOR INSPECTION AT LEAST ONE WORKING DAY (24 HOURS MINIMUM) BEFORE SUCH INSPECTION IS REQUIRED.
 - ALL WORK REQUIRING SPECIAL INSPECTION SHALL REMAIN ACCESSIBLE AND EXPOSED UNTIL IT HAS BEEN OBSERVED BY THE SPECIAL INSPECTOR.
- PLEASE SEE THE "SPECIAL INSPECTION SCHEDULE" FOR THE TYPES, DUTIES AND FREQUENCY OF SPECIAL INSPECTIONS AND STRUCTURAL TESTS PART OF THIS PROJECT.
- REFER TO ARCHITECTURAL AND/OR MEP DRAWINGS FOR ADDITIONAL SPECIAL INSPECTION REQUIRED. DUDLEY ENGINEERING HAS LISTED THE STRUCTURAL SPECIAL INSPECTIONS AND TESTING.

PERIODIC SPECIAL INSPECTION IS REQUIRED FOR FATTENING OF THE FOLLOWING SYSTEMS AND COMPONENTS:
 1. ROOF COVERING, ROOF DECK AND ROOF FRAMING CONNECTIONS.
 2. EXTERIOR WALL COVERING AND WALL CONNECTIONS TO ROOF AND FLOOR DIAPHRAGMS AND FRAMING

WIND-RESISTING COMPONENTS (1708.11.3)

| REQUIRED VERIFICATION AND INSPECTION OF SOILS (TABLE 1706.2) | CONTINUOUS | PERIODIC | REQUIRED |
|--|------------|----------|----------|
| VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY | - | X | YES |
| VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIALS | - | X | YES |
| PERFORM CLASSIFICATION AND TESTING OF COMPACTED MATERIALS | - | X | YES |
| VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESS DURING PLACEMENT AND COMPACTION OF COMPACTED FILL | X | - | YES |
| PRIOR TO PLACEMENT OF COMPACTED FILL, OBSERVE SURFACE AND VERIFY THE SITE HAS BEEN PREPARED PROPERLY | - | X | YES |

REQUIRED VERIFICATION AND INSPECTION OF GRADING AND DRAINAGE FOR FOUNDATIONS ON EXPANSIVE SOILS

| VERIFICATION AND INSPECTION | CONTINUOUS | PERIODIC | REQUIRED |
|---|------------|----------|----------|
| AFTER BUILDING CONSTRUCTION AND LANDSCAPING HAVE BEEN COMPLETED, FINAL GRADES SHALL BE VERIFIED TO DOCUMENT REQUIRED DRAINAGE | - | X | YES |
| AFTER BUILDING CONSTRUCTION AND LANDSCAPING HAVE BEEN COMPLETED, DOWNSPOUTS SHALL BE INSPECTED TO CONFIRM CONFORMANCE. | - | X | YES |
| GRADES AROUND THE STRUCTURE SHALL BE PERIODICALLY INSPECTED AND ADJUSTED AS PART OF THE BUILDING'S MAINTENANCE PROGRAM | - | X | YES |
| PLUMBING LEAK "HYDROSTATIC" TEST PERFORMED BY A LICENSED PLUMBER. TEST TO OCCUR AFTER ROUGH PLUMBING INSTALL | - | X | YES |
| WHERE FINISH FLOORWORK ABOUT THE FOUNDATION, A MAINTENANCE PROGRAM SHALL BE ESTABLISHED TO EFFECTIVELY SEAL AND MAINTAIN JOINTS AND PREVENT SURFACE WATER INFILTRATION. | - | X | YES |

REQUIRED VERIFICATION AND INSPECTION OF WOOD CONSTRUCTION (1705.5)

| VERIFICATION AND INSPECTION | CONTINUOUS | PERIODIC | REQUIRED |
|--|------------|----------|----------|
| PREFABRICATED WOOD STRUCTURAL ELEMENTS (METAL PLATE CONNECTED WOOD TRUSSES) FABRICATION AND IMPLEMENTATION PROCEDURES (NOT REQUIRED WHERE THE WORK IS DONE ON THE PREMISES OF A FABRICATOR REGISTERED AND APPROVED TO PERFORM SUCH WORK WITHOUT SPECIAL INSPECTION) | - | X | YES |
| HIGH-LOAD DIAPHRAGMS A. INSPECT GRADE AND THICKNESS OF WOOD STRUCTURAL PANEL SHEATHING. B. VERIFY HORIZONTAL SIZE OF FRAMING MEMBERS AT ADJOINING PANEL EDGES, THE NAILS OR STAPLE DIAMETER AND LENGTH, THE NUMBER OF FASTENER LINES AND THAT THE SPACING BETWEEN FASTENERS IN EACH LINE AND AT EDGE MARKING AGREES WITH THE APPROVED BUILDING PLAN. | - | X | NO |
| METAL-PLATE CONNECTED WOOD TRUSSES WITH OVERALL HEIGHTS OF 40' OR GREATER A. VERIFY THAT INSTALLATION OF THE PERMANENT INDIVIDUAL TRUSS MEMBER RESTRAINT BRACING ARE INSTALLED IN ACCORDANCE WITH THE APPROVED TRUSS SUBMITTAL PACKAGE | - | X | YES |
| METAL-PLATE CONNECTED WOOD TRUSSES SPANNING 60 FT OR GREATER A. VERIFY THAT TEMPORARY INSTALLATION RESTRAINT BRACING ARE INSTALLED IN ACCORDANCE WITH THE APPROVED TRUSS SUBMITTAL PACKAGE | - | X | NO |
| INSPECTION OF NAILING, BOLTING, ANCHORING AND OTHER FASTENING COMPONENTS WITHIN THE SEISMIC / WIND WIND FORCE RESISTING SYSTEM, INCLUDING WOOD SHEAR WALLS, WOOD DIAPHRAGMS, DRAG STRIPS, BRACES, SHEAR WALLS AND HOLD-DOWNS. (EXCEPTION: SPECIAL INSPECTIONS ARE NOT REQUIRED FOR WOOD SHEAR WALLS, SHEAR PANELS AND DIAPHRAGMS, INCLUDING NAILING, BOLTING, ANCHORING AND OTHER FASTENING TO OTHER ELEMENTS OF THE MAIN WIND FORCE RESISTING SYSTEM, WHERE THE SPECIFIED FASTENER SPACING AT PANEL EDGES IS MORE THAN 4 INCHES ON CENTER) | - | X | YES |
| MOISTURE CONTENT OF LOAD BEARING WOOD FRAMING: • MOISTURE CONTENT JUST PRIOR TO INSTALLING SHEET ROCK SHOULD BE AT OR BELOW 19%. SPECIAL ATTENTION SHALL BE PAID TO MEMBERS ORIENTED WITH THEIR PERIODIC AND PERPENDICULAR TO THE VERTICAL PLANE (PLATE, JOIST, TRUSS CHORDS, ETC.) | - | X | YES |

REQUIRED VERIFICATION AND INSPECTION OF CONCRETE CONSTRUCTION (TABLE 1705.3)

| VERIFICATION AND INSPECTION | CONTINUOUS | PERIODIC | REQUIRED |
|--|------------|----------|----------|
| INSPECTION OF REINFORCING STEEL INCLUDING PRESSURING TENDONS AND PLACEMENT | - | X | YES |
| INSPECTION OF ANCHOR CAST IN CONCRETE WHERE ALLOWABLE LOADS HAVE BEEN USED OR STRENGTH DESIGN IS USED. | - | X | YES |
| INSPECTION OF ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS. | - | X | YES |
| VERIFYING USE OF REQUIRED MIX DESIGN | - | X | YES |
| AT THE TIME FRESH CONCRETE IS SAMPLED TO FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE | X | - | YES |
| INSPECTION OF CONCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES. | X | - | YES |
| INSPECTION FOR MAINTENANCE OF SPECIFIED CURING TEMPERATURES AND TECHNIQUES | - | X | YES |
| INSPECTION OF PRESTRESSED CONCRETE APPLICATION OF PRESTRESSING FORCES | X | - | NO |
| ERECTION OF PRECAST CONCRETE MEMBERS | - | X | NO |
| VERIFICATION OF 28-DAY CONCRETE STRENGTH, PRIOR TO STRESSING OF TENDONS IN POST-TENSIONED CONCRETE AND PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS. | - | X | YES |
| INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED | - | X | YES |

REQUIRED VERIFICATION AND INSPECTION OF STRUCTURAL STEEL CONSTRUCTION (1706.2.1)

| STRUCTURAL STEEL - GENERAL |
|---|
| THE SPECIAL INSPECTOR SHALL INSPECT THE FABRICATED OR ERECTED STEEL FRAME AS APPROPRIATE TO VERIFY COMPLIANCE WITH THE DETAIL SHOWN ON THE CONSTRUCTION DOCUMENTS, SUCH AS BRACES, DIFFERERS, MEMBER LOCATIONS AND PROPER APPLICATION OF JOINT DETAILS AT EACH CONNECTION. |
| STRUCTURAL STEEL - ANCHOR RODS / EMBED PLATES |
| THE SPECIAL INSPECTOR SHALL BE ON THE PREMISES FOR INSPECTION DURING THE PLACEMENT OF ANCHOR RODS AND OTHER EMBEDMENT SUPPORTING STRUCTURAL STEEL FOR COMPLIANCE WITH THE CONSTRUCTION DOCUMENTS, AS A MINIMUM, THE DIAMETER, GRADE, TYPE AND LENGTH OF THE ANCHOR RODS OR EMBEDDED ITEM, AND THE EXTENT OR DEPTH OF EMBEDMENT INTO THE CONCRETE, SHALL BE VERIFIED PRIOR TO PLACEMENT OF CONCRETE. |

STRUCTURAL STEEL - WELDS

| VERIFICATION AND INSPECTION | CONTINUOUS | PERIODIC | REQUIRED |
|---|------------|----------|----------|
| INSPECTION TASKS PRIOR TO WELDING (ASC 340 TABLE NS-4-1) | | | |
| WELDING PROCEDURE SPECIFICATION (WPS): AVAILABLE | X | - | YES |
| MANUFACTURER CERTIFICATIONS FOR WELDING CONSUMABLES AVAILABLE | X | - | YES |
| MATERIAL IDENTIFICATION (TYPE / GRADE) | - | X | YES |
| WELDER IDENTIFICATION SYSTEM | - | X | YES |
| Fit-Up GROOVE WELDS | - | X | NO |
| CONFIGURATION AND FINISH OF ACCESS HOLES | - | X | NO |
| Fit-Up FILLET WELDS | - | X | YES |
| CHECK WELDING EQUIPMENT | - | X | YES |
| INSPECTION TASKS DURING WELDING (ASC 340 TABLE NS-4-2) | | | |
| USE OF QUALIFIED WELDERS | - | X | YES |
| CONTROL AND HANDLING OF WELDING CONSUMABLES | - | X | YES |
| NO WELDING OVER CRACKED TACK WELDS | - | X | YES |
| ENVIRONMENTAL CONDITIONS (WIND SPEED WITHIN LIMITS, PRECIPITATION AND TEMPERATURE) | - | X | YES |
| WPS FOLLOWED • SETTINGS ON WELDING EQUIPMENT • TRAVEL SPEED • SELECTED WELDING MATERIALS • WELDING GAS TYPE / FLOW RATE • PREHEAT APPLIED • INTERPASS TEMPERATURE MAINTAINED (MIN MAX) • PROPER POSITIONING (IF V. L. OR H.) | - | X | YES |
| WELDING TECHNIQUES • INTERPASS AND FINAL CLEANING • EACH PASS WITH PROPER LIMITATIONS • EACH HAS MET QUALITY REQUIREMENTS | - | X | YES |
| WELDS CLEANED | - | X | YES |
| SIZE, LENGTH AND LOCATION OF WELDS | X | - | YES |
| WELDS MEET VISUAL ACCEPTANCE CRITERIA • CRACK PROHIBITION • WELD FRACTURE REGION • CRATER CROSS SECTION • WELD PROFILES • WELD SIZE • UNDERCUT • POROSITY | X | - | YES |
| ARC STRIKES | X | - | YES |
| W-AREA | X | - | YES |
| BACKING REMOVED AND WELD TABS REMOVED (IF REQUIRED) | X | - | YES |
| REPAIR ACTIVITIES | X | - | YES |
| DOCUMENT ACCEPTANCE OR REJECTION OF WELDED JOINT MEMBER | X | - | YES |
| | X | - | YES |
| NON-DESTRUCTIVE TESTING OF WELDED JOINTS | | | |
| FILLET WELDS: | | | |
| MT TEST A MINIMUM OF 10% OF THE LENGTH OF EACH FILLET WELD EXCEEDING 5/16" | - | X | YES |
| PERIODIC MT TESTING OF REPRESENTATIVE FILLET WELDS 5/16" AND LESS BUT NEED NOT EXCEED 10% OF ALL SUCH WELDS, EXCEPT AS REQUIRED FOR HIGH REJECTION RATES AS INDICATED IN THE FOLLOWING PARAGRAPH. | - | X | YES |
| INCREASE MT TESTING RATE FOR WELDERS HAVING A HIGH REJECTION RATE AS REQUIRED TO ENSURE ACCEPTABLE WELDS. | X | - | YES |
| PARTIAL JOINT PENETRATION (PJP) WELDS INCLUDING FLARE BEVEL WELDS | | | |
| MT TEST A MINIMUM OF 25% OF THE LENGTH OF EACH PJP WELD EXCEEDING 5/16" EFFECTIVE THROAT. | - | X | YES |
| PERIODIC MT TESTING OF REPRESENTATIVE PJP WELDS 5/16" AND LESS BUT NEED NOT EXCEED 10% OF ALL SUCH WELDS, EXCEPT AS REQUIRED FOR HIGH REJECTION RATES AS INDICATED IN THE FOLLOWING PARAGRAPH. | - | X | YES |
| INCREASE MT TESTING RATE FOR WELDERS HAVING A HIGH REJECTION RATE AS REQUIRED TO ENSURE ACCEPTABLE WELDS. | X | - | YES |
| COMPLETE JOINT PENETRATION (CJP) WELDS | | | |
| ALL CJP WELDS EXCEEDING 5/16" THICKNESS SHALL BE 100% OF TESTED PER AWS D11.1 CLAUSE 4 PART 1. THE TESTING LABORATORY SHALL REVIEW THE CJP JOINTS TO DETERMINE WHERE GEOMETRY OR ACCESSIBILITY PRECLUDES THE USE OF STANDARD SCANNING PATTERNS PER AWS D11.1 CLAUSE 4 PART 1. AT THESE LOCATIONS THE TESTING LABORATORY SHALL DEVELOP AND SUBMIT FOR APPROVAL A WRITTEN TESTING PROCEDURE IN ACCORDANCE WITH AWS D11.1 ANNEX S. | X | - | YES |
| PERIODIC MT TESTING OF REPRESENTATIVE CJP WELDS 5/16" AND LESS NOT TO EXCEED 10% OF ALL SUCH WELDS. | - | X | YES |
| INCREASE MT TESTING RATE FOR WELDERS HAVING A HIGH REJECTION RATE AS REQUIRED TO ENSURE ACCEPTABLE WELDS. | X | - | YES |

| STRUCTURAL STEEL HIGH-STRENGTH BOLTS (HIGH-TIGHT) - INSPECTION TASKS PRIOR TO BOLTING | | | |
|---|------------|----------|----------|
| VERIFICATION AND INSPECTION | CONTINUOUS | PERIODIC | REQUIRED |
| DOCUMENTATION AND ACCEPTANCE OR REJECTION OF BOLTED CONNECTIONS | - | X | YES |

| STRUCTURAL STEEL HIGH-STRENGTH BOLTS (HIGH-TIGHT) - INSPECTION TASKS DURING BOLTING | | | |
|---|------------|----------|----------|
| VERIFICATION AND INSPECTION | CONTINUOUS | PERIODIC | REQUIRED |
| DOCUMENTATION OF ACCEPTANCE OR REJECTION OF BOLTED CONNECTIONS. | - | X | YES |

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 2533 Midtown Park Blvd., Bryan, Tx. 77801

| Revisions | Number | Date |
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Project 22027
 February 7, 2023

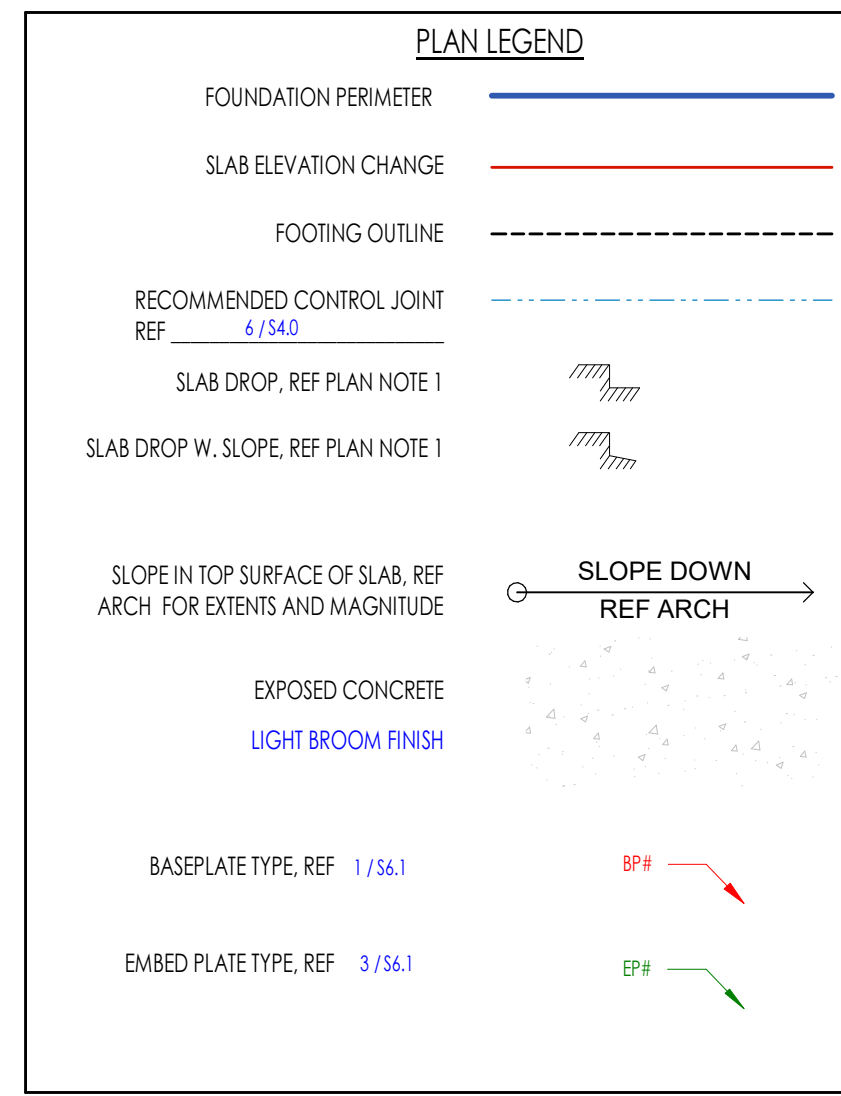
S0.2

STRUCTURAL REFERENCE SHEETS

FOUNDATION DETAILS: S4.0 S4.1

PLAN NOTES

1. VERIFY ALL EDGE OF FOUNDATION DIMENSIONS WITH FINAL ARCHITECTURE FLOOR PLANS.
2. FORM DIMENSIONS, SLAB DROPS, SLOPES, ETC. ARE SHOWN AS AN AID TO THE CONTRACTOR ONLY. VERIFY EXACT DIMENSIONS AND LOCATIONS WITH ARCH./OWNER.
3. DIMENSIONS ARE TO CL. OF GRADE BEAMS OR EDGE OF SLAB UNLESS NOTED OTHERWISE.
4. REFER TO REBAR DRAWINGS FOR REBAR TYPES AND UNDERGROUND UTILITIES. ALL REBAR TYPES SHALL BE SHOWN IN REBAR PLACEMENT DRAWINGS.
5. CONTROL JOINTS (GROoved OR SAW-CUT) ARE RECOMMENDED TO REDUCE CRACKS IN SLAB WHICH WILL BE VISIBLE, BUT ARE NOT REQUIRED FOR STRUCTURAL REQUIREMENTS. FOR THE RECOMMENDED MAXIMUM JOINT SPACING, REF DETAIL S4.1/S4.2.
6. FOR FLOORWORK OR PAVEMENT ABUTTING THE BUILDING FOUNDATION, REF DETAIL 13/14.0.



SLAB GEOMETRY

| | |
|----------------|------|
| AREA (SF) | 1275 |
| PERIMETER (FT) | 154 |
| SHAPE FACTOR | 19 |

AREA AND PERIMETER OF THE SLAB ARE PROVIDED FOR PURPOSES OF CALCULATING THE SHAPE FACTOR FOR THE SLAB ONLY AND SHALL NOT BE USED FOR ANY OTHER PURPOSE.

BRAB / WRI PARAMETERS

| | |
|---|------|
| CLIMATIC RATING | 23 |
| SOIL SUPPORT INDEX | 0.95 |
| ALLOW. BEARING (PSF) | 1800 |
| MIN PERIMETER BEAM EMBEDMENT BELOW FINAL GRADE / FLATWORK | 12" |
| EFFECTIVE PI | 20 |

FOUNDATION NOTES

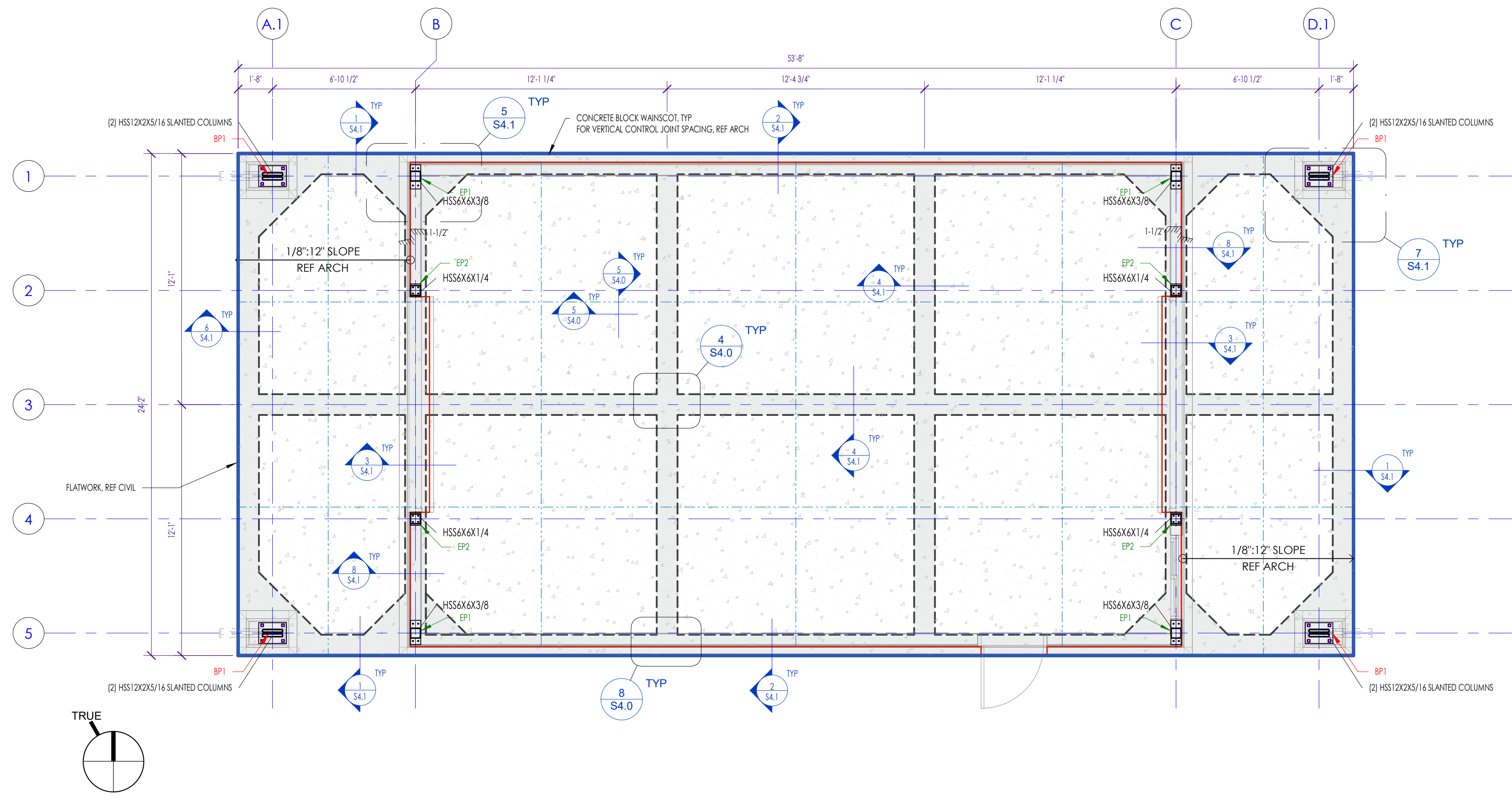
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|---------------------|---|-------|-------|----------|-------------|-------------|
| FOUNDATION TYPE: | BRAB TYPE III - STIFFENED NON-STRUCTURAL SLAB-ON-GROUND | | | | | |
| SLAB THICKNESS: | 5" | | | | | |
| SLAB REINFORCEMENT: | #4 @ 16" OC EACH WAY - REF DETAIL S1/S4.0 | | | | | |
| DESIGN METHOD: | ACI 318, ACI 308 | | | | | |
| VAPOR RETARDER: | MINIMUM 10 MIL (UNLESS THICKER REQ'D BY ARCHITECT) | | | | | |
| BEAM ID | DESCRIPTION | WIDTH | DEPTH | TOP BARS | BOTTOM BARS | STIRRUPS |
| B1 | TYPICAL BEAM | 12" | 30" | (2) #4 | (2) #4 | #3 @ 24" OC |

- NOTES:
1. BEAMS ARE TYPE B1 UNDO.
 2. LOCATE THE FIRST STIRRUP A MINIMUM OF 3" FROM FACE OF SUPPORT.
 3. BEAM OPTS INDICATED IN THE SCHEDULE IS A STRUCTURAL MINIMUM THAT THE BEAM REINFORCEMENT CAGES MAY BE BASED UPON. REFERENCE GEOTECHNICAL REPORT FOR MINIMUM GRADE BEAM EMBEDMENT BELOW ADJACENT FINAL GRADE OR FLATWORK/PAVEMENT.
 4. NFR = NOT REQUIRED.

- REFERENCE DRAWINGS:
- SLAB DIMENSIONS SHOWN ARE BASED UPON THE FOLLOWING CAD (COMPUTER-AIDED DESIGN) REFERENCE FILES, BY OTHERS.
 - FILE FORMAT: DWG/REVIT
 - FILE NAME: LEGENDS BOOK HOUSE FLOOR PLAN / LEGENDS BOOK HOUSE ELEVATIONS
 - DATE OF IAS: 12/22/22
 - FILE AUTHOR: ARC THREE STUDIOS

SUBGRADE AND BUILDING PAD NOTES (PER GEOTECHNICAL REPORT):

1. SUBGRADE IMPROVEMENT:
 - A. UNDERCUT UPPER 2 FEET OF EXISTING SOIL, AND REPLACE WITH COMPACTED SELECT FILL TO TOP OF BUILDING PAD ELEVATION. THE SELECT FILL PAD MUST BE OF UNIFORM THICKNESS UNDO BY GEOTECHNICAL ENGINEER.
2. SITE PREPARATION:
 - A. SOFT SOILS SHOULD BE REMOVED UNTIL FIRM SOIL IS REACHED. THE SOFT SOILS CAN BE ABRATED AND PLACED BACK IN SIX-INCH LOOSE LIFTS AND COMPACTED BY ASTM D-498. TREE STUMPS, TREE ROOTS, OLD SLABS, OLD FOUNDATIONS AND EXISTING PAVEMENTS SHOULD BE REMOVED FROM THE STRUCTURE AREA. IF THE TREE STUMPS AND ROOTS ARE LEFT IN PLACE, SETTLEMENT AND TERMITES INFESTATION MAY OCCUR. ONCE A ROOT SYSTEM IS REMOVED, A VOID IS CREATED IN THE SUBSOIL. IT IS RECOMMENDED TO FILL THESE VOIDS WITH STRUCTURAL FILL OR CEMENT-STABILIZED SAND AND COMPACT TO 95% AS SPECIFIED BY ASTM D-498.
 - B. ANY LOW-LYING AREAS INCLUDING RAVINES, DITCHES, SWAMPS, ETC. SHOULD BE FILLED WITH STRUCTURAL FILL AND PLACED IN EIGHT-INCH LIFTS. EACH LIFT SHOULD BE COMPACTED TO 95% OF THE MAXIMUM DRY DENSITY AS SPECIFIED BY ASTM D-498.
 - C. THE EXPOSED SUBGRADE SHOULD BE SCARIFIED TO A MINIMUM DEPTH OF SIX (6) INCHES FOUNDATION AREAS OR PER SUBGRADE IMPROVEMENT REQUIREMENTS. THE SUBGRADE SHOULD THEN BE COMPACTED TO 95% OF THE MAXIMUM DENSITY AS DETERMINED BY THE STANDARD MOISTURE DENSITY RELATIONSHIP (ASTM D-498). IN THE EVENT THAT THE UPPER SIX (6) INCHES CANNOT BE COMPACTED DUE TO EXCESSIVE MOISTURE, WE RECOMMEND THAT THESE SOILS BE EXCAVATED AND REMOVED OR CHEMICALLY STABILIZED TO PROVIDE A FIRM BASE FOR FILL PLACEMENT. PROOF ROLLING SHOULD BE PERFORMED USING A HEAVY TIRED LOADED TRUCK OR PNEUMATIC RUBBER-TIRED WEIGHING 20 TONS.
 - D. THE SELECT FILL SOILS SHALL EXTEND AT LEAST 5 FEET BEYOND THE PERIMETER OF THE FOUNDATION.
 - E. THE FLOOR SLAB SHOULD BE PLACED AS SOON AS POSSIBLE AFTER THE BUILDING PAD IS PREPARED. IF THE BUILDING PAD IS LEFT EXPOSED TO RAINFALL, PERCHED GROUNDWATER CONDITIONS MAY DEVELOP WHICH WILL UNDERMINE THE INTEGRITY OF THE FLOOR SLAB. ALL TRENCHES (WATER, CABLE, ELECTRICAL) SHOULD BE PROPERLY BACKFILLED AND COMPACTED TO 95% OF THE MAXIMUM DRY DENSITY. SAND OR PERMEABLE MATERIALS SHOULD NOT BE USED AS BACKFILL. IMPROPERLY BACKFILLED AND IMPROPERLY COMPACTED TRENCH, IF LEFT EXPOSED WILL ALSO BE ANOTHER SOURCE FOR PERCHED GROUNDWATER CONDITIONS. IN GENERAL PERCHED WATER TENDS TO BE TRAPPED WITHIN THE FILL. THE TRAPPED GROUNDWATER TENDS TO SOFTEN THE SUBGRADE. POSITIVE DRAINAGE SHOULD BE MAINTAINED ACROSS THE ENTIRE BUILDING PAD.
 - F. A QUALIFIED SOIL TECHNICIAN SHOULD MONITOR ALL EARTHWORK OPERATIONS. FIELD DENSITY TESTS SHOULD BE CONDUCTED ON EACH LIFT USING A NUCLEAR DENSITY GAUGE. THE GAUGE SHOULD BE CALIBRATED EVERY DAY. PRIOR TO FIELD DENSITY TESTS, A SPOUNDED SAMPLE FROM THE SUBGRADE SOILS SHOULD BE OBTAINED. A SIMILAR SAMPLE SHOULD BE OBTAINED FROM THE FILL SOILS. A STANDARD MOISTURE DENSITY RELATIONSHIP (ASTM D-498) SHOULD BE PERFORMED ON EACH SAMPLE IN ORDER TO OBTAIN AN OPTIMUM MOISTURE CONTENT AND A MAXIMUM DRY DENSITY. THE FIELD DENSITY TESTS SHOULD BE COMPARED TO THESE RESULTS EVERY TIME THE SOILS ARE TESTED IN THE FIELD.
3. LOW SWELL POTENTIAL SELECT FILL (SELECT FILL)
 - A. LOW SWELL POTENTIAL SELECT FILL SHOULD CONSIST OF COHESIVE SOILS FREE OF ORGANICS OR OTHER DELETERIOUS MATERIALS AND SHOULD HAVE A PLASTICITY INDEX NOT LESS THAN 0 OR MORE THAN 15. SANDY CLAYS ARE RECOMMENDED FOR USE. THE LOW SWELL POTENTIAL SELECT FILL SHOULD BE CLEANED AND FREE OF ORGANIC MATTER OR OTHER DELETERIOUS MATERIAL. THE FILL SHOULD BE PLACED IN MAXIMUM 8-INCH LOOSE LIFTS AND COMPACTED TO A MINIMUM OF 95 PERCENT OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D 498 (STANDARD PROCTOR). THE MOISTURE CONTENT AT THE TIME OF COMPACTION SHOULD BE ±2% - 4% OF THE OPTIMUM VALUE AS DEFINED BY ASTM D 498. THE REFERENCED MOISTURE CONTENT AND DENSITY SHOULD BE MAINTAINED UNTIL CONSTRUCTION IS COMPLETE.
4. HORIZONTAL MOISTURE BARRIER
 - A. WHERE THE PERIMETER OF THE FOUNDATION DOES NOT HAVE LOW PERMEABILITY FLATWORK (SIDEWALK, PAVEMENT, PATIO, ETC.) ABUTTING THE FOUNDATION, A HORIZONTAL MOISTURE BARRIER VIA CLAY CAP AND VAPOR RETARDER MUST BE PROVIDED.
 - a. CLAY CAP: A MINIMUM 5" WIDE LOW PERMEABILITY CLAY "CAP" SHALL BE PLACED ALONG THE EXTERIOR OF THE FOUNDATION TO HELP MINIMIZE MOISTURE TRANSITION INTO THE SELECT FILL SOIL PADS. THE LOW PERMEABILITY, 1-FOOT THICK CLAY "CAP" SHALL HAVE A MINIMUM PLASTICITY INDEX (PI) OF 30.
 - b. VAPOR RETARDER: BELOW THE CLAY CAP, A MIN 10 MIL VAPOR RETARDER MUST BE PROVIDED ON A MINIMUM 5% SLOPE. RETARDER MUST BE SECURED TO THE FOUNDATION.
5. DRAINAGE
 - A. ROOF DRAINAGE SHOULD BE COLLECTED BY A SYSTEM OF GUTTERS AND DOWNSPOUTS AND TRANSMITTED A MINIMUM DISTANCE OF 10' AWAY FROM THE FOUNDATION TO AN AREA WITH POSITIVE DRAINAGE AWAY FROM THE FOUNDATION. PREFERABLY TO A PAVED SURFACE WHERE WATER CAN DRAIN RAPIDLY AWAY FROM THE STRUCTURE, SIDEWALKS, PARKING AREAS, BUILDING ACCESS DRIVES, AND THE GENERAL GROUND SURFACE SHOULD BE SLOPED SO THAT WATER WILL DRAIN AWAY FROM THE STRUCTURE. WATER SHOULD NOT BE ALLOWED TO POND NEAR THE BUILDING FOUNDATIONS.
 - B. FINAL GRADES SHALL SLOPE A MINIMUM OF 5% FOR THE FIRST 10 FEET AWAY FROM THE FOUNDATION IN ALL DIRECTIONS. THIS SLOPE SHALL OCCUR IN THE SELECT FILL OR IN-SITU SOIL. MERELY SLOPING TOPSOIL IS NOT SUFFICIENT.
6. LANDSCAPING
 - A. DO NOT USE METAL EDGING OR OTHER DAMMING DEVICES WITHIN FIVE FEET OF THE FOUNDATION. THE ROOTS OF TREES AND LARGE PLANTS REMOVE LARGE QUANTITIES OF WATER FROM THE SOIL. IF THESE TREES AND SHRUBS ARE NEAR THE FOUNDATION AND IF SUFFICIENT WATER IS NOT SUPPLIED, THE SOILS MAY SHRINK IF EXPANSIVE, CAUSING SUBSIDENCE IN THE FOUNDATION. DURING DRY PERIODS, ENOUGH WATER SHOULD BE SUPPLIED TO TREES TO MINIMIZE SHRINKING OF EXPANSIVE SOILS AROUND THEM. MOST OF THE IRRIGATION WATER SHOULD BE APPLIED WELL AWAY FROM THE FOUNDATION TO ATTRACT THE TREE ROOTS IN THAT DIRECTION. WHEN TREES MATURE TO THE POINT OF SHADING THE ENTIRE LOT, REGULAR PRUNING WILL BE NEEDED TO REDUCE THEIR WATER UPTAKE. LANDSCAPING PLANTS, SHRUBS, FLOWERS, ETC. SHOULD NOT TRAP WATER AGAINST THE FOUNDATION. PROVIDE A SLOPE IN SOILS BELOW LANDSCAPE BEDDING AND IN THE BEDDING AWAY FROM THE FOUNDATION. ALTERNATIVELY, PROVIDE SWALES AROUND AND THROUGH THE LANDSCAPING TO DRAIN WATER AWAY. PROVIDE UNIFORM GROUND COVER AROUND THE FOUNDATION. THIS WILL HELP KEEP THE MOISTURE EVAPORATION RATE UNIFORM. IN AREAS THAT ARE NOT PLANTED, USE MULCH. EXTEND THE GROUND COVER AT LEAST FIVE FEET FROM THE FOUNDATION.
 - B. ANY TALL TREES SHALL BE PLANTED AT A MINIMUM DISTANCE EQUIVALENT TO THE HEIGHT OF THE TREE OR THE DRIP LINE PLUS 10 FEET WHICHEVER IS GREATER.
7. SOIL MOISTURE
 - A. EXPANSIVE SOILS HEAVE AND SUBSIDE DUE TO CHANGES IN MOISTURE CONTENT. CHANGES IN MOISTURE CONTENT CAN CAUSE VERY LARGE CHANGES IN SOIL VOLUME WHEN GOING FROM A DRY TO A SATURATED CONDITION, AND VICE VERSA. THIS MOVEMENT DOES NOT MEAN THE FOUNDATION IS IMPROPERLY DESIGNED OR THAT IT HAS FAILED. THE FOUNDATION DESIGN ENGINEER CANNOT CONTROL THE MOISTURE CONTENT OF THE SOIL, BUT OFTEN THE OWNER/TENANT CAN. UNIFORMITY IS THE KEY. UNIFORM MOISTURE CONTENT IN THE SOIL, UNIFORMLY MAINTAINED IN ALL AREAS AROUND THE FOUNDATION, IF CHANGES IN MOISTURE CONTENT ARE UNIFORM, THEN MOVEMENT OF THE FOUNDATION WILL BE UNIFORM AND LESS DISTRESS WILL BE CREATED IN THE STRUCTURE. IF CHANGES IN MOISTURE CONTENT ARE NON-UNIFORM, THEN THERE MAY BE DIFFERENTIAL MOVEMENT IN THE FOUNDATION. DIFFERENTIAL MOVEMENT CAN CAUSE GREATER (AND MORE OBVIOUS) DISTRESS IN THE STRUCTURE, LEADING POOLS, LEAKING PLUMBING LINES, LEAKING DRAINS, DRIPPING FAUCETS, DRIPPING AIR CONDITIONING CONDENSATE LINES, AND MISDIRECTED WATER FROM CLOGGED AND BROKEN GUTTERS AND DOWNSPOUTS CAN CAUSE LOCAL HIGH MOISTURE CONTENTS THAT CAN RESULT IN DIFFERENTIAL MOVEMENT IN AREAS OF EXPANSIVE SOILS. THESE CONDITIONS SHOULD BE REMEDIATED AS SOON AS POSSIBLE. TREES IN OR NEAR THE FOOTPRINT OF THE FOUNDATION, EITHER REMOVED OR PLANTED DURING CONSTRUCTION, CAUSE THE MAJORITY OF FOUNDATION PROBLEMS REQUIRING REPAIR IN THIS AREA. TREES REMOVED DURING CONSTRUCTION TEND TO CAUSE HEAVE OF EXPANSIVE SOILS DURING THE FIRST FEW YEARS. WITH INITIAL DISTRESS OFTEN EVIDENT AT THE TIME OF MOVEMENT, TREES PLANTED DURING OR AFTER CONSTRUCTION TEND TO CAUSE SUBSIDENCE OF EXPANSIVE SOILS. HOWEVER, SIGNIFICANT SUBSIDENCE DISTRESS WILL USUALLY NOT OCCUR FOR TEN TO TWENTY YEARS AS THE TREES MATURE.
8. CLIMATE
 - A. DURING PERIODS OF DRY WEATHER, THE SOIL AROUND THE FOUNDATION SHOULD BE IRRIGATED IF THE BUILDING IS LOCATED IN AN AREA WHERE EXPANSIVE SOILS ARE KNOWN TO OCCUR. THE MOST COMMONLY USED IRRIGATION SYSTEM IS ABOVEGROUND TIMED SPRINKLERS WITH A MANUAL OVERRIDE SO THEY CAN BE TURNED OFF IN RAINY WEATHER. AN AUTOMATIC BELOWGROUND IRRIGATION SYSTEM THAT SENSES THE MOISTURE CONTENT OF THE SOIL MAY ALSO BE USED. TEND TO KEEP THE IRRIGATION SYSTEM SET ON "MANUAL," AND ONLY USE IT IN DRIER PERIODS WHEN WILTING OF THE LAWN GRASSES AND OTHER VEGETATION OCCURS. THE IRRIGATION SHOULD BE DONE AT LEAST ONE TO TWO FEET AWAY FROM THE FOUNDATION, AND THEN LIGHTLY SO THAT TREE ROOTS ARE NOT ATTRACTED THERE. DO NOT ALLOW SPRINKLERS TO SPRAY WATER AGAINST THE STRUCTURE. IN EXTENDED DRY PERIODS, SHOULD THE SOIL CRACK AND PULL AWAY FROM THE FOUNDATION, DO NOT WATER DIRECTLY INTO THE GAP.
9. UTILITIES
 - A. CONNECTIONS FOR UTILITIES (PLUMBING, ELECTRICAL, GAS, ETC.) THAT ARE UNDERNEATH, GO THROUGH OR ARE ATTACHED TO THE FOUNDATION SHALL HAVE BE FLEXIBLE TO ACCOMMODATE FOUNDATION MOVEMENT OF AT LEAST 2". ALL DRAINAGE PIPING, AND GENERAL PLUMBING SYSTEMS ASSOCIATED WITH THE FOUNDATION OR IN PROXIMITY TO THE FOUNDATION SHALL BE LEAK TESTED FOLLOWING INSTALLATION AND ON AN ANNUAL BASIS.
10. ARCHITECTURAL FINISHES
 - A. TILE FLOORS SHALL BE JOINTED AT CONSTRUCTION, EXPANSION OR CONTROL JOINTS IN THE CONCRETE.
 - B. TILE FLOORS SHALL HAVE AN UNCOUPLING POLYETHYLENE MEMBRANE BENEATH THE TILE THAT ALLOWS IN-PLANE MOVEMENT. EXAMPLE PRODUCTS: SCHLITZER DITRA, NUNENT UNCOUPLING MEMBRANE.
 - C. WALL COVERINGS SHALL BE JOINTED ON EACH SIDE OF DOOR AND WINDOW OPENINGS.
 - D. ALL ARCHITECTURAL FINISHES SHALL MIRROR CONTROL, EXPANSION OR CONSTRUCTION JOINTS IN THE FOUNDATION.



1 FOUNDATION PLAN
1/4" = 1'-0"

| Revisions | Number | Date |
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ELECTRICAL SYMBOLS AND ABBREVIATIONS

(SOME SYMBOLS MAY NOT BE APPLICABLE TO THIS PROJECT)

SYMBOLS

ABBREVIATIONS

GENERAL

| | |
|--|--|
| | MOTOR, HP AS INDICATED |
| | CONTROLLER TO BE FURNISHED UNDER DIVISION 15 AND INSTALLED UNDER DIVISION 16 |
| | DISCONNECT SWITCH |
| | MAGNETIC MOTOR STARTER |
| | COMBINATION MOTOR STARTER/DISCONNECT SWITCH |
| | GROUNDING REFERENCE POINT |
| | JUNCTION BOX, CEILING MOUNTED |
| | JUNCTION BOX, WALL MOUNTED |
| | PHOTO CELL |
| | RELAY |
| | TIME CLOCK |
| | CONTACTOR |
| | BELL |
| | BUZZER |
| | CEILING MOUNTED CLOCK |
| | WALL MOUNTED CLOCK |
| | WALL MOUNTED DOUBLE FACE CLOCK |
| | HORN |
| | TRANSFORMER AS INDICATED |
| | AUTOMATIC TRANSFER SWITCH |
| | EQUIPMENT CONNECTION |
| | KEYED NOTE NO. 2 |
| | MECHANICAL EQUIPMENT DESIGNATION |

LUMINAIRES

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|--|--|
| | LUMINAIRE, CEILING OR WALL MOUNTED. SUBSCRIPT INDICATES ASSOCIATED SWITCHING. CAPITAL LETTER INDICATES FIXTURE TYPE. |
| | FIXTURE CEILING MOUNTED |
| | FIXTURE WALL MOUNTED |
| | WALL WASH FIXTURE CEILING MOUNTED |
| | EXIT LIGHT, CEILING MOUNTED WITH ARROWS |
| | EXIT LIGHT, WALL MOUNTED WITH ARROWS |
| | EMERGENCY FIXTURE (CONNECTED TO A LIGHTING INVERTER) |
| | EMERGENCY LIGHT, WALL MOUNTED |
| | POLE MOUNTED LUMINAIRE |
| | FLOOD LIGHT. ARROW INDICATES AIMING DIRECTION. |
| | TRACK LIGHT WITH HEADS AS INDICATED |

RACEWAYS

| | |
|--|---|
| | CONDUIT CONCEALED IN WALL OR CEILING |
| | CONDUIT UNDER FLOOR OR CAST IN STRUCTURE |
| | SWITCH LEG |
| | BRANCH CIRCUIT HOMERUN 3/4"Ø, 3#12 AND 1#12 GND. MIN. |
| | SURFACE RACEWAY |
| | TELEPHONE |
| | BUS DUCT WITH TAKE OFF DEVICE |

PANEL AND RELATED ITEMS

| | |
|--|---|
| | PANELBOARD, SURFACE MOUNTED. |
| | PANELBOARD, FLUSH MOUNTED. |
| | SWITCHBOARD OR DISTRIBUTION BOARD |
| | MOTOR CONTROL CENTER |
| | TRANSIENT VOLTAGE SURGE SUPPRESSOR |
| | PLYWOOD TELEPHONE BACKBOARD; PROVIDE WALL MOUNTED WHITE PAINTED 4x8 PLYWOOD BACKBOARD |

OUTLETS

| | |
|--|--|
| | SIMPLEX RECEPTACLE |
| | DUPLEX RECEPTACLE |
| | DUPLEX RECEPTACLE, GFI=GROUND FAULT INTERRUPTING, WP=WEATHERPROOF, TR=TAMPER RESISTANT, IG=ORANGE SOLATED GROUND, C=CLOCK OUTLET, TV=TV RECEPTACLE |
| | DOUBLE DUPLEX RECEPTACLE |
| | EMERGENCY RED DUPLEX RECEPTACLE |
| | EMERGENCY RED QUAD RECEPTACLE |
| | DUPLEX RECEPTACLE WITH USB PORTS |
| | SPECIAL PURPOSE RECEPTACLE |
| | ROUND FLOOR BOX WITH POWER AND DATA |
| | SQUARE FLOOR BOX WITH POWER AND DATA |
| | TELEPHONE OUTLET |
| | TELEVISION OUTLET |
| | VOICE/DATA OUTLET |

SWITCHES

| | |
|--|--|
| | SINGLE POLE SWITCH |
| | DOUBLE POLE SWITCH |
| | THREE-WAY SWITCH |
| | FOUR-WAY SWITCH |
| | CEILING FAN SPEED SWITCH |
| | SWITCH WITH PILOT LIGHT IN HANDLE |
| | WEATHERPROOF SWITCH |
| | MOTOR RATED SWITCH |
| | LOW VOLTAGE SWITCH |
| | LOW VOLTAGE SWITCH WITH DIMMING |
| | LOW VOLTAGE SWITCH SHOWING QUANTITY |
| | LOW VOLTAGE SWITCH WITH DIMMING SHOWING QUANTITY |
| | LOW VOLTAGE SWITCH WITH TOUCH SCREEN |
| | CEILING MOUNTED OCCUPANCY SENSOR AND SWITCH |
| | WALL MOUNTED OCCUPANCY SENSOR AND SWITCH |

P.A./INTERCOM

| | |
|--|------------------------------------|
| | REMOTE INTERCOM STATION |
| | INTERCOM MASTER STATION |
| | SPEAKER, CEILING MOUNTED |
| | SPEAKER, WALL MOUNTED |
| | AMPLIFIER AND ASSOCIATED EQUIPMENT |
| | MICROPHONE JACK |
| | INTERCOM CALL BOX |

FIRE ALARM

| | |
|--|---|
| | FIRE ALARM CONTROL PANEL |
| | FIRE ALARM EXPANSION PANEL |
| | REMOTE FIRE ALARM ANNUNCIATOR |
| | MANUAL PULL STATION |
| | SMOKE DETECTOR; DASHED INDICATES BELOW RAISED FLOOR |
| | SMOKE DETECTOR, DUCT MOUNTED |
| | TEST SWITCH |
| | HEAT DETECTOR |
| | FLOW SWITCH |
| | VALVE SWITCH |
| | FLOW SWITCH |
| | AUDIO-VISUAL ANNUNCIATOR (WALL, CEILING) |
| | VISUAL ANNUNCIATOR (WALL, CEILING) |
| | MAGNETIC DOOR HOLDER |
| | FIRE FIGHTERS PHONE JACK |
| | FIRE ALARM SPEAKER / VISUAL (VOICE EVACUATION) |

SITE UTILITY

| | |
|--|---|
| | MANHOLE NUMBER 1; CMH=INDICATES COMMUNICATIONS MANHOLE. |
| | PULL BOX OR HANDHOLE AS SPECIFIED ON DRAWINGS AND SPECIFICATIONS. |
| | POWER POLE |
| | POLE MOUNTED TRANSFORMERS |
| | TELEPHONE TERMINAL BOX |
| | AERIAL PRIMARY |
| | AERIAL SECONDARY |
| | AERIAL TELEPHONE; CATV = CABLE TELEVISION. |
| | UNDERGROUND PRIMARY |
| | UNDERGROUND SECONDARY |
| | UNDERGROUND TELEPHONE/COMMUNICATIONS |

SECURITY

| | |
|--|---|
| | SECURITY PANEL |
| | DOOR CONTACT |
| | CCTV CAMERA WITH FIXED WIDE ANGLE LENS WALL MOUNTED TO SET CAMERA 6" BELOW CEILING. |
| | CCTV CAMERA; PT=PAN AND TILT; Z=ZOOM LENS |
| | EXTERIOR CAMERA IN WEATHERPROOF ENCLOSURE WITH ANTI-FOG HEATERS. |
| | DOOR LOCK |
| | CARD READER ACCESS |
| | DURESS PUSHBUTTON |
| | KEYPAD |

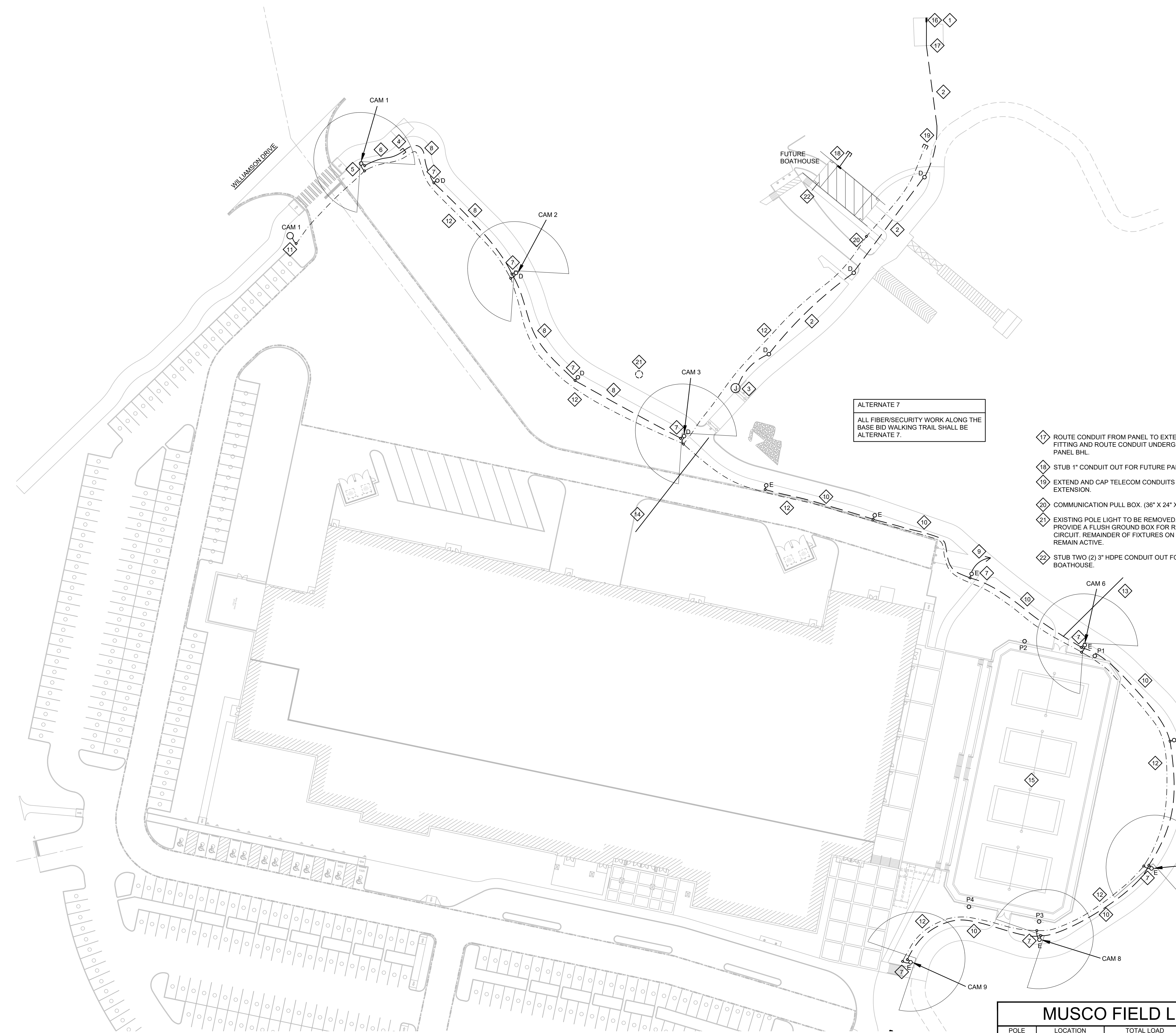
DISTRIBUTION

| | |
|--|--|
| | MOLDED CASE CIRCUIT BREAKER |
| | DRAWOUT POWER CIRCUIT BREAKER, AIR, VACUUM OR SF AS SPECIFIED. |
| | DISCONNECT SWITCH |
| | FUSIBLE DISCONNECT SWITCH |
| | TRANSFORMER |
| | SHIELDED ISOLATION TRANSFORMER |
| | VOLTMETER |
| | AMMETER |
| | VOLTMETER SELECTOR SWITCH |
| | AMMETER SELECTOR SWITCH |
| | SHUNT TRIP |
| | CT AND METER |

| CODES | |
|--|--|
| USE THE 2021 INTERNATIONAL CODES, 2018 INTERNATIONAL ENERGY CONSERVATION CODE, 2020 NATIONAL ELECTRICAL CODE, 2012 TAS, AND 2021 CITY OF BRYAN AMENDMENTS. | |

| | | | |
|-----------|--|---------|---|
| A | AMPERE(S) | MDP | MAIN DISTRIBUTION PANEL |
| AC | ABOVE COUNTER | MECH | MECHANICAL |
| A/C | AIR CONDITIONING | MH | METAL HALIDE |
| AIC | AMPERE INTERRUPTING CAPACITY | MIN | MINIMUM |
| AFF | ABOVE FINISHED FLOOR | MLO | MAIN LUGS ONLY |
| AFG | ABOVE FINISHED GRADE | MTD | MOUNTED |
| AHU | AIR HANDLING UNIT | MTG | MOUNTING |
| AL, ALUM | ALUMINUM | MV | MERCURY VAPOR |
| ATS | AUTOMATIC TRANSFER SWITCH | MW | MICROWAVE |
| AWG | AMERICAN WIRE GAUGE | NA | NOT APPLICABLE |
| BLDG | BUILDING | NC | NORMALLY CLOSED |
| C | CONDUIT | NF | NONFUSIBLE |
| CB | CIRCUIT BREAKER | NL | NIGHT LIGHT |
| CCTV | CLOSED CIRCUIT TELEVISION | NO | NORMALLY OPEN |
| CFCI | CONTRACTOR FURNISHED, CONTRACTOR INSTALLED | NTS | NOT TO SCALE |
| CKT | CIRCUIT | OC | ON CENTER |
| COND | CONDUCTOR | OCFI | OWNER FURNISHED CONTRACTOR INSTALLED OVERHEAD |
| CPU | CENTRAL PROCESSING UNIT | OH | OVERHEAD |
| CT | CURRENT TRANSFORMER | P | POLE |
| DCP | DATA COLLECTION PANEL | PA | PUBLIC ADDRESS |
| DIA | DIAMETER | PB | PUSHBUTTON |
| DC | DISCONNECT | PBX | PRIVATE BUILDING EXCHANGE |
| DIST | DISTRIBUTION | PC | PULL CHAIN |
| DN | DOWN | PCD | PHOTO CELL |
| DWGS | DRAWINGS | PDP | POWER DISTRIBUTION PANEL |
| EC | EMPTY CONDUIT | PH, Ø | PHASE |
| EF | EXHAUST FAN | PNL | PANELBOARD |
| EQMT | EQUIPMENT | PR | PAIR |
| EWC | ELECTRIC WATER COOLER | PSI | POUNDS PER SQUARE INCH |
| EXH | EXHAUST | PWR | POWER |
| EXP | EXPLOSION PROOF | QUAD | QUAD RECEPTACLE |
| EXTG | EXISTING | REFR | REFRIGERATOR |
| FIA, F.A. | FIRE ALARM | S | SECURITY |
| FLUOR | FLUORESCENT | S.C. | SPLIT CIRCUIT |
| FN | FULL NEUTRAL | SCC | STATUS COMMAND CENTER |
| FT | FEET, FOOT | SN | SOLID NEUTRAL |
| GALV | GALVANIZED | SPD | SURGE PROTECTION DEVICE |
| GFCI | GROUND FAULT CIRCUIT INTERRUPTER | SQFT, ⌘ | SQUARE FOOT |
| GFI | GROUND FAULT INTERRUPTER | SW | SWITCH |
| GND | GROUND | SWBD | SWITCHBOARD |
| GRD | GALVANIZED RIGID STEEL | TC | TIME CLOCK |
| HID | HIGH INTENSITY DISCHARGE | TELE | TELEPHONE |
| HP | HORSEPOWER | TSTAT | THERMOSTAT |
| HOA | HAND OFF AUTOMATIC | TV | TELEVISION |
| HPS | HIGH PRESSURE SODIUM | TVSS | TRANSIENT VOLTAGE SURGE SUPPRESSOR |
| HVAC | HEATING/VENTILATING/AIR CONDITIONING | UON | UNLESS OTHERWISE NOTED |
| HZ | HERTZ | UPS | UNINTERRUPTIBLE POWER SUPPLY |
| ID | INSIDE DIAMETER | V | VOLT(S) |
| IG | ISOLATED GROUND | VEND | VENDING |
| IMC | INTERMEDIATE STEEL CONDUIT | VP | VAPOR PROOF |
| IN | INCHES | W | WIRE, WATT(S) |
| INCD | INCANDESCENT | WP | WEATHERPROOF |
| JB | JUNCTION BOX | XFMR | TRANSFORMER |
| KV | KILOVOLT | 1P | ONE POLE |
| KVA | KILOVOLT AMPERE | 2P | TWO POLE |
| KVAC | KILOVOLT AMPERE CAPACTIVE | 3P | THREE POLE |
| KVAR | KILOVOLT AMPERE REACTIVE | | |
| KW | KILOWATT | | |
| KWH | KILOWATT HOUR | | |
| LPS | LOW PRESSURE SODIUM | | |
| MAX | MAXIMUM | | |
| MCB | MAIN CIRCUIT BREAKER | | |
| MCC | MOTOR CONTROL CENTER | | |

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- GENERAL NOTES**
- DIAGRAMS, SCHEMATICS, AND DETAILS ARE SHOWN ONLY TO ILLUSTRATE FUNCTIONAL REQUIREMENTS BETWEEN EQUIPMENT.
 - CONTRACTOR SHALL SUBMIT EQUIPMENT, PRODUCT DATA, AND SHOP DRAWINGS INDICATING FINAL INSTALLATION METHODS AND EQUIPMENT TO BE INSTALLED. EQUIPMENT SHALL NOT BE PURCHASED UNTIL OWNER AND ENGINEER HAVE REVIEWED SUBMITTALS AND PROVIDED RESPONSE.
 - HANDLE, STORE, AND PROTECT EQUIPMENT AND MATERIALS TO PREVENT DAMAGE BEFORE AND DURING INSTALLATION IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATION, AND AS APPROVED BY CITY. REPLACE ALL DAMAGED, UNAPPROVED, OR DEFECTIVE ITEMS AT NO ADDITIONAL COST TO OWNER.
 - PROVIDE ENGRAVED PLASTIC LAMINATE EQUIPMENT IDENTIFICATION LABELS FOR ALL MAJOR PIECES OF SECURITY AND ELECTRICAL EQUIPMENT.
 - COORDINATE WORK WITH CITY OF BRYAN SECURITY, CITY OF BRYAN IT, CITY OF BRYAN OPERATIONS, AND ALL OTHER TRADES ON PROJECT. MAINTAIN CLEARANCES AND ADVISE OTHER TRADES OF CLEARANCE REQUIREMENTS FOR OPERATION, REPAIR, REMOVAL, AND TESTING OF EQUIPMENT.
 - CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH ALL SECURITY PROCEDURES, CONSTRUCTION DOCUMENTS, AND CITY OF BRYAN STANDARDS PRIOR TO STARTING WORK.
 - ALL WORK SHALL BE DONE IN COMPLIANCE WITH THE LATEST NEC STANDARDS.
 - TELECOMMUNICATION CONTRACTOR SHALL HAVE A MASTER ELECTRICIAN ON STAFF AND LICENSED FOR THE STATE IN WHICH THIS PROJECT IS LOCATED. AN ELECTRICIAN SHALL BE PRESENT AT ALL TIMES DURING THE INSTALLATION AND TERMINATION OF ALL FIBER CABLES IN PROXIMITY OF ANY POWER CABLES OR EQUIPMENT IN ELECTRICAL MANHOLES.
 - ALL FIBER MATERIALS AND DEVICES, ETC., SHALL BE UL LISTED.
 - EQUIPMENT SHOWN MAY NOT BE TO SCALE. REFER TO ALL PLAN SHEETS, ADJACENT PROJECTS, AND SECURITY DETAILS FOR ADDITIONAL INFORMATION. REFER TO CIVIL DRAWINGS FOR SITE DIMENSIONS. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFICATION OF DIMENSIONS AND SHALL PERFORM FIELD MEASUREMENTS PRIOR TO FABRICATION AND/OR PURCHASE OF ANY EQUIPMENT AND MATERIALS.
 - ALL EQUIPMENT WORKING SPACE SHALL BE PER NEC, BSCSI, AND ALL REFERENCES STATED IN SPECIFICATIONS. PROVIDE ADEQUATE WORKING SPACE FOR ALL ELECTRICAL EQUIPMENT.
 - ALL EQUIPMENT SHOWN IN PACKAGE IS NEW UNLESS STATED OTHERWISE.
 - PROVIDE ALL FIBER TRANSCEIVERS, MEDIA CONVERTORS, OUTDOOR RATED ENCLOSURES, POLE CAMERA MOUNTS, AND LABELING AND BOTH ENDS OF TERMINATION PER CAMERA INSTALL.
 - CITY VMS IS MILESTONE PROFESSIONAL PLUS, V13.3 CAMERA LICENSES SHALL BE PROVIDED PER CAMERA UNDER ALTERNATE NO. 7.

- KEYED PLAN NOTES:**
- PATH LIGHT BRANCH CIRCUIT. CONNECT TO A NEW 20A/2P BREAKER INSTALLED IN EXISTING RESTROOM PANEL.
 - PROVIDE 3/8" 1/8" GROUND IN 1".
 - 2#10, 1#10 GROUND IN 3/4" CONDUIT TO BRIDGE LIGHTS. BRIDGE LIGHTS ARE INSTALLED FOR SINGLE POINT CONNECTION BY BRIDGE MANUFACTURER. PROVIDE A PHOTOCELL FOR BRIDGE LIGHTS. MOUNT PHOTOCELL ON OUTSIDE OF BRIDGE FRAME 1'-0" ABOVE THE WALKING SURFACE.
 - EXISTING CONDUIT IS STUBBED OUT AT THIS LOCATION. EXTEND TO NEW FIXTURES AS SHOWN.
 - EXISTING WALKING TRAIL LIGHT TO REMAIN. EXTEND CIRCUIT FROM HANDHOLE AS SHOWN. 3/2"Ø, 1/4" GROUND.
 - EXISTING 2" PVC.
 - 11x17 ELECTRICAL HANDHOLE. PROVIDE 1 1/2" CONDUIT TO POLE. REFER TO DETAILS ON SHEET E3.0 FOR CONNECTION.
 - 2" PVC. (3/2"Ø, 1/4" GROUND).
 - 3/8", 1/8" GROUND IN 1" CONDUIT TO A NEW 20A/2P BREAKER INSTALLED IN EXISTING PANEL LD. REFER TO SHEET E1.0 FOR LOCATION OF PANEL LD.
 - 3/8", 1/8" GROUND IN 1" CONDUIT.
 - TIE INTO EXISTING COMMUNICATION PULL BOX FROM ADJACENT PROJECT. LOCATION IS APPROXIMATE. CONTRACTOR SHALL FIELD VERIFY.
 - ROUTING SHOWN IS FOR (2) HDPE 3 IN. CONDUIT FOR FUTURE FIBER TO BE PERFORMED BY CITY OF BRYAN. COMM PULL BOX AT EACH CAMERA POLE SHALL HAVE DEDICATED CONDUIT INTO POLE AS SHOWN IN DETAILS. ALL COMM DUCTBANK, CAMERAS, AND SURVEILLANCE EQUIPMENT ARE PART OF THE SCOPE. REFER TO NOTES FOR ALTERNATES.
 - WORK SHOWN FOR TRAIL LIGHTING/CAMERAS FROM THIS POINT AROUND COURTS AND TO EVENT CENTER SHALL BE ALTERNATE 9.
 - WORK SHOWN FROM THIS POINT TO WILLIAMSON DRIVE SHALL BE ALTERNATE 8.
 - WORK SHOWN FOR LIGHTING THE COURTS SHALL BE ALTERNATE 1.
 - EXISTING PANEL IN RESTROOM BUILDING.

ALTERNATE 7
ALL FIBER/SECURITY WORK ALONG THE BASE BID WALKING TRAIL SHALL BE ALTERNATE 7.

1 ELECTRICAL SITE PLAN
E0.1 1" = 40'-0"

MUSCO FIELD LIGHTING CIRCUITS (ALT 1)

| POLE | LOCATION | TOTAL LOAD | LENGTH TO CONTACTOR | CONDUIT/WIRE | CIRCUIT |
|------|------------|------------|---------------------|--------------------|-------------|
| P1 | VOLLEYBALL | 3.4 AMPS | 230 FT | 3#10 + 1#10G, 3/4" | HVB-1,3,5 |
| P2 | VOLLEYBALL | 3.4 AMPS | 175 FT | 3#10 + 1#10G, 3/4" | HVB-2,4,6 |
| P3 | VOLLEYBALL | 3.4 AMPS | 400 FT | 3#10 + 1#10G, 3/4" | HVB-7,9,11 |
| P4 | VOLLEYBALL | 3.4 AMPS | 425 FT | 3#10 + 1#10G, 3/4" | HVB-8,10,12 |

POLES TO BE LOCATED BASED ON MUSCO DRAWINGS. POLE CIRCUITS TO ROUTE TO MUSCO CONTROL PANEL. REFER TO SHEET E1.0 FOR LOCATION.

Revisions

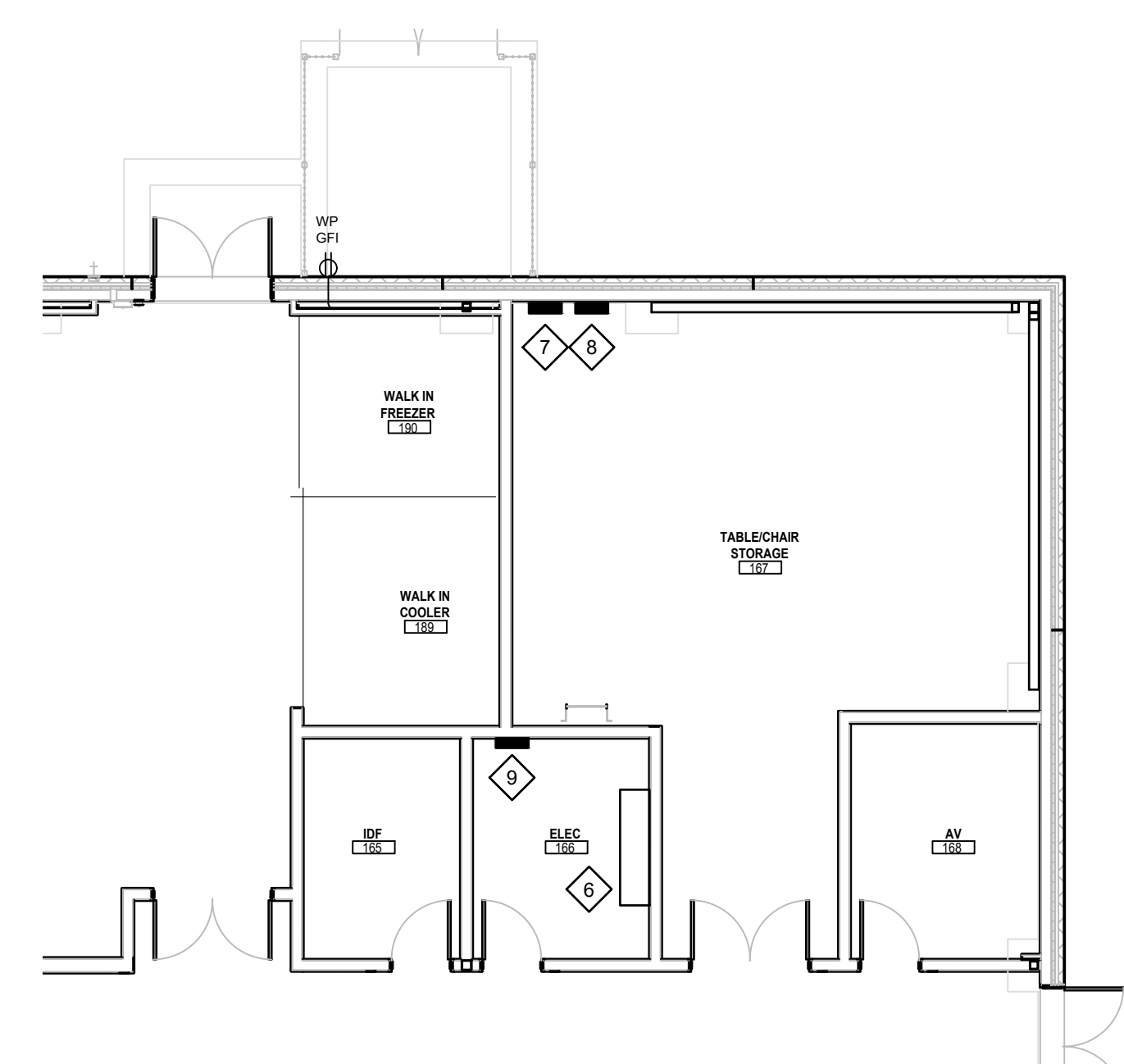
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| LIGHTING FIXTURE SCHEDULE | | | | | | | | | | | |
|---------------------------|--------------|---|----------------|----------|------------|---------|--------|------|--|----------|--|
| MARK | MANUFACTURER | MODEL | DIMENSION | MOUNTING | FIXTURE VA | VOLTAGE | LUMENS | TEMP | DESCRIPTION | NOTES | |
| D | LUMENPULSE | ALG7120 240 CSL M80 40K CR180 2 BK DIM CRC SP ARM: CS2 S1E BK CRC POLE: PL-M 4 STL R 12 M BK Q88 BRK CRC AB | 18" DIA. X 12" | POLE | 64 | 240 | 6610 | 4000 | SINGLE PEDESTRIAN LIGHT MOUNTED ON 12' POLE WITH DECORATIVE ARM | NOTE 6,7 | |
| E | LUMENPULSE | ALG7120 208 CSL M80 40K CR180 2 BK DIM CRC SP ARM: CS2 S1E BK CRC POLE: PL-M 4 STL R 12 M BK Q88 BRK CRC AB | 18" DIA. X 12" | POLE | 64 | 208 | 6610 | 4000 | SINGLE PEDESTRIAN LIGHT MOUNTED ON 12' POLE WITH DECORATIVE ARM | NOTE 6,7 | |

NOTES:

- 1. ALL FIXTURES SHALL BE SPEC GRADE UNLESS OTHERWISE NOTED.
- 2. ALL TOGGLE SWITCHES TO BE MOUNTED AT HEIGHTS TO COMPLY WITH ADA GUIDELINES UNLESS OTHERWISE NOTED.
- 3. LIGHTING FIXTURES SHALL BE COORDINATED WITH THE CEILING TYPE PRIOR TO ORDERING. SEE RCP TO VERIFY CEILING TYPES.
- 4. FOR ALL EMERGENCY LIGHT FIXTURES SHOWN WITH AN 'E' SUFFIX, PROVIDE A 10W EMERGENCY BATTERY PACK.
- 5. CONTRACTOR SHALL COORDINATE ALL FINISHES WITH OWNER/ARCHITECT.
- 6. FIXTURE TO BE PROVIDED WITH PHOTOCELL RECEPTACLE. ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL PHOTOCELL.
- 7. FIXTURE TO BE PROVIDED WITH A POLE MOUNTED GFI RECEPTACLE WITH A WEATHERPROOF 'IN USE' COVERPLATE. MOUNT RECEPTACLE AS HIGH AS POSSIBLE ON THE POLE.

GENERAL NOTE

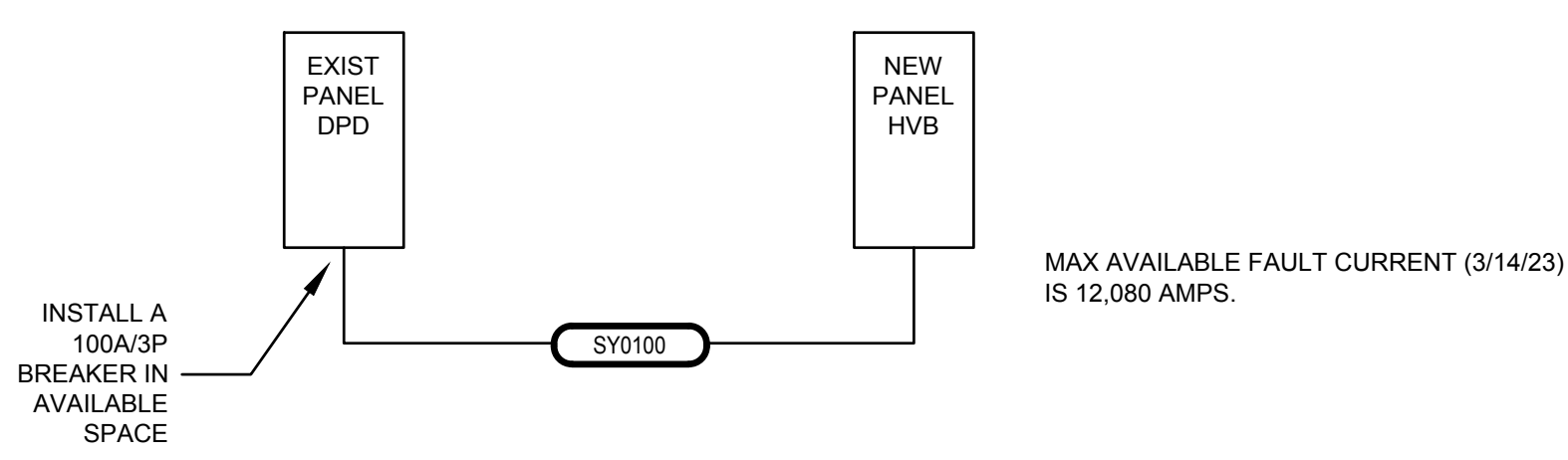


3 LEGENDS EVENT CENTER - AREA F
 E1.0 SCALE: 1/8" = 1'-0"

- KEYED PLAN NOTES:**
- 1 NOT USED.
 - 2 NOT USED.
 - 3 NOT USED.
 - 4 NOT USED.
 - 5 NOT USED.
 - 6 EXISTING PANEL 'DPD'.
 - 7 NEW PANEL 'HVB'.
 - 8 MUSCO CONTROL PANEL.
 - 9 EXISTING PANEL 'LD'. INSTALL A NEW 20A/2P BREAKER FOR LIGHTING CIRCUIT. SEE SHEET E0.1, KEYED NOTE 9.
 - 10 NOT USED.
 - 11 NOT USED.
 - 12 NOT USED.

Legends Event Center- Exterior Amenities
 2533 Midtown Park Blvd., Bryan, TX. 77801

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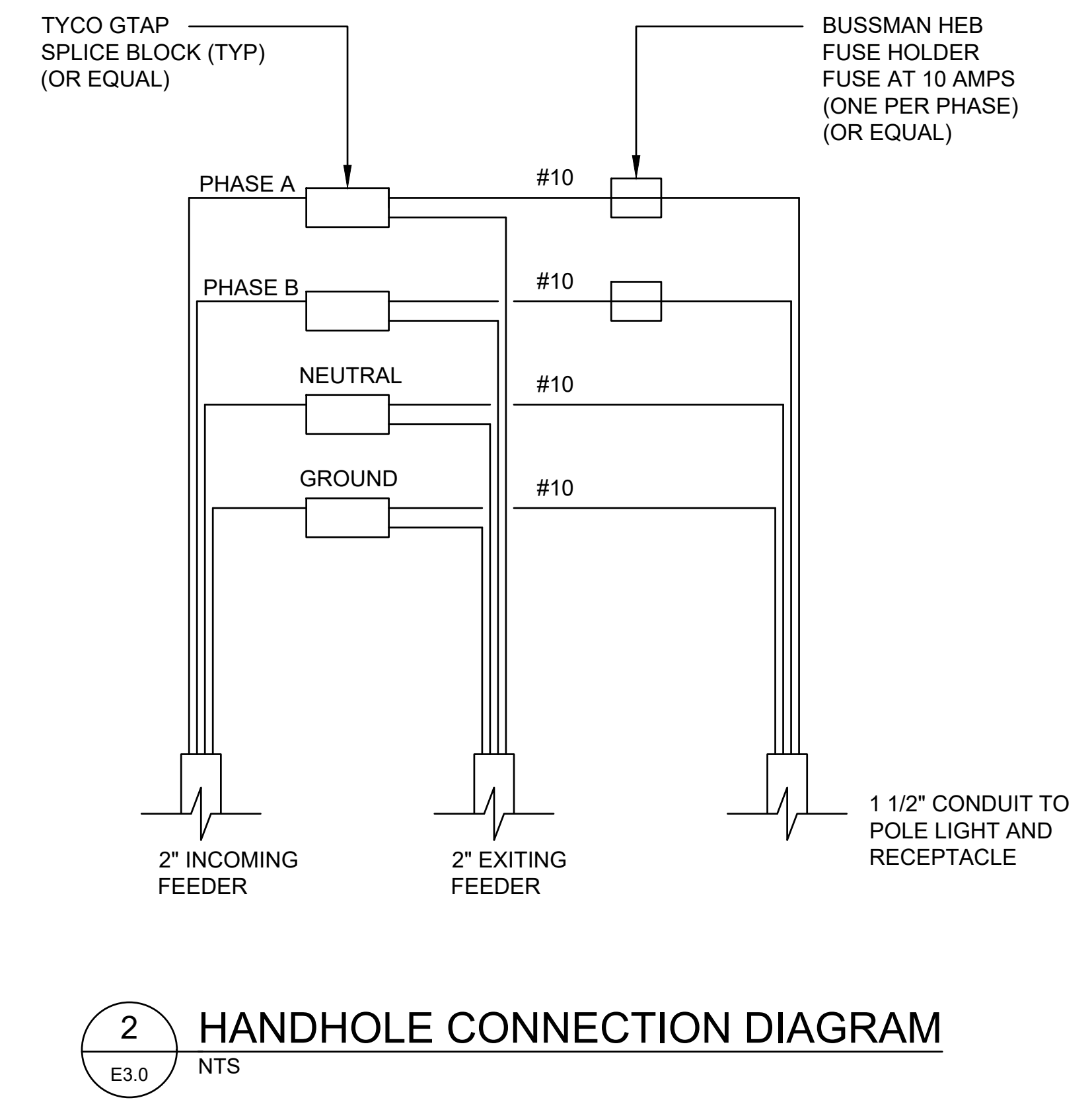
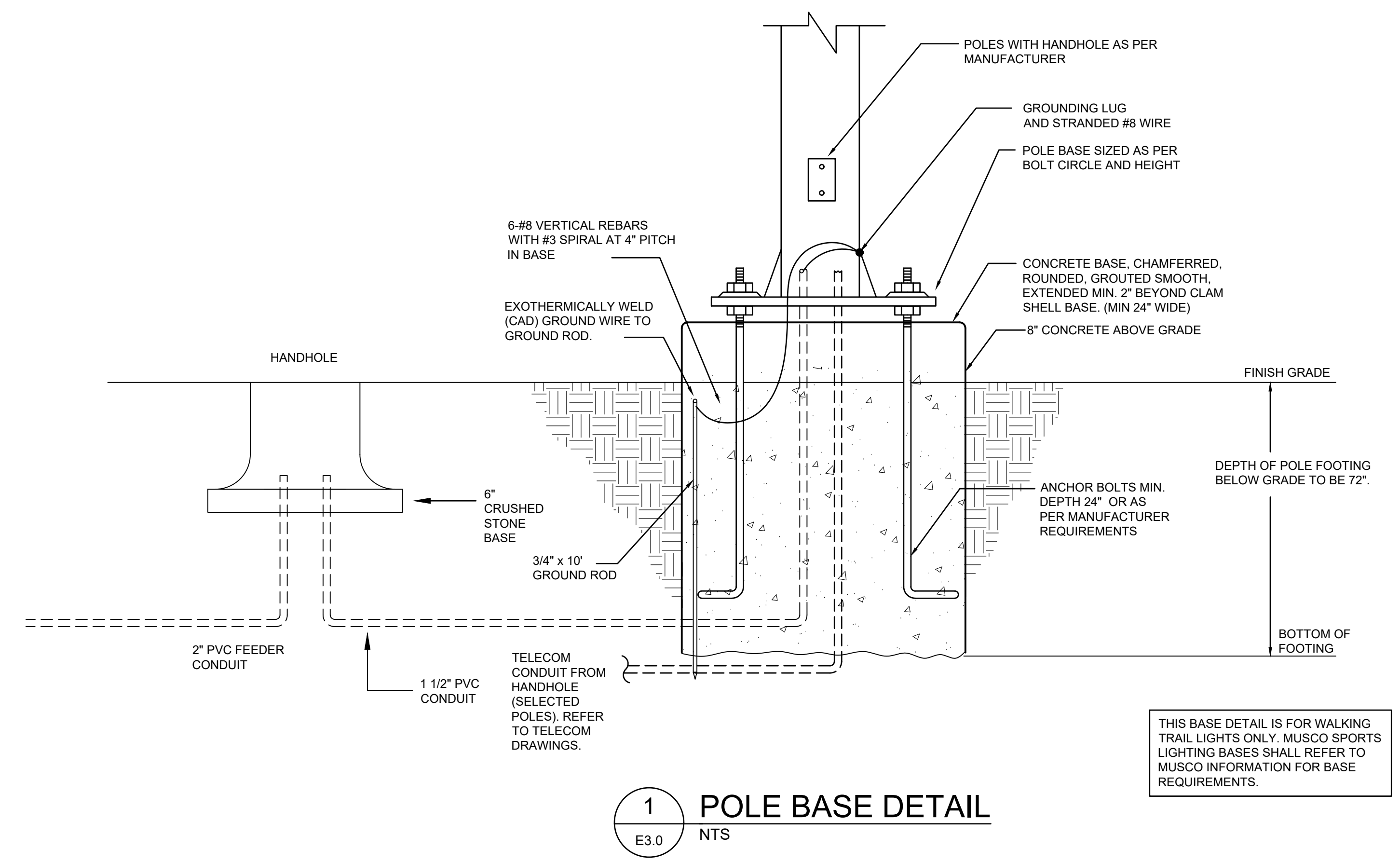
2 ELECTRICAL RISER - ALT 1
E2.0 NTS

| ELECTRICAL FEEDER SCHEDULE | | |
|----------------------------|--------------------|--------------------------|
| MARK | CONDUIT | CONDUCTORS |
| 2050 | 1 - 3/4" Conduit | 3 - #8 and 1 - #8 Ground |
| SY0100 | 1 - 1-1/4" Conduit | 4 - #3 and 1 - #6 Ground |

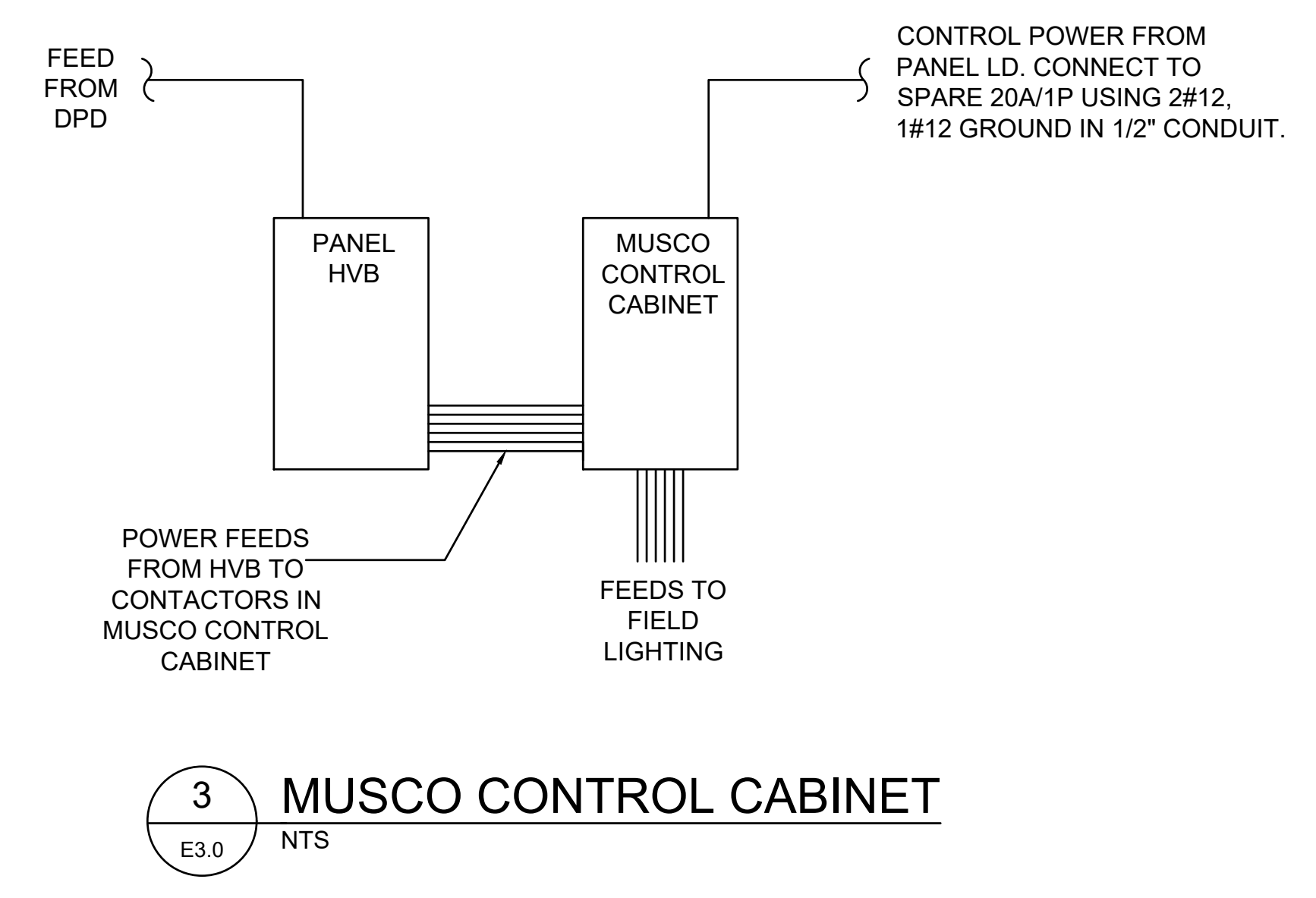
- Notes:**
1. Well location (underground or outdoors) use THWN. Otherwise THHN.
 2. Conduit Types: underground - schedule 40 PVC; indoors - EMT; outdoor exposed - IMC. Utility - riser poles (follow Utility guidelines or minimum schedule 80).
 3. Provide transitions to conduit changes prior to different environment (ex. Transition from EMT to IMC prior to penetrating walls to the exterior).
 4. Motor Connections shall be flexible non-metallic conduit for water equipment
 5. All conduit penetrations in rated walls shall be firestopped.
 6. See drawings for any special requirements.

| PANEL HVB (ALT 1) | | | | | | | | | | | | | | | | | | | |
|-----------------------|------|-----------------------------------|--|-----------------|------|------------|---|-----------------------|------|--------------------------------------|----------------------------|-------------------------------------|------|----------|--|-----------|--|--|--|
| LOCATION: | | STORAGE ROOM | | VOLTAGE: | | 277/480 V | | KAIC: | | 18 | | BUSSESS SHALL BE FULLY RATED | | | | | | | |
| MOUNTING: | | SURFACE | | PHASE: | | 3 P / 4W | | CODES: | | 0=EQPT, 1=RCPT, 2=LTG, 3=A/C, 4=HEAT | | | | | | | | | |
| ENCLOSURE: | | NEMA 1 | | STYLE: | | NF | | BUSSING: | | 125 A | | 5=CONTINUOUS MOTORS, 6=LARGST MOTOR | | | | | | | |
| BRKR MTG: | | BOLT-ON | | (REF: SQUARE D) | | MCR: | | 100 A | | ACCESSORIES: | | GROUND BUS, 42 SPACE | | | | | | | |
| BREAKERS: | | SERIES RATED, 75 DEGREE TERMINALS | | MLO: | | A | | | | | | | | | | | | | |
| CODE | BRKR | CIRCUIT USE | | CKT | LOAD | A | B | C | LOAD | CKT | CIRCUIT USE | | BRKR | CODE | | | | | |
| 2 | 20/3 | VOLEYBALL LIGHTING POLE P1 | | 1 | 945 | X | | | 945 | 2 | VOLEYBALL LIGHTING POLE P2 | | 20/3 | 2 | | | | | |
| 2 | -- | --- | | 3 | 945 | X | | | 945 | 4 | --- | | -- | 2 | | | | | |
| 2 | -- | --- | | 5 | 945 | X | | | 945 | 6 | --- | | -- | 2 | | | | | |
| 2 | 20/3 | VOLEYBALL LIGHTING POLE P3 | | 7 | 945 | X | | | 945 | 8 | VOLEYBALL LIGHTING POLE P4 | | 20/3 | 2 | | | | | |
| 2 | -- | --- | | 9 | 945 | X | | | 945 | 10 | --- | | -- | 2 | | | | | |
| 2 | -- | --- | | 11 | 945 | X | | | 945 | 12 | --- | | -- | 2 | | | | | |
| | | | | 13 | | X | | | | 14 | | | | | | | | | |
| | | | | 15 | | X | | | | 16 | | | | | | | | | |
| | | | | 17 | | X | | | | 18 | | | | | | | | | |
| | | | | 19 | | X | | | | 20 | | | | | | | | | |
| | | | | 21 | | X | | | | 22 | | | | | | | | | |
| | | | | 23 | | X | | | | 24 | | | | | | | | | |
| | | | | 25 | | X | | | | 26 | | | | | | | | | |
| | | | | 27 | | X | | | | 28 | | | | | | | | | |
| | | | | 29 | | X | | | | 30 | | | | | | | | | |
| | | | | 31 | | X | | | | 32 | | | | | | | | | |
| | | | | 33 | | X | | | | 34 | | | | | | | | | |
| | | | | 35 | | X | | | | 36 | | | | | | | | | |
| | | | | 37 | | X | | | | 38 | | | | | | | | | |
| | | | | 39 | | X | | | | 40 | | | | | | | | | |
| | | | | 41 | | X | | | | 42 | | | | | | | | | |
| EQPT VA | | RCPT VA | | LTG VA | | AC/HEAT VA | | MOTORS | | CONN VA | | FTL VA | | PANEL VA | | PHASE AMP | | | |
| PHASE A | | 0 | | 0 | | 3780 | | 0 | | 0 | | 3780 | | 4725 | | 17 | | | |
| PHASE B | | 0 | | 0 | | 3780 | | 0 | | 0 | | 3780 | | 4725 | | 17 | | | |
| PHASE C | | 0 | | 0 | | 3780 | | 0 | | 0 | | 3780 | | 4725 | | 17 | | | |
| TOTAL | | 0 | | 0 | | 11340 | | 0 | | 0 | | 11340 | | 14175 | | 51 | | | |
| PANEL DESIGN KVA: | | | | 14.18 | | | | PANEL SUBTOTAL: | | | | 17 | | | | AMPS | | | |
| RESERVE CAPACITY KVA: | | | | 2.84 | | | | RESERVE CAPACITY: | | | | 3 | | | | AMPS | | | |
| TOTAL KVA: | | | | 17.01 | | | | PANEL DESIGN CURRENT: | | | | 20 | | | | AMPS | | | |

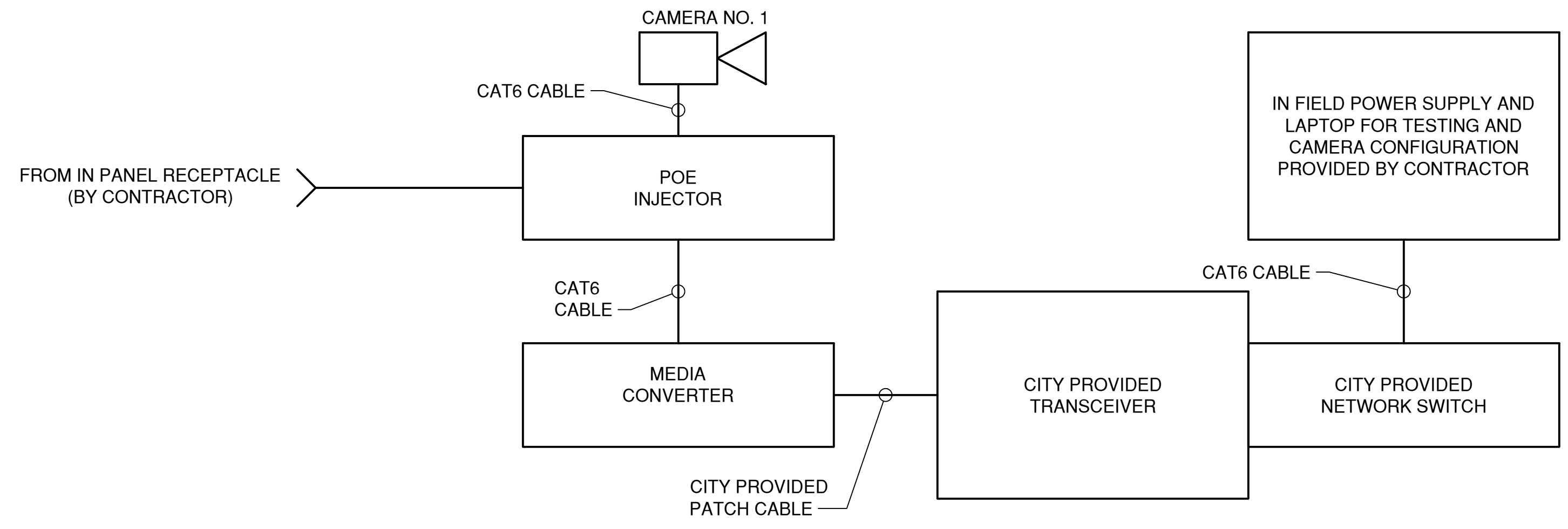
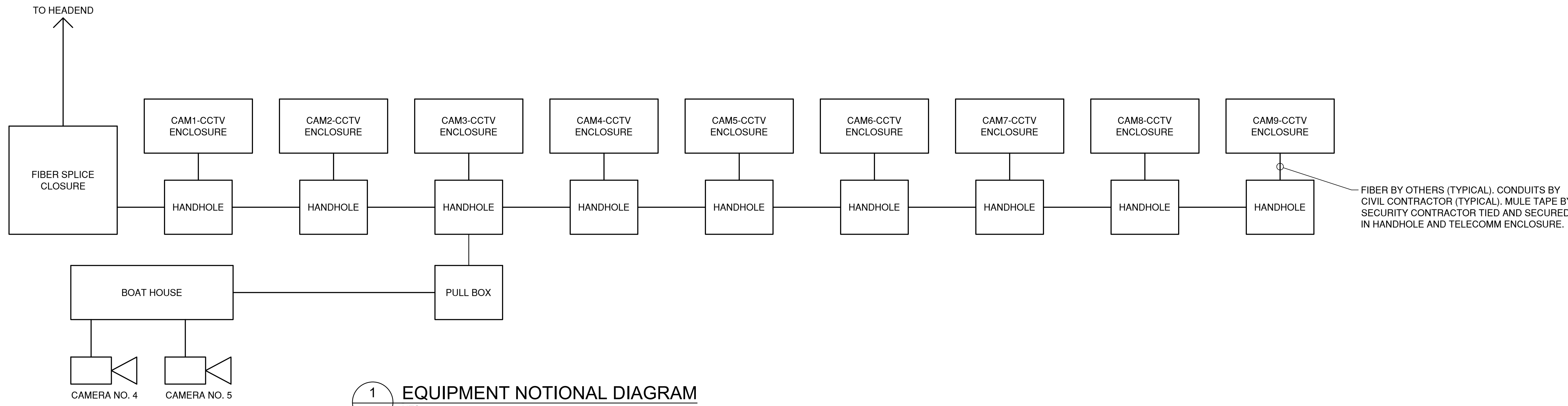
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HANDHOLE NOT SHOWN FOR CLARITY
RECEPTACLES SHALL ALTERNATE PHASES TO BALANCE LOAD ON CIRCUIT.

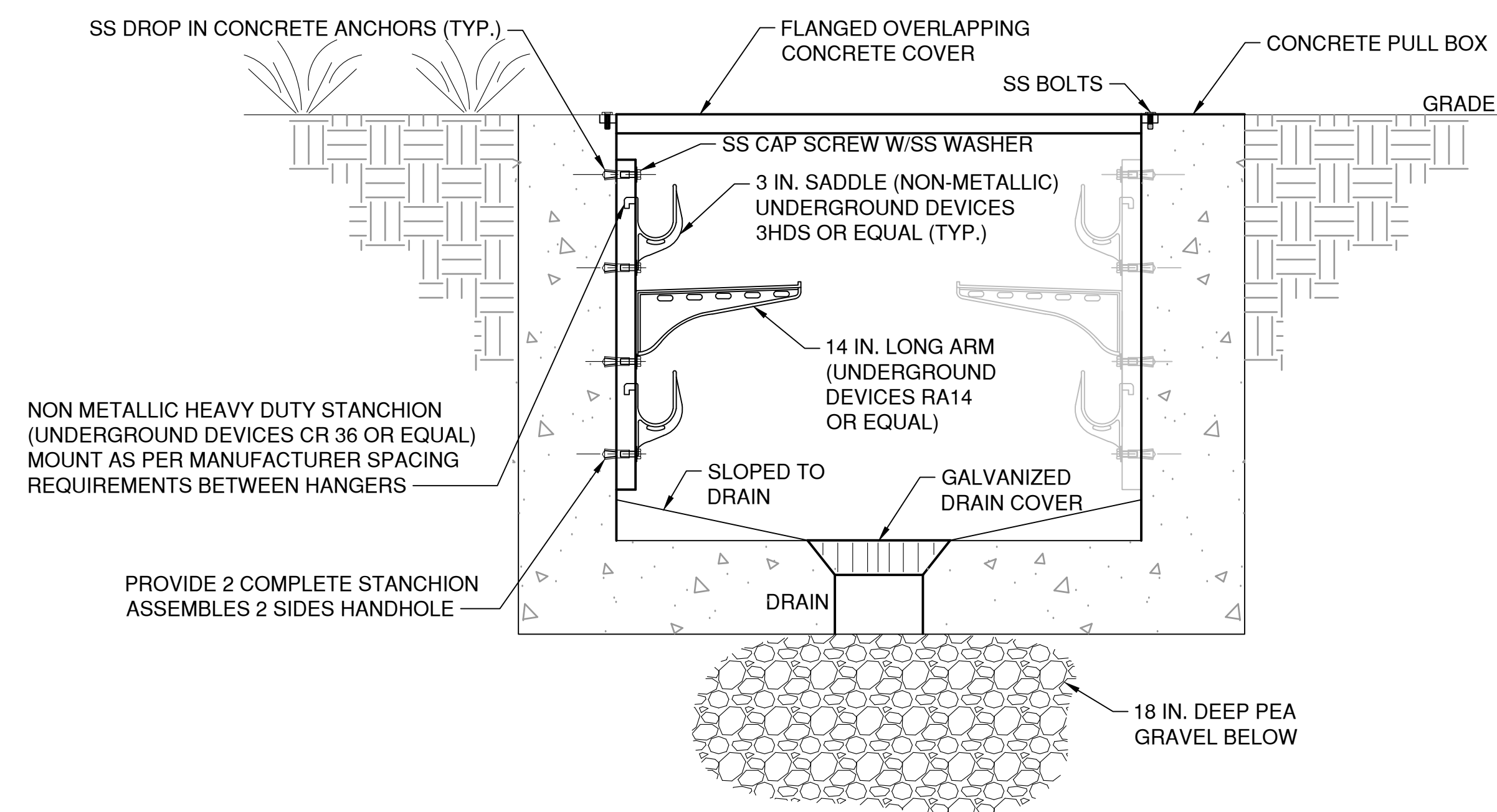


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- NOTES:**
- WHERE FIBER BACKHAUL BY OTHERS IS NOT INSTALLED AT TIME OF SUBSTANTIAL COMPLETION; CONTRACTOR WILL BE REQUIRED TO UTILIZE CITY PROVIDED NETWORK SWITCH, TRANSCEIVERS, AND SINGLE MODE FIBER PATCH CABLE; AND CONTRACTORS PROVIDED LAPTOP TO TEST AND CONFIGURE FIELD OF VIEWS WITH CITY PD AND OWNER'S REPRESENTATIVE FOR EGDE TESTING. INTENT IS TO TEST COMMUNICATION, FUNCTIONALITY, AND FIELD OF VIEWS FROM DEMARCATION POINT (MEDIA CONVERTER AT POLE). ALL TESTING FROM MEDIA CONVERTER TO HEAD END WILL BE PERFORMED BY OTHERS.
 - WHERE FIBER BACKHAUL BY OTHERS IS COMPLETED AND TESTED AT TIME OF SUBSTANTIAL COMPLETION; CONTRACTOR SHALL PROVIDE TIME FOR TESTING AND CALIBRATION AT CITY HEADEND FOR ALL CAMERA FIELD OF VIEWS WITH CITY PD AND OWNER'S REPRESENTATIVE. INTENT IS TO TEST COMMUNICATION, FUNCTIONALITY, AND FIELD OF VIEWS FROM HEADEND INTERFACE. INCLUDE ALL TIME AND MOBILIZATION FOR TESTING AT OFFSITE FACILITY.

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DIGGING: A FIRM BASE FOR THE ENCLOSURE IS VERY IMPORTANT. A LAYER OF AT LEAST 6 IN. OF AGGREGATE IS RECOMMENDED UNDER THE ENCLOSURE. THIS IS FOR SUPPORT AS WELL AS DRAINAGE. EXCAVATE AN AREA ROUGHLY 12 IN. - 18 IN. LARGER THAN THE BASE OF THE BOX AND 6 IN. DEEPER TO ACCOMMODATE THE AGGREGATE. IDEALLY YOU WANT THE BOX AT FINAL GRADE, SO YOU NEED TO DETERMINE THE DEPTH OF THE HOLE COMPARED TO THE HEIGHT OF THE ENCLOSURE YOU ARE INSTALLING.

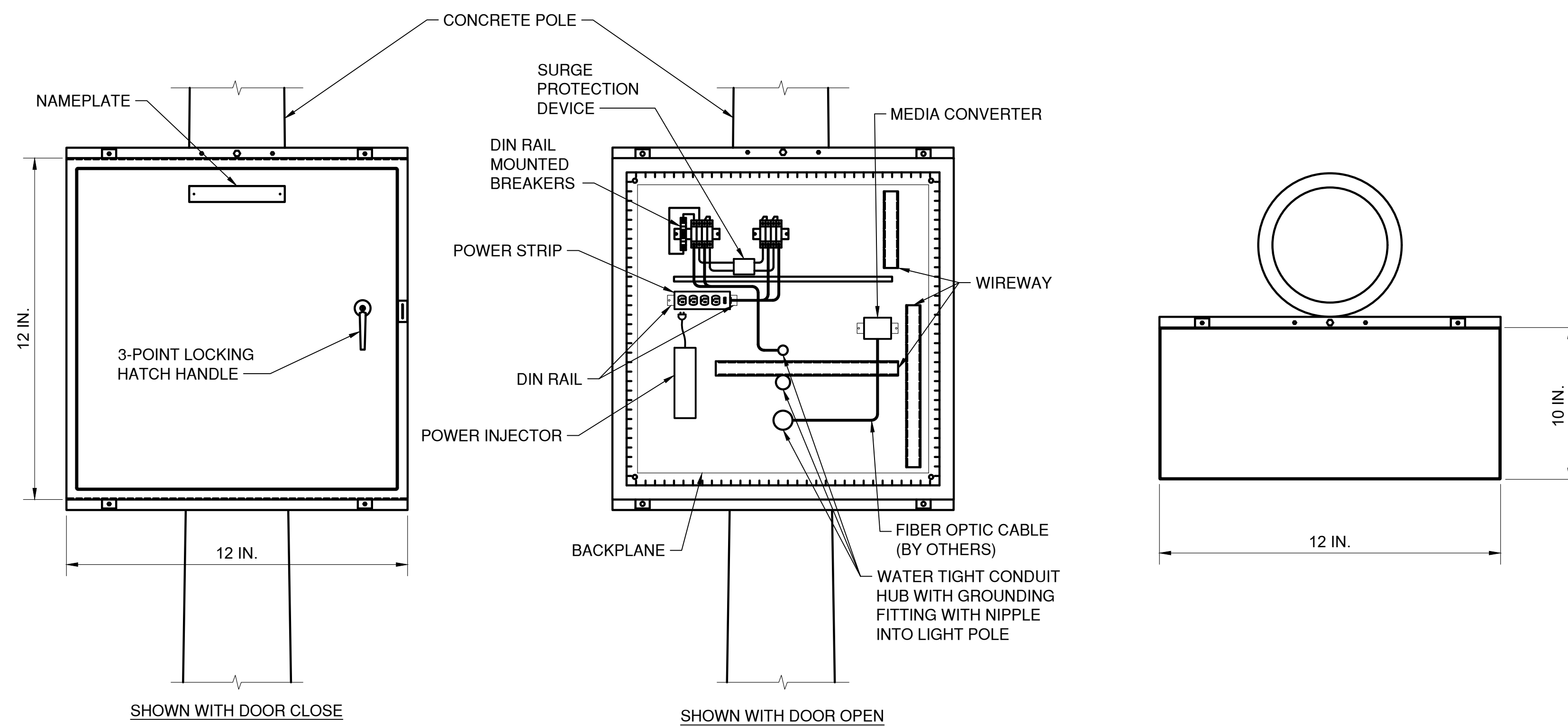
BASE PREPARATION: THE BOTTOM FLANGE MUST REST ON A FIRM FOUNDATION. USE APPROXIMATELY 6 IN. OF COMPACTED MATERIALS SUCH AS GRAVEL OR STONE DUST. AFTER THE ENCLOSURE HAS BEEN PLACED IN POSITION AND LEVELED, 3 IN. OF SOIL SHOULD BE PLACED ON THE FLANGE TO KEEP THE ENCLOSURE IN PLACE.

BACKFILLING: BACK FILLING THE EXTERIOR WALL CAN BE TYPICALLY DONE BY USING CLEAN LOOSE MATERIAL EXCAVATED FROM HOLE. BACKFILL IN 6 IN. INCREMENT. AVOID USING OVERSIZED STONES, ROCKS, CONCRETE, FROZEN CHUNKS, ETC. PACK THE BACKFILL BY TAMPING. DO NOT USE MECHANICAL EQUIPMENT FOR VIGOROUS TAMPING, AND DO NOT COMPACT AROUND THE BOX PD BY DRIVING VEHICLES NEXT TO IT.

IMPORTANT NOTES:

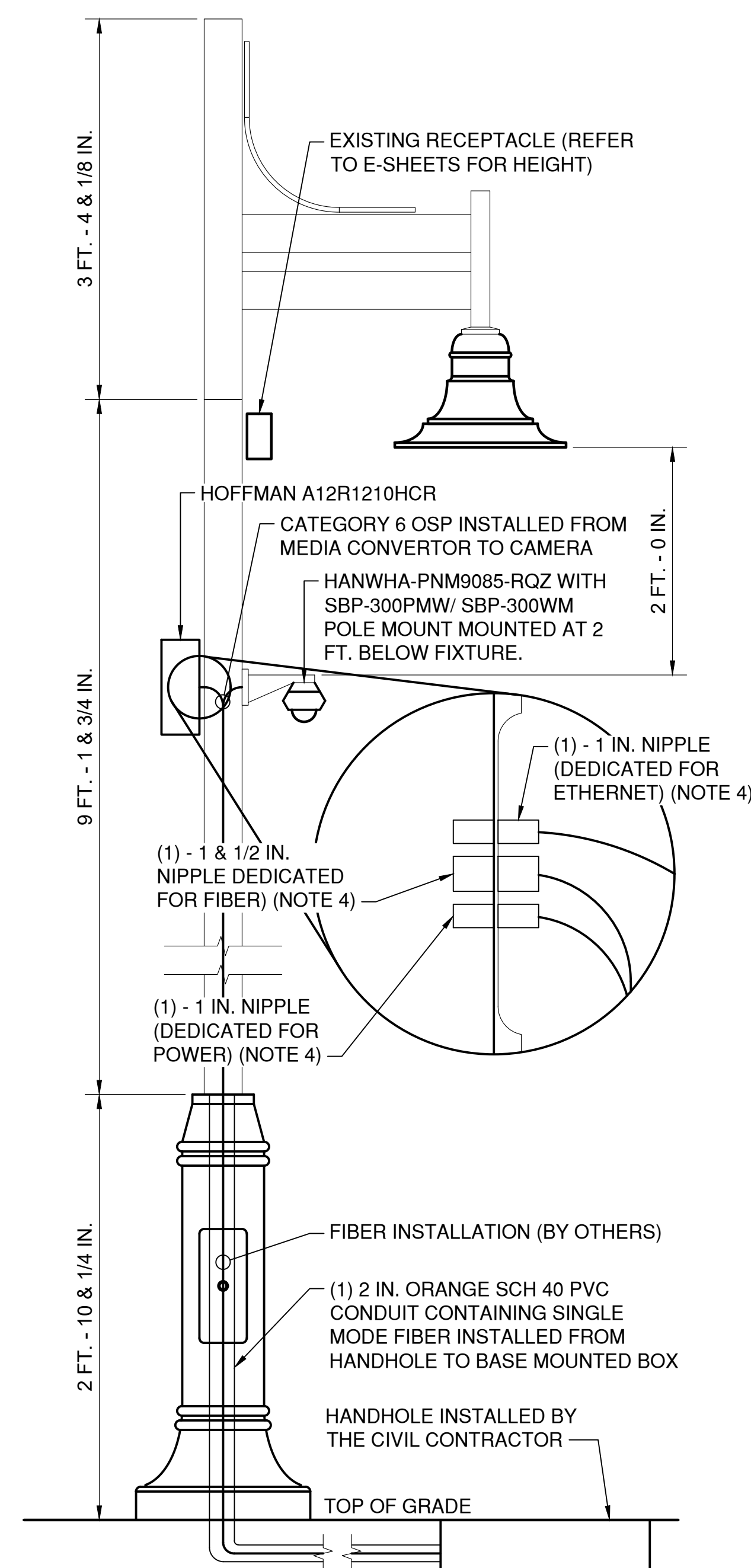
1. REFER TO CIVIL DRAWINGS FOR ADDITIONAL REQUIREMENTS.
2. ANY DRILLING OR MODIFICATIONS TO THE ENCLOSURE SHOULD BE DONE WITH CARE. DO NOT CUT THE FLANGE, AS THIS IS THE SUPPORT HOOP. DO NOT USE SAND AS BACKFILL. SAND PROVIDES NO FRICTIONAL RESISTANCE TO MOVEMENT, AND ACTUALLY CREATES TREMENDOUS SIDE WALL PRESSURE.
3. ALWAYS BACKFILL THE ENCLOSURE WITH THE COVER BOLTED IN PLACE.
4. IT IS RECOMMENDED THAT A 10 IN. TO 12 IN. x 12 IN. CONCRETE COLLAR BE POURED AROUND THE ENCLOSURE IN AREAS WHERE IT IS EXPECTED THAT SOIL WOULD WASH AWAY OR OTHERWISE BE DISTURBED BY HEAVY LAWN MOWERS, ETC. IF ENCLOSURE IS BEING INSTALLED IN A SIDEWALL OR AREA WHERE IT MAY BE DRIVEN OVER IT SHOULD ALSO HAVE A CONCRETE COLLAR. THIS PROTECTS THE SIDEWALL OF THE RING, WHICH IS NOT MEANT TO WITHSTAND IMPACT.

1 TELECOM PULL BOX DETAIL
E5.0 NTS



- NOTES:**
1. SPLICE FROM POLE RECEPTACLE.
 2. ALL EQUIPMENT TO BE MOUNTED ON DINRAIL.

2 SURVEILLANCE CABINET DETAIL
E5.0 NTS

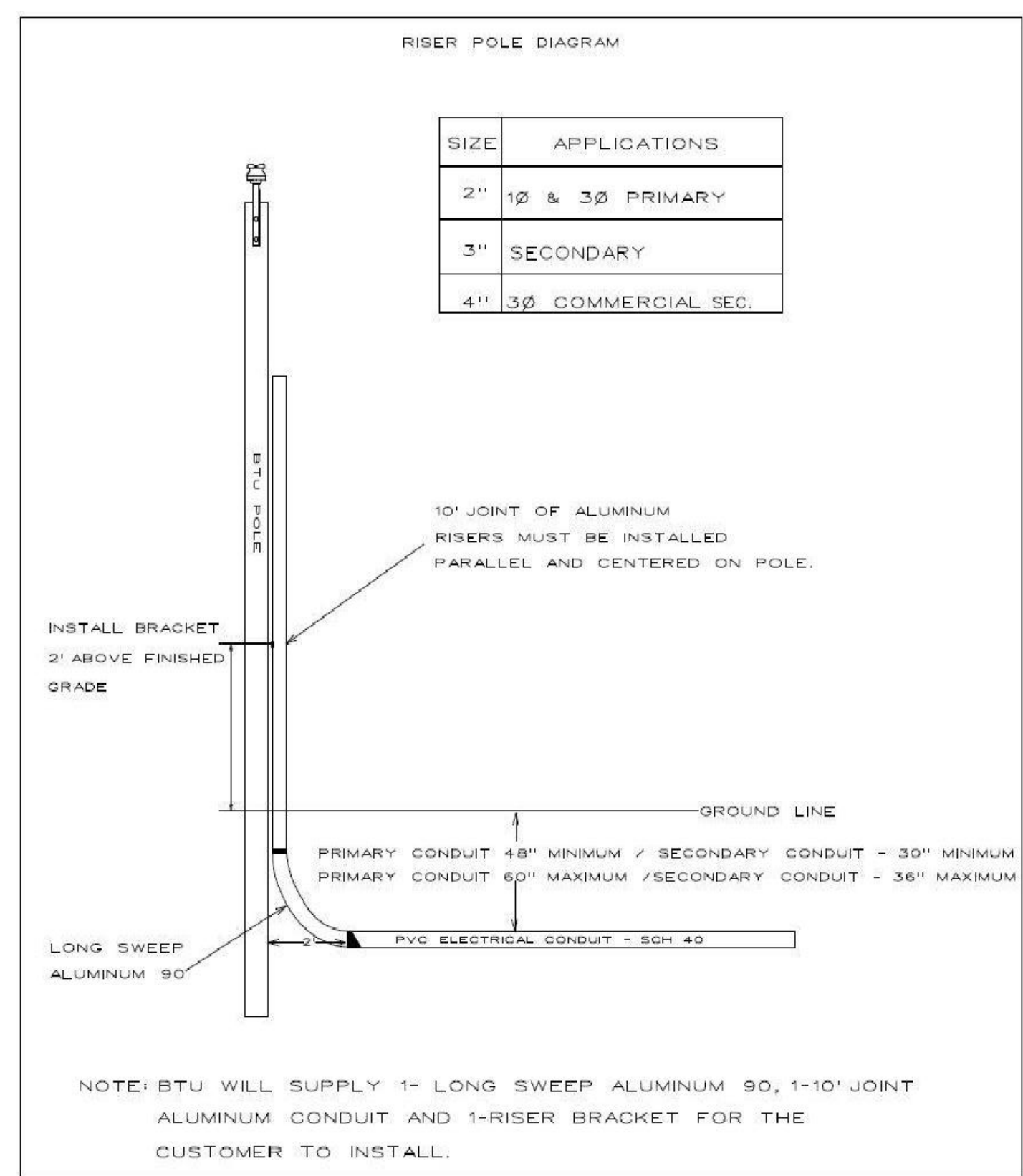


- NOTES:**
1. HOFFMAN A12R1210HCR SHALL BE MOUNTED AT SAME HEIGHT AS EXISTING POLE RECEPTACLE. REFER TO E-SHEETS.
 2. HOFFMAN A12R1210HCR SHALL INCLUDE DIN RAIL MOUNTED RECEPTACLE POE INJECTOR, 6 STRAND FIBER SPLICE CLOSURE, AND FIBER MEDIA CONVERTER (AXIS T8604/T8605). SUBMIT PANEL EQUIPMENT INSTALLATION ELEVATION PRIOR TO PURCHASE FOR ENGINEER REVIEW. PROVIDE AND INSTALL BACKPLANE (12N12P), POLE MOUNTING KIT (CPMK12), POWER STRIP (TRIPP LITE TLP404), AND DIN RAIL (ADNR1).
 3. FIBER FROM HANDHOLE TO PANEL SPLICE CLOSURE IS BY OTHERS. PROVIDE MULE TAPE.
 4. PROVIDE LIQUID TIGHT PVC COATED NIPPLES LISTED FOR INTENDED USE (ST, STG, STTB, STTTB, ETC.)

3 LIGHT POLE SECURITY CAMERA DETAIL
E5.0 NTS

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P. Riser Diagram for as Primary or Secondary Installations Attached to a Pole



Installation of Handholes / Pull Boxes and Vaults:

Please refer to local utility for installation guidelines. These installation guidelines are for reference only, proper installation shall be the sole responsibility of the contractor.



Digging

A firm base for the enclosure is very important. A layer of at least 6" of aggregate is required under the enclosure. A layer of at least 6" of aggregate is required within the base of the enclosure. This is for support as well as drainage.

Excavate an area roughly 12-18" larger than the base of the box and 6" deeper to accommodate the aggregate. Ideally you want the box at final grade, so you need to determine the depth of the hole compared to the height of the enclosure you are installing.

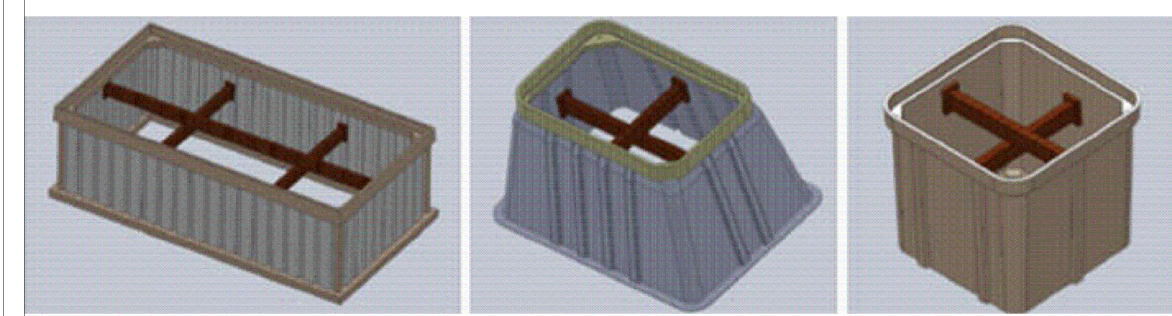
Base Preparation

The bottom flange must rest on a firm foundation. Use approximately 6" of compacted materials such as gravel, soil or stone dust. After the enclosure has been placed in position and leveled, 3" of soil should be placed on the flange to keep the enclosure in place. A layer of at least 6" of aggregate is required within the base of the enclosure.

Backfilling

Back filling the exterior wall can be typically done by using clean loose material excavated from hole. Backfill in 6" increments. Avoid using oversized stones, rocks, concrete, frozen chunks etc. Pack the backfill by tamping. Do not use mechanical equipment for vigorous tamping, and do not compact around the box pad by driving vehicles next to it.

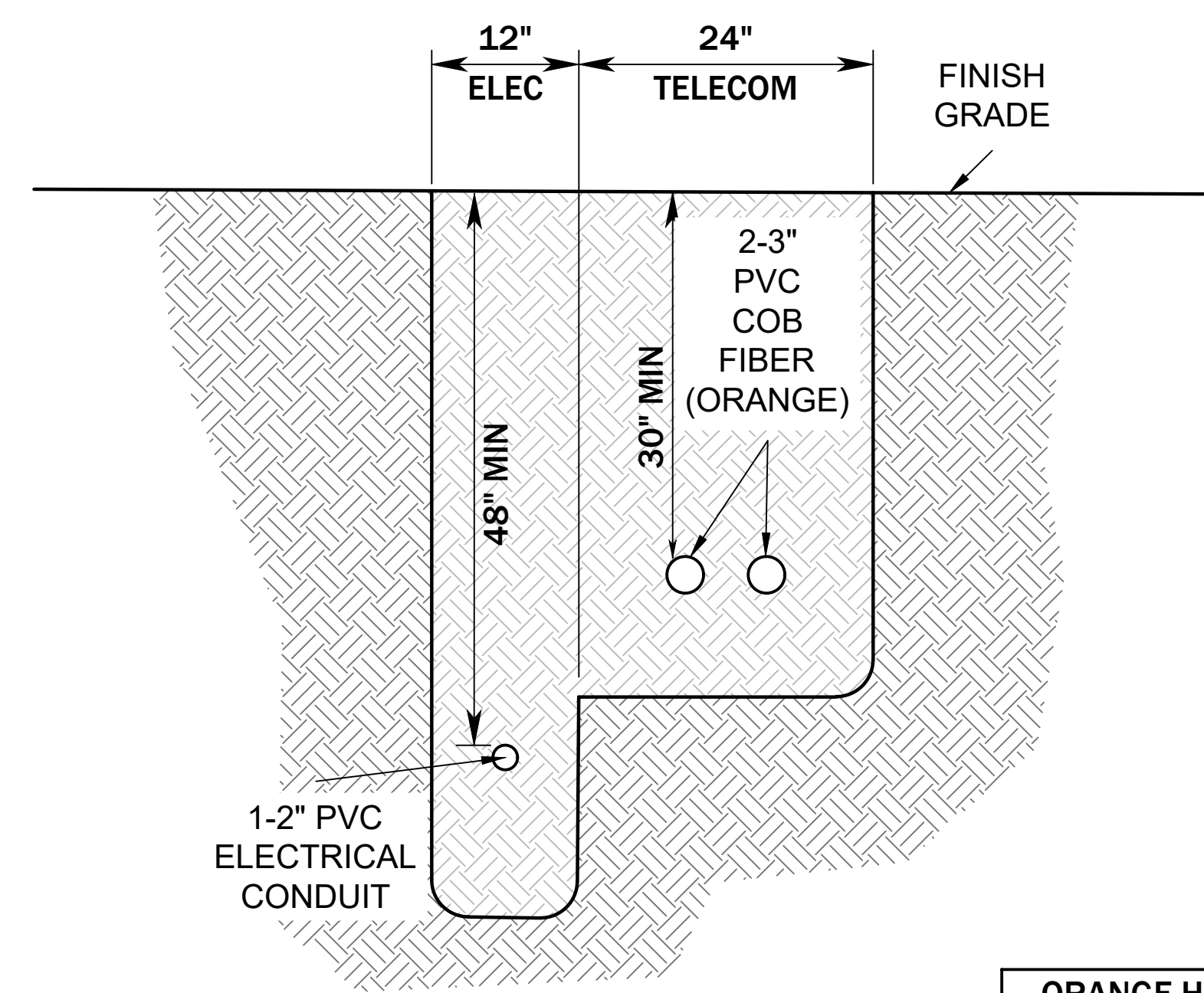
Larger enclosures should be braced from the inside by use of 2x4's.



Important issues

- NO drilling or modifications to the enclosure should be done. Do not cut the flange, as this is the support hoop. Do not use sand as backfill. Sand provides no frictional resistance to movement, and actually creates tremendous side wall pressure.
- All conduits shall enter the enclosure through the open bottom.
- ALWAYS backfill the enclosure with the cover bolted in place.
- It is recommended that a 10-12" x 12" concrete collar be poured around the enclosure in areas where it is expected that soil would wash away or otherwise be disturbed by heavy lawn mowers, etc. If enclosure is being installed in a sidewalk or area where it may be driven over it should also have a concrete collar. This protects the sidewall of the ring, which is not meant to withstand impact.

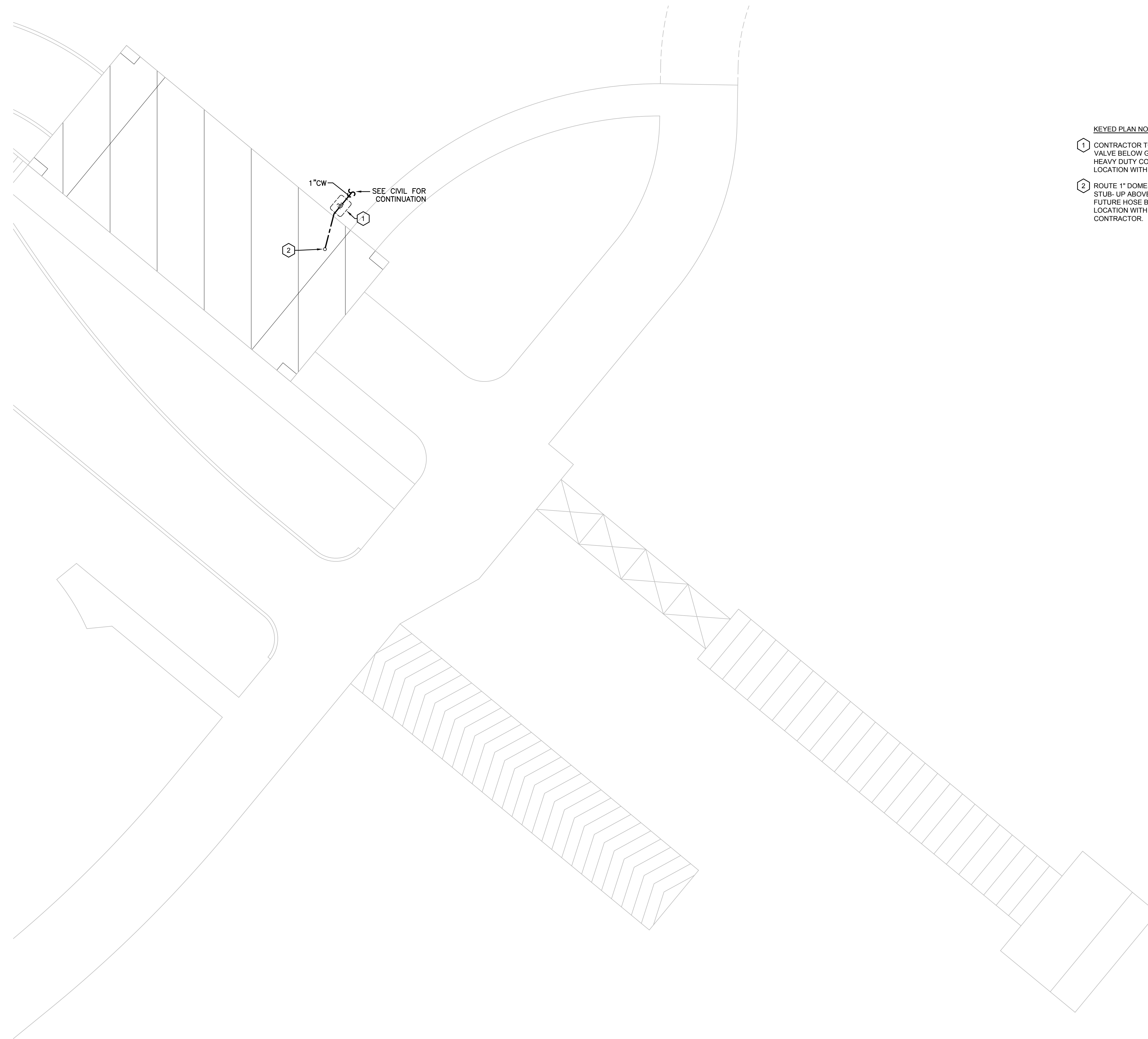
NOTE: ALL COB FIBER CONDUIT SHALL ENTER PULLBOXES/Vaults THROUGH THE BOTTOM. ANY BOX/Vault WITH CONDUIT PENETRATION THROUGH THE SIDE WILL BE REJECTED. ALL COB ELECTRICAL & FIBER CONDUIT SHALL HAVE MULE TAPE 1800 LB PULL RATING INSTALLED.



TRAIL DUCT BANK

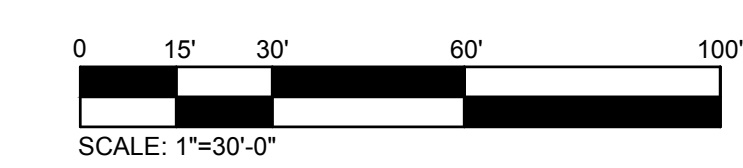
ORANGE HDPE ROLL PIPE HAS BEEN ACCEPTED AS A VALUE ENGINEERING ALTERNATIVE TO ALL ORANGE PVC PIPE SHOWN.

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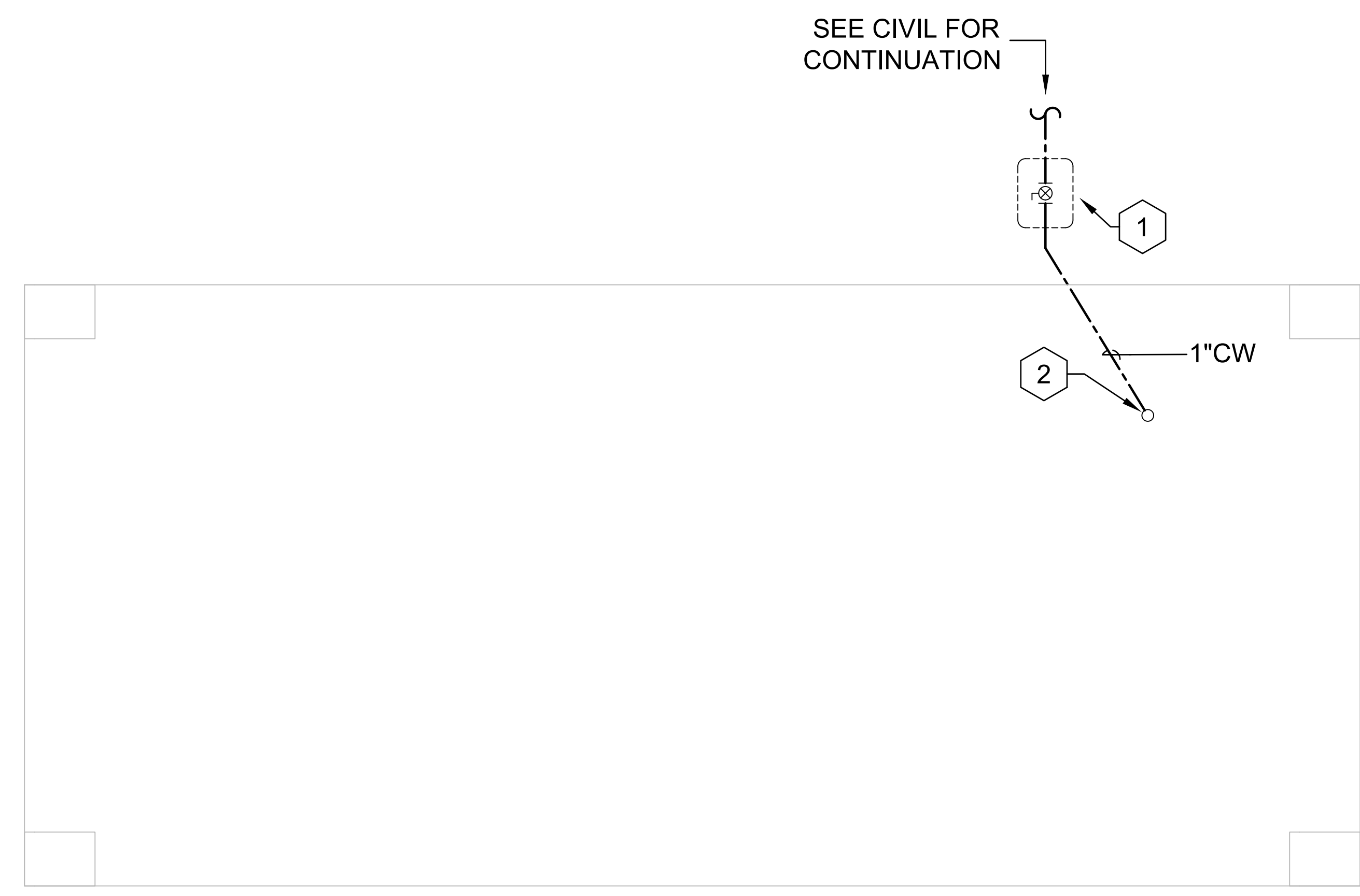


- KEYED PLAN NOTES:**
- 1 CONTRACTOR TO PROVIDE ISOLATION VALVE BELOW GRADE WITH EXTRA HEAVY DUTY COVER. COORDINATE LOCATION WITH ARCHITECT/OWNER.
 - 2 ROUTE 1" DOMESTIC COLD WATER STUB-UP ABOVE SLAB AND CAP FOR FUTURE HOSE BIBB. COORDINATE LOCATION WITH ARCHITECT/CONTRACTOR.

1 PLUMBING SITE PLAN
 P0.1 1" = 30'-0"

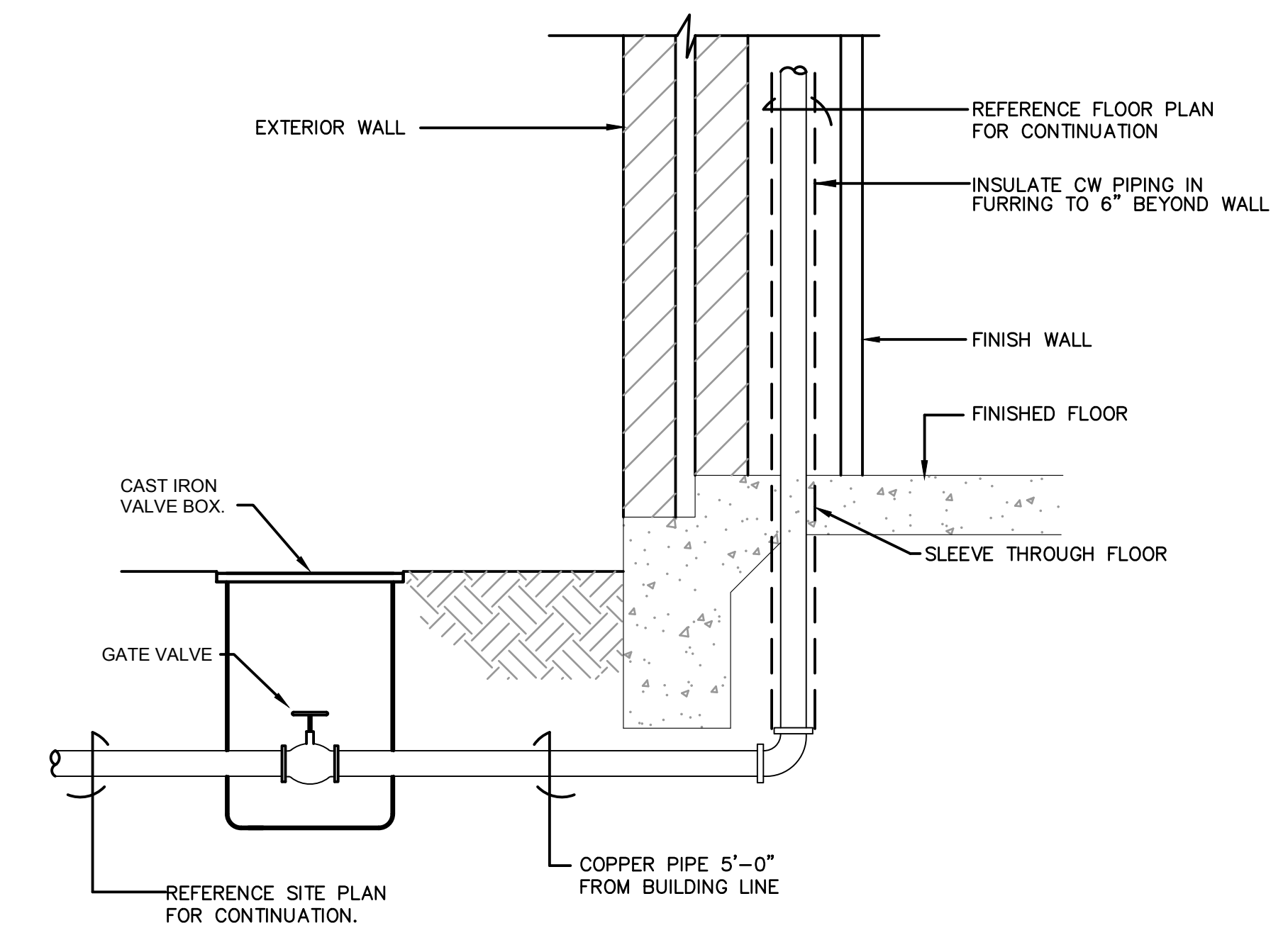


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- KEYED PLAN NOTES:**
- ① CONTRACTOR TO PROVIDE ISOLATION VALVE BELOW GRADE WITH EXTRA HEAVY DUTY COVER. COORDINATE LOCATION WITH ARCHITECT/OWNER.
 - ② ROUTE 1" DOMESTIC COLD WATER PIPING UP IN WALL TO WH-1.

1 PLUMBING FLOOR PLAN
 P1.0 1/4" = 1'-0"



4 WATER ENTRY DETAIL
 P1.0 NOT TO SCALE



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