Harrisburg Park

191 Sims Parkway

Harrisburg, North Carolina

Consultants

Landscape Architect

benesch

Alfred Benesch & Company
2359 Perimeter Pointe Parkway, Suite 350
Charlotte, NC 28208
www.benesch.com
P 704.521.9880

Corp. NC License: F-1320

Civil Engineer

benesch

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Architect

YCH ARCHITECTS

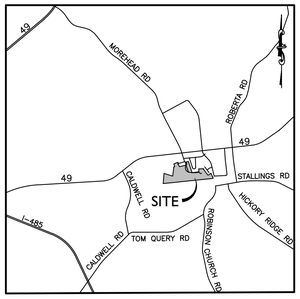
Mechanical/Electrical/Plumbing

McKnight Smith Ward Griffin Engineers, Incorporated

Irrigation

Irrigation Innovations, LLC

HarrisburgNC
The right side of opportunity



Vicinity Map

Schedule of Drawings

Civil/Landscape Architectural

Cover Sheet
Site Survey
C100 Overall Existing Conditions / Demolition Plan
C101 Existing Conditions / Demolition Plan Enlargement North
C102 Existing Conditions / Demolition Plan Enlargement South
C200 Overall Site Plan
C201 Site Plan Enlargement North
C202 Site Plan Enlargement West
C203 Site Plan Enlargement East
C300 Overall Erosion Control Plan Pre-Developed
C301 Erosion Control Plan Pre-Developed North
C302 Erosion Control Plan Pre-Developed West
C303 Erosion Control Plan Pre-Developed East
C304 Overall Erosion Control Plan Post Developed
C305 Erosion Control Plan Post Developed North
C306 Erosion Control Plan Post Developed West
C307 Erosion Control Plan Post Developed East
C308 Overall Grading and Drainage Plan
C309 Grading and Drainage Plan Enlargement North
C310 Grading and Drainage Plan Enlargement West
C311 Grading and Drainage Plan Enlargement East
C400 Overall Utility Plan
C401 Utility Plan North
C402 Utility Plan West
C403 Utility Plan East
C500 Site Construction Details
C501 Site Construction Details
C502 Site Construction Details
C503 Site Construction Details
C506 SCM Details
C600 Overall Landscape Plan

Irrigation
I-1.0 Xxxxxxxx
I-1.1 Xxxxxxxx

Architectural
A 101 Floor Plan - Toilet / Concessions Building A
A 102 Floor Plan - Toilet / & Ticket / Pump Buildings B & C
A 103 Floor Plan - Amphitheater Building D
A 104 Reflected Ceiling and Roof Plans - Building A
A 105 Reflected Ceiling Plans - Buildings B & C
A 106 Roof Plan - Toilet & Ticket / Pump Buildings B & C
A 107 Reflected Ceiling and Roof Plans - Building D
A 108 Plans and Elevations - Building E
A 300 Elevations - Building A
A 301 Elevations - Buildings B & C
A 302 Elevations - Buildings B & C
A 303 Elevations - Building D
A 304 Wall Sections
A 305 Wall Sections
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A 313 Building Sections - Buildings B & C
A 314 Building Sections - Building D
A 315 Wall Section Details
A 316 Wall Section Details
A 601 Door & Window Schedule and Details
A 602 Finish and Partition Schedule
A 900 3D Views - Building A
A 901 3D Views - Building B & C
A 902 3D Views - Amphitheater / Building D

Structural
S-1.1 Xxxxxxxx

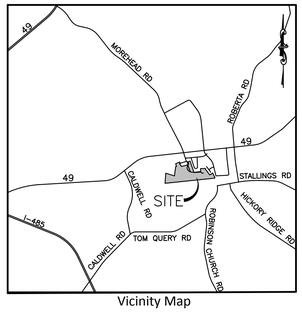
Mechanical
M 101 Mechanical Floor Plan - Toilet / Concessions Building A
M 102 Mechanical Floor Plan - Toilet & Ticket / Pump Buildings B & C
M 103 Mechanical Floor Plan - Amphitheater Building D
M 201 Mechanical Schedules
MP 104 Floor Plans - Pond Shelter Restrooms Building E - Mechanical & Plumbing

Electrical
E 100 Symbols and Schedules
E 101 Site Plan - Overall
E 102 Floor Plans - Concessions / Toilet Building A - Electrical
E 202 Floor Plan - Toilet and Ticket / Pump Buildings B and C - Lighting
E 203 Floor Plan - Toilet and Ticket / Pump Buildings B and C - Power
E 204 Floor Plan - Amphitheater Building D - Lighthing
E 205 Floor Plan - Amphitheater Building D - Power
E 206 Floor Plan - Amphitheater Building D - Electrical
E 207 Site Plan - Soccer Fields - Electrical
E 208 Site Plan - Soccer Fields - Electrical
E 209 Site Plan - Multipurpose Field - Electrical
E 210 Shelter Plans - Electrical
E 301 Power Riser Diagrams
E 302 Panel Schedules
E 303 Panel Schedules

Plumbing
P 100 Plumbing Schedules & Details
P 101 Plumbing Floor Plan - Toilet / Concessions Building A
P 102 Plumbing Floor Plan - Toilet & Ticket / Pump Buildings B & C
P 103 Plumbing Floor Plan - Amphitheater Building D

Issued For PRELIMINARY Review

Date of Issue: 06/18/19 Set No.:_____



Vicinity Map

DEMOLITION/CLEARING NOTES

1. BOUNDARY AND TOPOGRAPHIC INFORMATION TAKEN FROM A SURVEY PREPARED BY HARRISBURG SURVEYING DATED SEPTEMBER 2018.
2. CONTRACTOR SHALL REMOVE EXISTING TREES, CONCRETE, ASPHALT AND OTHER EXISTING STRUCTURES INDICATED ON PLAN. CONTRACTOR TO DISPOSE OF ALL DEBRIS TO AN APPROVED (LEGAL) OFF-SITE LOCATION.
3. PROTECT ADJACENT CURBS, TREES, BUILDINGS, UTILITIES AND OTHER ITEMS TO REMAIN FROM DAMAGE. CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR AND/OR PAYMENT OF ANY DAMAGED ITEMS TO REMAIN.
4. CONTRACTOR SHALL VERIFY LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO BEGINNING WORK, BOTH PUBLIC AND PRIVATE. CONTRACTOR IS FULLY RESPONSIBLE FOR ALL UNDERGROUND UTILITIES AND SHALL REPAIR ANY DAMAGE AS A RESULT OF THIS CONTRACT.
5. CONTRACTOR SHALL REPORT ANY ENCROACHMENTS OR DISCREPANCIES IMMEDIATELY TO ALFRED BENESCH & COMPANY FOR DECISION.
6. HATCHED AREA ON THIS PLAN INDICATES EXISTING WOODED AREA TO BE REMOVED. DUE TO A LACK OF AN INDIVIDUAL TREE SURVEY, TREE SAVE AREAS ARE SHOWN IN MASSES. CONTRACTOR SHALL MAKE EVERY EFFORT TO SAVE ANY SPECIMEN TREES NEAR CLEARING LIMITS.
7. CONTRACTOR SHALL MAKE EVERY EFFORT TO SAVE ADDITIONAL TREES WHEREVER FEASIBLE.
8. NO SOIL DISTURBANCE OR COMPACTION, CONSTRUCTION MATERIALS, TRAFFIC, BURIAL PITS, TRENCHING OR OTHER LAND DISTURBING ACTIVITY ALLOWED IN THE TREE SAVE AREA.
9. CLEARING LIMITS ON THE PLAN INDICATE THE EXTENT OF ALL MAJOR CLEARING REQUIRED. CONTRACTOR IS ALSO RESPONSIBLE FOR ANY INCIDENTAL CLEARING REQUIRED FOR MINOR DISCREPANCIES IN GRADE, UTILITY OR STORM PIPE INSTALLATIONS, EROSION CONTROL MEASURES, ETC.

LEGEND

	EXISTING SIGN	X OR \\\\\	EXISTING ITEMS TO BE REMOVED
EIP	EXISTING IRON PIN		EXISTING PAVEMENT TO BE REMOVED
	EXISTING LIGHT POLE		SAWCUT LINE
	EXISTING UTILITY POLE		EXISTING CURB AND GUTTER
R/W	RIGHT-OF-WAY		PROPERTY LINE
HC	ACCESSIBLE SPACE		EXISTING FENCE
	EXISTING TREE TO REMAIN	UGE	EXISTING UNDERGROUND ELECTRIC LINE
	EXISTING TREE TO BE REMOVED	OH/U	EXISTING OVERHEAD ELECTRIC LINE
	EXISTING FIRE HYDRANT	T	EXISTING UNDERGROUND TELEPHONE LINE
WV	EXISTING WATER VALVE	FO/C	EXISTING FIBER OPTIC LINE
WM	EXISTING WATER METER	SS	EXISTING SANITARY SEWER LINE
S	EXISTING SEWER MANHOLE	W	EXISTING WATER LINE
D	EXISTING STORM MANHOLE	G	EXISTING GAS LINE
	EXISTING DRAINAGE STRUCTURE	XXX	EXISTING CONTOUR LINE
CO	EXISTING CLEANOUT		TEMPORARY TREE PROTECTION BARRICADE
+XXX.X	EXISTING SPOT ELEVATION		EXISTING TREELINE
GV	EXISTING GAS VALVE	E	EXISTING EASEMENT
GM	EXISTING GAS METER		

811 Know what's below. Call before you dig.

NORTH

SCALE: 1"=80'

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Seals:

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Corp. NC License: F-1320

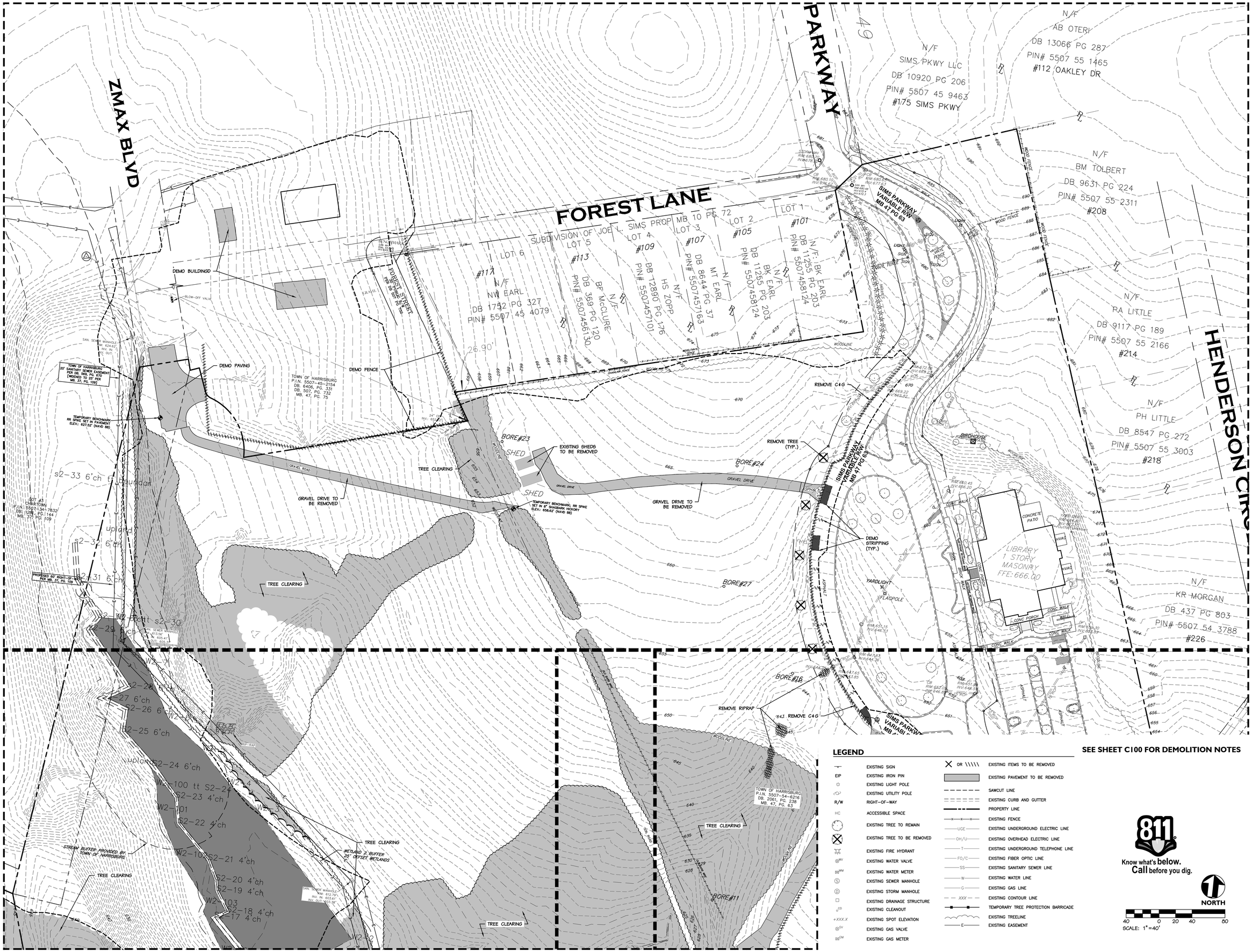
Harrisburg Park

191 Sims Parkway
Harrisburg, North Carolina

Project No: 17.000255
Date: 06.18.19
Revisions:

Sheet Title:
OVERALL DEMO PLAN

Sheet No:
C100



LEGEND

	EXISTING SIGN
EIP	EXISTING IRON PIN
	EXISTING LIGHT POLE
	EXISTING UTILITY POLE
R/W	RIGHT-OF-WAY
HC	ACCESSIBLE SPACE
	EXISTING TREE TO REMAIN
	EXISTING TREE TO BE REMOVED
	EXISTING FIRE HYDRANT
WV	EXISTING WATER VALVE
WM	EXISTING WATER METER
S	EXISTING SEWER MANHOLE
D	EXISTING STORM MANHOLE
	EXISTING DRAINAGE STRUCTURE
CO	EXISTING CLEANOUT
+XXX.X	EXISTING SPOT ELEVATION
GV	EXISTING GAS VALVE
GM	EXISTING GAS METER
X OR \\\\\	EXISTING ITEMS TO BE REMOVED
	EXISTING PAVEMENT TO BE REMOVED
	SAWCUT LINE
	EXISTING CURB AND GUTTER
	PROPERTY LINE
—X—X—	EXISTING FENCE
—UGE—	EXISTING UNDERGROUND ELECTRIC LINE
—OH/U—	EXISTING OVERHEAD ELECTRIC LINE
—T—	EXISTING UNDERGROUND TELEPHONE LINE
—FO/C—	EXISTING FIBER OPTIC LINE
—SS—	EXISTING SANITARY SEWER LINE
—W—	EXISTING WATER LINE
—G—	EXISTING GAS LINE
— XXX —	EXISTING CONTOUR LINE
	TEMPORARY TREE PROTECTION BARRICADE
	EXISTING TREELINE
—E—	EXISTING EASEMENT

SEE SHEET C100 FOR DEMOLITION NOTES

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NORTH

SCALE: 1"=40'

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Harrisburg Park

191 Sims Parkway
Harrisburg, North Carolina

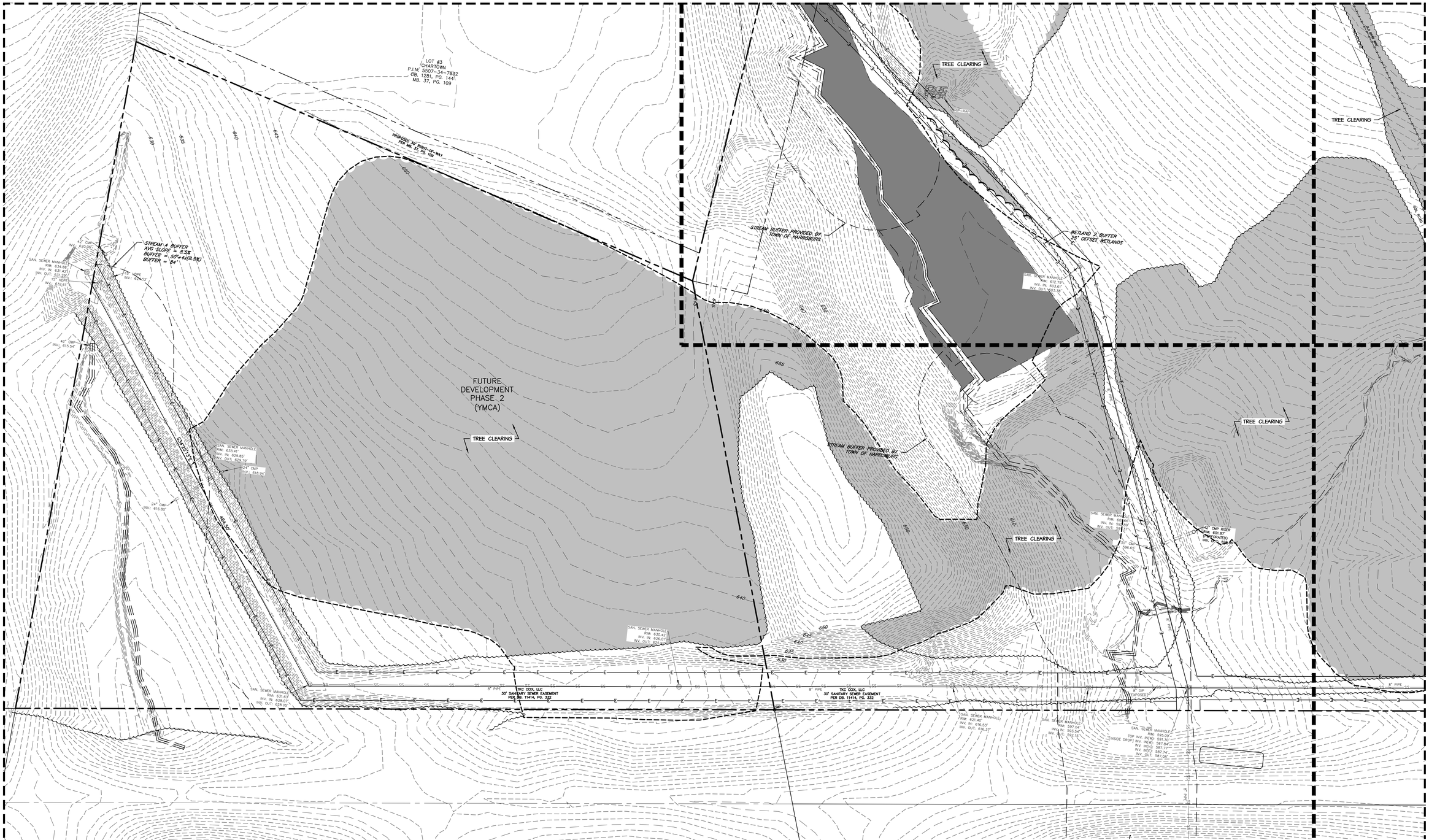
Project No:	17.000255
Date:	06.18.19
Revisions:	

Sheet Title:

DEMO PLAN ENLARGEMENT NORTH

Sheet No:

C101



LEGEND

	EXISTING SIGN	X OR \\\\\	EXISTING ITEMS TO BE REMOVED
EIP	EXISTING IRON PIN		EXISTING PAVEMENT TO BE REMOVED
	EXISTING LIGHT POLE		SAWCUT LINE
	EXISTING UTILITY POLE		EXISTING CURB AND GUTTER
R/W	RIGHT-OF-WAY		PROPERTY LINE
HC	ACCESSIBLE SPACE	—X—X—X—	EXISTING FENCE
	EXISTING TREE TO REMAIN	—UGE—	EXISTING UNDERGROUND ELECTRIC LINE
	EXISTING TREE TO BE REMOVED	—OH/U—	EXISTING OVERHEAD ELECTRIC LINE
	EXISTING FIRE HYDRANT	—T—	EXISTING UNDERGROUND TELEPHONE LINE
WV	EXISTING WATER VALVE	—FO/C—	EXISTING FIBER OPTIC LINE
WM	EXISTING WATER METER	—SS—	EXISTING SANITARY SEWER LINE
S	EXISTING SEWER MANHOLE	—W—	EXISTING WATER LINE
D	EXISTING STORM MANHOLE	—G—	EXISTING GAS LINE
	EXISTING DRAINAGE STRUCTURE	— XXX —	EXISTING CONTOUR LINE
CO	EXISTING CLEANOUT		TEMPORARY TREE PROTECTION BARRICADE
+XXX.X	EXISTING SPOT ELEVATION		EXISTING TREELINE
GV	EXISTING GAS VALVE	—E—	EXISTING EASEMENT
GM	EXISTING GAS METER		

SEE SHEET C100 FOR DEMOLITION NOTES

811
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NORTH

40 0 20 40 80
SCALE: 1"=40'

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Harrisburg Park

191 Sims Parkway
Harrisburg, North Carolina

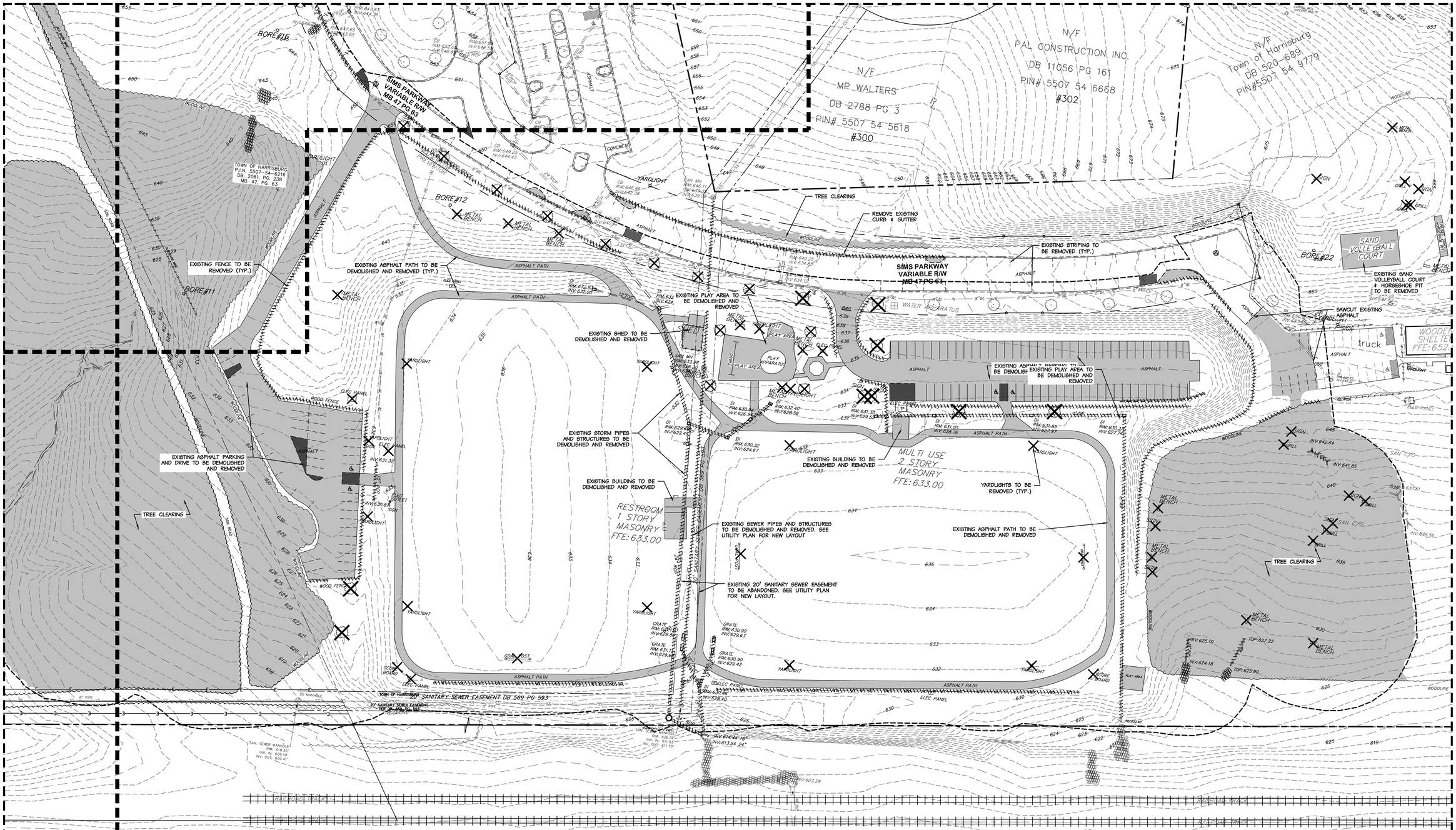
Project No:	17.000255
Date:	06.18.19
Revisions:	

Sheet Title:

DEMO PLAN ENLARGEMENT WEST

Sheet No:

C102



LEGEND

	EXISTING SIGN	X OR \\\\\	EXISTING ITEMS TO BE REMOVED
EIP	EXISTING IRON PIN		EXISTING PAVEMENT TO BE REMOVED
	EXISTING LIGHT POLE		SAWCUT LINE
	EXISTING UTILITY POLE		EXISTING CURB AND GUTTER
R/W	RIGHT-OF-WAY		PROPERTY LINE
HC	ACCESSIBLE SPACE		EXISTING FENCE
	EXISTING TREE TO REMAIN	UGE	EXISTING UNDERGROUND ELECTRIC LINE
	EXISTING TREE TO BE REMOVED	OH/U	EXISTING OVERHEAD ELECTRIC LINE
	EXISTING FIRE HYDRANT	T	EXISTING UNDERGROUND TELEPHONE LINE
WV	EXISTING WATER VALVE	FO/C	EXISTING FIBER OPTIC LINE
WM	EXISTING WATER METER	SS	EXISTING SANITARY SEWER LINE
S	EXISTING SEWER MANHOLE	W	EXISTING WATER LINE
D	EXISTING STORM MANHOLE	G	EXISTING GAS LINE
	EXISTING DRAINAGE STRUCTURE	XXX	EXISTING CONTOUR LINE
CO	EXISTING CLEANOUT		TEMPORARY TREE PROTECTION BARRICADE
+XXX.X	EXISTING SPOT ELEVATION		EXISTING TREELINE
GV	EXISTING GAS VALVE	E	EXISTING EASEMENT
GM	EXISTING GAS METER		

SEE SHEET C100 FOR DEMOLITION NOTES

811 Know what's below. Call before you dig.

NORTH

40 0 20 40 80
SCALE: 1"=40'

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www.benesch.com
P 704.521.9880

Seals:

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Corp. NC License: F-1320

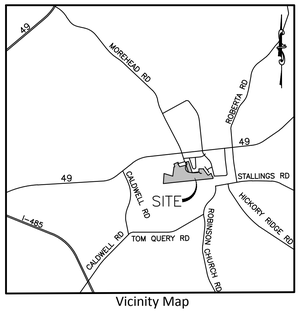
Harrisburg Park

191 Sims Parkway
Harrisburg, North Carolina

Project No: 17.000255
Date: 06.18.19
Revisions:

Sheet Title:
DEMO PLAN ENLARGEMENT EAST

Sheet No:
C103



Vicinity Map

ZONING CODE SUMMARY

PROJECT NAME: HARRISBURG PARK
OWNER: HARRISBURG PARKS AND REC
PLANS PREPARED BY: BENESCH
ZONING: OI, I-1
JURISDICTION: HARRISBURG/CABARRUS
PROPOSED USE: RECREATION / PARK
BUILDING COVERAGE: 8511 SQ.FT.
LOT SIZE: 52.8 AC.

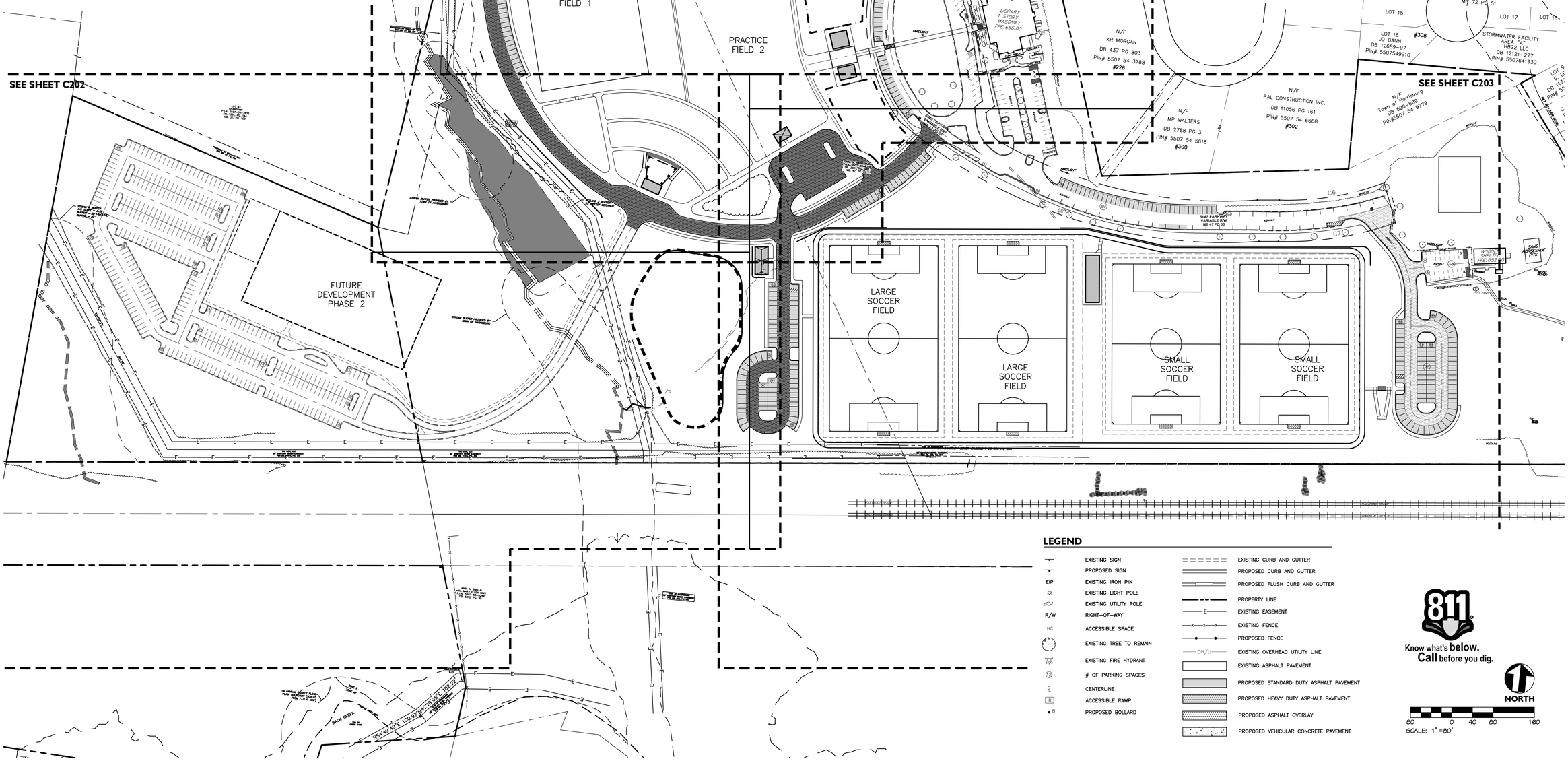
PIN: 5507-54-6216, 5507-44-3477

PHONE # 704-521-9880

IMPERVIOUS AREA: XXX SF (XX AC)

PARKING DATA:
PER ARTICLE 10 - TABLE 10.3.1:
PARKINGS PROVIDED:
PRACTICE FIELD 1 = 45 SPACES (0 ACCESSIBLE)
PRACTICE FIELD 2 = 65 SPACES (2 ACCESSIBLE)
AMPHITHEATER LOT = 27 SPACES (2 ACCESSIBLE)
WEST SOCCER LOT = 76 SPACES (2 ACCESSIBLE)
EAST SOCCER LOT = 76 SPACES (2 ACCESSIBLE)
MISC. STREET PARKING = 159 SPACES (0 ACCESSIBLE)
EX. LIBRARY LOT = 49 SPACES (5 ACCESSIBLE)
EX SHELTER LOT = 18 SPACES (2 ACCESSIBLE)
TOTAL ACCESSIBLE SPACES PROVIDED = 15 SPACES

TOTAL SPACES PROVIDED: 515 SPACES



SITE NOTES

1. DIMENSIONS AND COORDINATE POINTS ARE TO FACE OF CURB, EDGE OF PAVEMENT, OR CORNER OF BUILDING UNLESS OTHERWISE NOTED.
2. ALL IMPROVEMENTS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH STATE AND LOCAL STANDARDS.
3. ANY DISCREPANCIES FOUND IN THE FIELD SHALL BE CALLED TO THE ATTENTION OF THE OWNER OR ENGINEER PRIOR TO PROCEEDING WITH WORK.
4. PRIOR TO BEGINNING CONSTRUCTION, UNLESS OTHERWISE PROVIDED IN THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS (BOTH SITE AND BUILDING RELATED) INCLUDING BUT NOT LIMITED TO REGULATORY FEES, LICENSES, AND INSPECTIONS NECESSARY FOR PROPER EXECUTION AND COMPLETION OF THE WORK.
5. THE GENERAL CONTRACTOR SHALL CONTACT ALL OWNERS OF EASEMENTS, UTILITIES, AND RIGHT-OF-WAYS, PUBLIC AND PRIVATE, PRIOR TO WORKING IN THESE AREAS.
6. GENERAL CONTRACTOR SHALL MAINTAIN THE SITE IN A MANNER SO THAT WORKMEN AND THE PUBLIC SHALL BE PROTECTED FROM INJURY.
7. SIGHT TRIANGLES SHOWN ARE THE MINIMUM REQUIRED.
8. USE CAUTION WHEN REPRODUCING COPIES OF THE CONSTRUCTION DRAWINGS. COPIES ARE SUBJECT TO DISTORTION AND INACCURACY IN THE SCALE OF DRAWINGS. VERIFY ANY DISCREPANCIES WITH BENESCH.
9. ALL SIGNS, PAVEMENT MARKINGS, AND OTHER TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), LATEST EDITION AS AMENDED.
10. ALL PAVEMENT MARKINGS SHALL BE FOUR (4) INCHES WIDE UNLESS INDICATED OTHERWISE ON THE DRAWINGS.
11. CONTRACTOR SHALL FURNISH AND INSTALL ALL PAVEMENT MARKINGS AS SHOWN ON THE PLANS.
12. CONTRACTOR SHALL SAW-CUT EXISTING ASPHALT PAVEMENT AREAS TO TIE IN SMOOTHLY TO PROPOSED PAVEMENT AT DRIVEWAY ENTRANCES.
13. REFER TO ARCHITECTURAL PLANS FOR ACTUAL BUILDING DIMENSIONS.
14. THE ENGINEER WILL PROVIDE THE CONTRACTOR WITH AN ELECTRONIC FILE OF THESE DRAWINGS UPON REQUEST.
15. CONTACT THE UTILITY COMPANY TO RELOCATE ANY EXISTING UTILITY POLES. ALL EXISTING FACILITIES WHICH CONFLICT WITH THE IMPROVEMENTS UNDER THE SCOPE OF THIS PROJECT MUST BE RELOCATED AT THE EXPENSE OF THE OWNER.
16. STOP BEFORE YOU DIG. CALL 811. IT'S THE LAW.
17. HEAVY DUTY PAVEMENT SHOWN ON THIS PLAN IS CAPABLE OF SUPPORTING AN 80,000 LB FIRE TRUCK.
18. ALL ROAD IMPROVEMENTS AT _____ TO BE COORDINATED WITH ENGINEERING DEPARTMENT PRIOR TO CONSTRUCTION.
19. THE (CITY OF _____) ENGINEERING DEPARTMENT HAS NOT REVIEWED THE STRUCTURAL STABILITY OF ANY RETAINING WALLS ON THE SITE AND DOES NOT ASSUME RESPONSIBILITY FOR THEM.

LEGEND

	EXISTING SIGN		EXISTING CURB AND GUTTER
	PROPOSED SIGN		PROPOSED CURB AND GUTTER
EIP	EXISTING IRON PIN		PROPOSED FLUSH CURB AND GUTTER
	EXISTING LIGHT POLE		PROPERTY LINE
	EXISTING UTILITY POLE	E	EXISTING EASEMENT
R/W	RIGHT-OF-WAY	X	EXISTING FENCE
HC	ACCESSIBLE SPACE		PROPOSED FENCE
	EXISTING TREE TO REMAIN	OH/U	EXISTING OVERHEAD UTILITY LINE
	EXISTING FIRE HYDRANT		EXISTING ASPHALT PAVEMENT
12	# OF PARKING SPACES		PROPOSED STANDARD DUTY ASPHALT PAVEMENT
℄	CENTERLINE		PROPOSED HEAVY DUTY ASPHALT PAVEMENT
R	ACCESSIBLE RAMP		PROPOSED ASPHALT OVERLAY
B	PROPOSED BOLLARD		PROPOSED VEHICULAR CONCRETE PAVEMENT

811 Know what's below. Call before you dig.

NORTH

80 0 40 80 160
SCALE: 1"=80'

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Seals:

PRELIMINARY NOT FOR CONSTRUCTION

Corp. NC License: F-1320

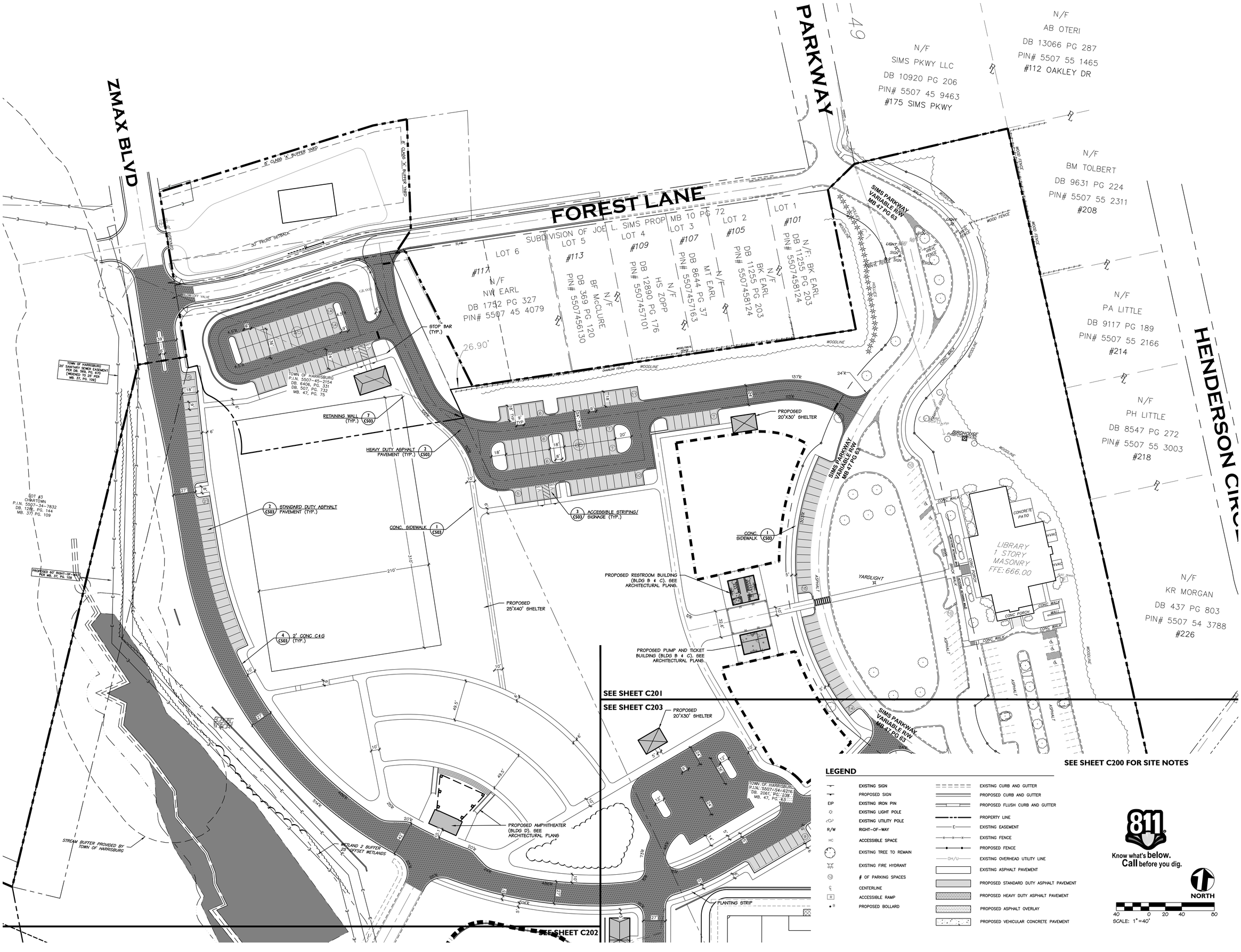
Harrisburg Park

191 Sims Parkway
Harrisburg, North Carolina

Project No: 17.000255
Date: 06.18.19
Revisions:

Sheet Title:
OVERALL SITE PLAN

Sheet No:
C200



LEGEND

EXISTING SIGN	EXISTING CURB AND GUTTER
PROPOSED SIGN	PROPOSED CURB AND GUTTER
EIP EXISTING IRON PIN	PROPOSED FLUSH CURB AND GUTTER
EXISTING LIGHT POLE	PROPERTY LINE
EXISTING UTILITY POLE	EXISTING EASEMENT
R/W RIGHT-OF-WAY	EXISTING FENCE
HC ACCESSIBLE SPACE	PROPOSED FENCE
EXISTING TREE TO REMAIN	EXISTING OVERHEAD UTILITY LINE
EXISTING FIRE HYDRANT	EXISTING ASPHALT PAVEMENT
# OF PARKING SPACES	PROPOSED STANDARD DUTY ASPHALT PAVEMENT
CENTERLINE	PROPOSED HEAVY DUTY ASPHALT PAVEMENT
ACCESSIBLE RAMP	PROPOSED ASPHALT OVERLAY
PROPOSED BOLLARD	PROPOSED VEHICULAR CONCRETE PAVEMENT

811 Know what's below. Call before you dig.

NORTH

SCALE: 1"=40'

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Seals:

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Harrisburg Park

191 Sims Parkway
Harrisburg, North Carolina

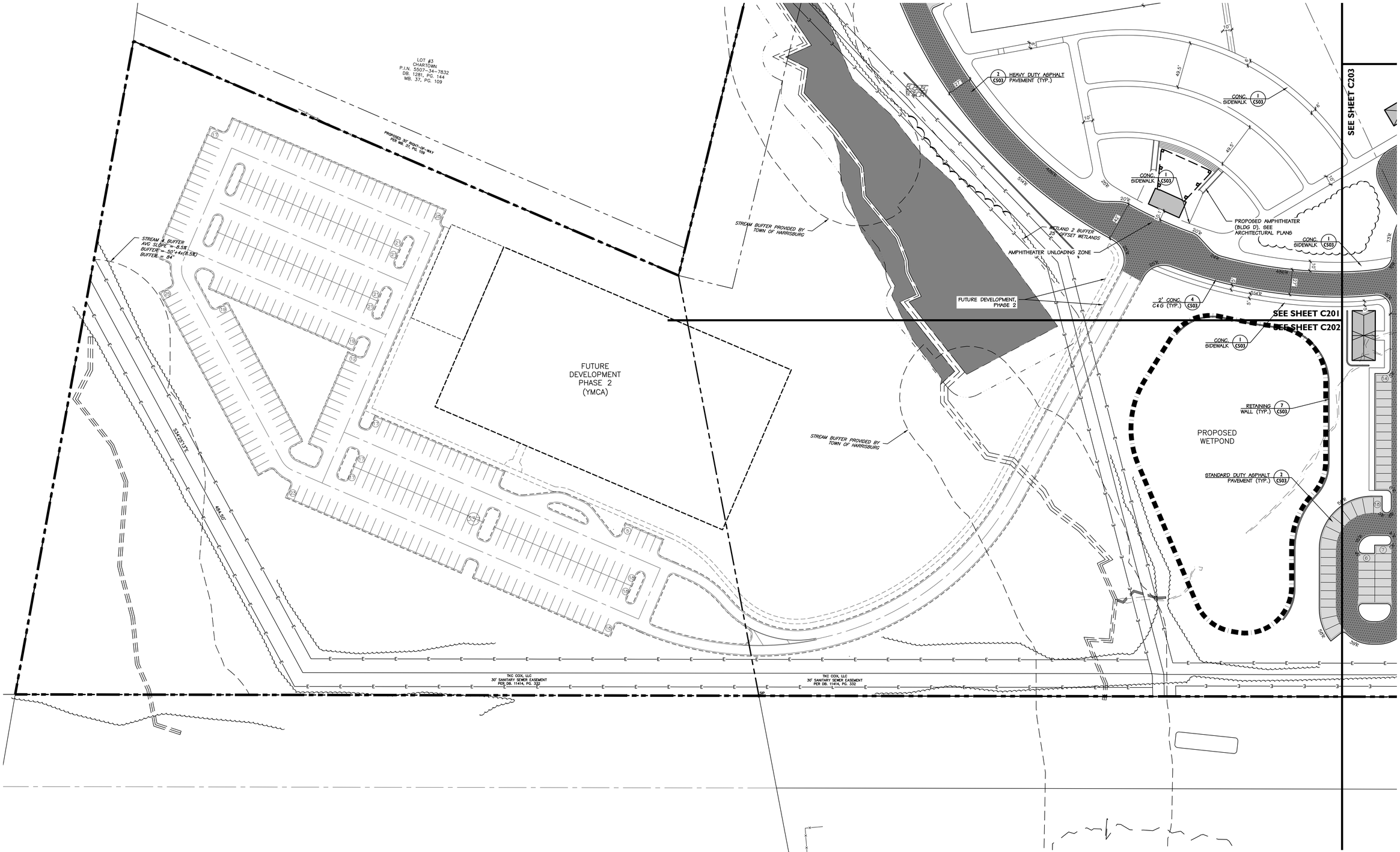
Project No:	17.000255
Date:	06.18.19
Revisions:	

Sheet Title:

SITE PLAN ENLARGEMENT NORTH

Sheet No:

C201



SEE SHEET C200 FOR SITE NOTES

LEGEND

EXISTING SIGN	EXISTING CURB AND GUTTER
PROPOSED SIGN	PROPOSED CURB AND GUTTER
EIP EXISTING IRON PIN	PROPOSED FLUSH CURB AND GUTTER
EXISTING LIGHT POLE	PROPERTY LINE
EXISTING UTILITY POLE	EXISTING EASEMENT
R/W RIGHT-OF-WAY	EXISTING FENCE
HC ACCESSIBLE SPACE	PROPOSED FENCE
EXISTING TREE TO REMAIN	EXISTING OVERHEAD UTILITY LINE
EXISTING FIRE HYDRANT	EXISTING ASPHALT PAVEMENT
# OF PARKING SPACES	PROPOSED STANDARD DUTY ASPHALT PAVEMENT
CENTERLINE	PROPOSED HEAVY DUTY ASPHALT PAVEMENT
ACCESSIBLE RAMP	PROPOSED ASPHALT OVERLAY
B PROPOSED BOLLARD	PROPOSED VEHICULAR CONCRETE PAVEMENT

811 Know what's below. Call before you dig.

NORTH

40 0 20 40 80
SCALE: 1" = 40'

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Seals:

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Corp. NC License: F-1320

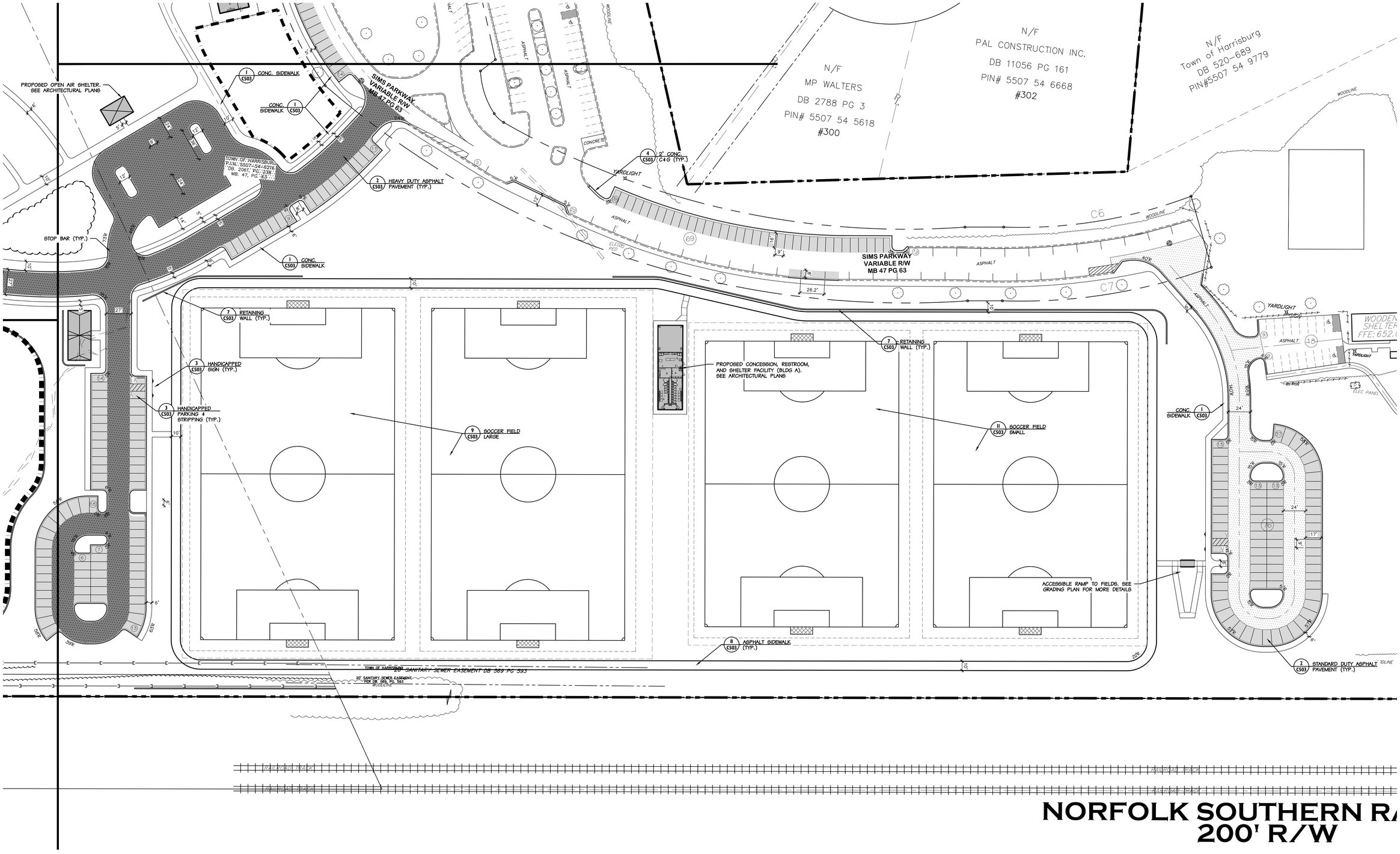
Harrisburg Park

191 Sims Parkway
Harrisburg, North Carolina

Project No: 17.000255
Date: 06.18.19
Revisions:

Sheet Title:
SITE PLAN ENLARGEMENT WEST

Sheet No:
C202



NORFOLK SOUTHERN RAILROAD TRACK 200' R/W

SEE SHEET C200 FOR SITE NOTES

LEGEND

	EXISTING SIGN
	PROPOSED SIGN
EIP	EXISTING IRON PIN
	EXISTING LIGHT POLE
	EXISTING UTILITY POLE
R/W	RIGHT-OF-WAY
HC	ACCESSIBLE SPACE
	EXISTING TREE TO REMAIN
	EXISTING FIRE HYDRANT
12	# OF PARKING SPACES
℄	CENTERLINE
R	ACCESSIBLE RAMP
B	PROPOSED BOLLARD
	EXISTING CURB AND GUTTER
	PROPOSED CURB AND GUTTER
	PROPOSED FLUSH CURB AND GUTTER
	PROPERTY LINE
E	EXISTING EASEMENT
X	EXISTING FENCE
	PROPOSED FENCE
OH/U	EXISTING OVERHEAD UTILITY LINE
	EXISTING ASPHALT PAVEMENT
	PROPOSED STANDARD DUTY ASPHALT PAVEMENT
	PROPOSED HEAVY DUTY ASPHALT PAVEMENT
	PROPOSED ASPHALT OVERLAY
	PROPOSED VEHICULAR CONCRETE PAVEMENT

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NORTH

40 0 20 40 80
SCALE: 1" = 40'

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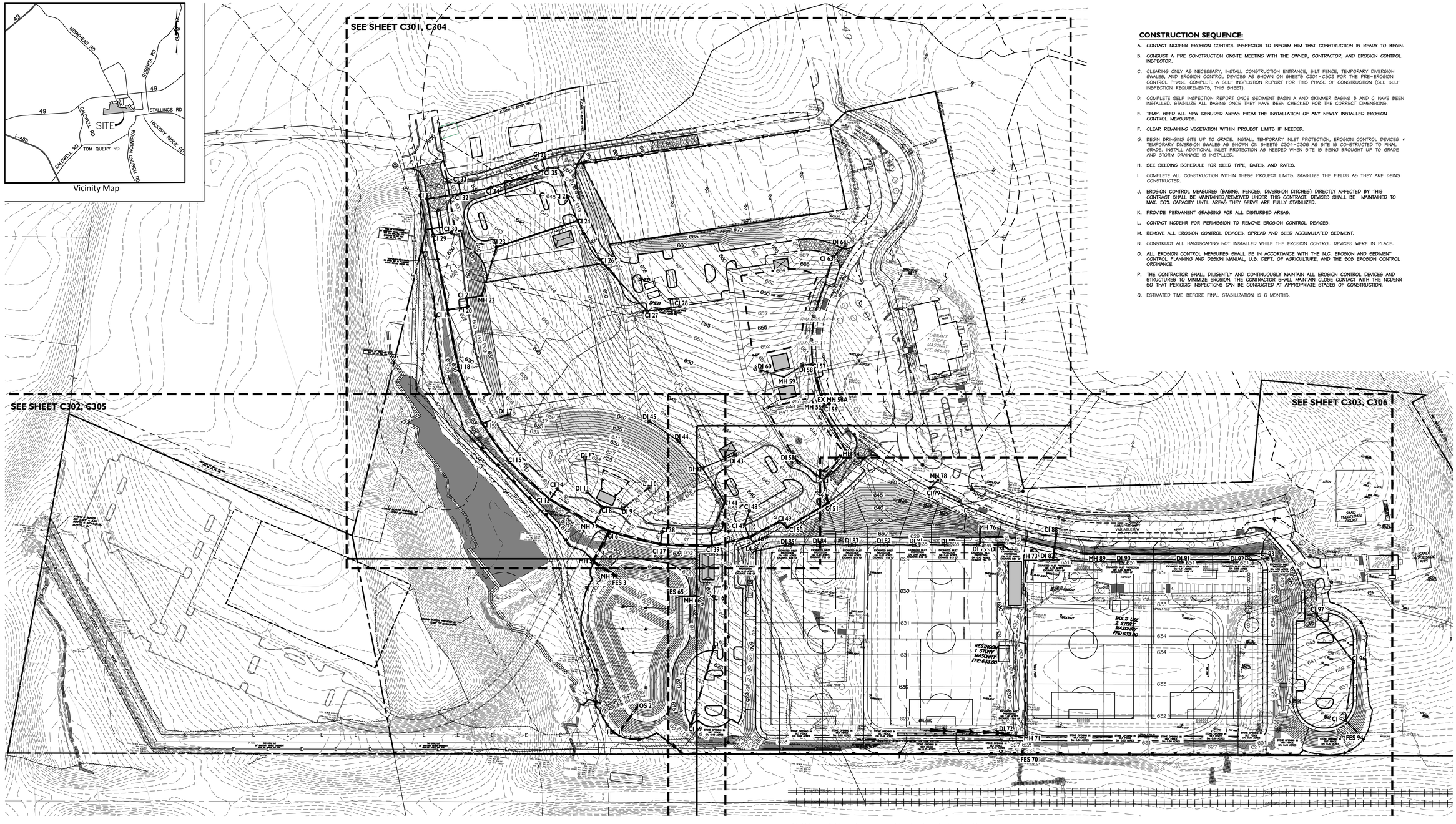
Harrisburg, North Carolina

Project No: 17.000255
Date: 06.18.19
Revisions:

Sheet Title:
SITE PLAN ENLARGEMENT EAST

Sheet No:
C203

Vicinity Map



CONSTRUCTION SEQUENCE:

A. CONTACT NCDENR EROSION CONTROL INSPECTOR TO INFORM HIM THAT CONSTRUCTION IS READY TO BEGIN.

B. CONDUCT A PRE CONSTRUCTION ONSITE MEETING WITH THE OWNER, CONTRACTOR, AND EROSION CONTROL INSPECTOR.

C. CLEARING ONLY AS NECESSARY, INSTALL CONSTRUCTION ENTRANCE, SILT FENCE, TEMPORARY DIVERSION SWALES, AND EROSION CONTROL DEVICES AS SHOWN ON SHEETS C301-C303 FOR THE PRE-EROSION CONTROL PHASE. COMPLETE A SELF INSPECTION REPORT FOR THIS PHASE OF CONSTRUCTION (SEE SELF INSPECTION REQUIREMENTS, THIS SHEET).

D. COMPLETE SELF INSPECTION REPORT ONCE SEDIMENT BASIN A AND SKIMMER BASINS B AND C HAVE BEEN INSTALLED. STABILIZE ALL BASINS ONCE THEY HAVE BEEN CHECKED FOR THE CORRECT DIMENSIONS.

E. TEMP. SEED ALL NEW DENUDED AREAS FROM THE INSTALLATION OF ANY NEWLY INSTALLED EROSION CONTROL MEASURES.

F. CLEAR REMAINING VEGETATION WITHIN PROJECT LIMITS IF NEEDED.

G. BEGIN BRINGING SITE UP TO GRADE. INSTALL TEMPORARY INLET PROTECTION, EROSION CONTROL DEVICES & TEMPORARY DIVERSION SWALES AS SHOWN ON SHEETS C304-C306 AS SITE IS CONSTRUCTED TO FINAL GRADE. INSTALL ADDITIONAL INLET PROTECTION AS NEEDED WHEN SITE IS BEING BROUGHT UP TO GRADE AND STORM DRAINAGE IS INSTALLED.

H. SEE SEEDING SCHEDULE FOR SEED TYPE, DATES, AND RATES.

I. COMPLETE ALL CONSTRUCTION WITHIN THESE PROJECT LIMITS. STABILIZE THE FIELDS AS THEY ARE BEING CONSTRUCTED.

J. EROSION CONTROL MEASURES (BASINS, FENCES, DIVERSION DITCHES) DIRECTLY AFFECTED BY THIS CONTRACT SHALL BE MAINTAINED/REMOVED UNDER THIS CONTRACT. DEVICES SHALL BE MAINTAINED TO MAX. 50% CAPACITY UNTIL AREAS THEY SERVE ARE FULLY STABILIZED.

K. PROVIDE PERMANENT GRASSING FOR ALL DISTURBED AREAS.

L. CONTACT NCDENR FOR PERMISSION TO REMOVE EROSION CONTROL DEVICES.

M. REMOVE ALL EROSION CONTROL DEVICES. SPREAD AND SEED ACCUMULATED SEDIMENT.

N. CONSTRUCT ALL HARDSCAPING NOT INSTALLED WHILE THE EROSION CONTROL DEVICES WERE IN PLACE.

O. ALL EROSION CONTROL MEASURES SHALL BE IN ACCORDANCE WITH THE N.C. EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL, U.S. DEPT. OF AGRICULTURE, AND THE SCS EROSION CONTROL ORDINANCE.

P. THE CONTRACTOR SHALL DILIGENTLY AND CONTINUOUSLY MAINTAIN ALL EROSION CONTROL DEVICES AND STRUCTURES TO MINIMIZE EROSION. THE CONTRACTOR SHALL MAINTAIN CLOSE CONTACT WITH THE NCDENR SO THAT PERIODIC INSPECTIONS CAN BE CONDUCTED AT APPROPRIATE STAGES OF CONSTRUCTION.

Q. ESTIMATED TIME BEFORE FINAL STABILIZATION IS 6 MONTHS.

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MAINTENANCE PLAN:

1. ALL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CHECKED FOR STABILITY AND OPERATION FOLLOWING EVERY RUNOFF-PRODUCING RAINFALL, BUT IN NO CASE LESS THAN ONCE EVERY WEEK. ANY NEEDED REPAIRS WILL BE MADE IMMEDIATELY TO MAINTAIN ALL PRACTICES AS DESIGN.
2. SEDIMENT WILL BE REMOVED FROM THE TEMPORARY SEDIMENT TRAPS WHEN STORAGE CAPACITY HAS BEEN APPROXIMATELY 50% FILLED. GRAVEL WILL BE CLEANED OR REPLACED WHEN THE SEDIMENT POOL NO LONGER DRAINS PROPERLY.
3. SEDIMENT WILL BE REMOVED FROM BEHIND THE SILT FENCE WHEN IT BECOMES ABOUT 0.5 FEET DEEP AT THE FENCE.
4. THE SEDIMENT FENCE WILL BE REPAIRED AS NECESSARY TO MAINTAIN A BARRIER. THE ENGINEER MAY DIRECT THAT ADDITIONAL SILT FENCING OR EROSION CONTROL MATTING BE INSTALLED AT ANY TIME PRIOR TO FINAL ACCEPTANCE.
5. ALL EROSION AND SEDIMENT CONTROL DEVICES SHALL BE INSTALLED IN ACCORDANCE WITH THE DETAILS INCLUDED IN THESE PLANS UNLESS OTHERWISE DIRECTED BY THE ENGINEER IN WRITING.
6. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED ONCE THE ENTIRE SITE IS STABILIZED.
7. CONTACT PERSON RESPONSIBLE FOR EROSION CONTROL MAINTENANCE:_____

EROSION CONTROL NOTES:

1. SOIL STABILIZATION SHALL BE ACHIEVED ON ANY AREA OF A SITE WHERE LAND-DISTURBING ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED ACCORDING TO THE FOLLOWING SCHEDULE:

1A. ALL PERIMETER DIKES, SWALES, PERIMETER SLOPES AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1) SHALL BE PROVIDED TEMPORARY OR PERMANENT STABILIZATION WITH GROUND COVER AS SOON AS PRACTICABLE BUT IN ANY EVENT WITHIN 7 CALENDAR DAYS FROM THE LAST LAND-DISTURBING ACTIVITY.

1B. ALL OTHER DISTURBED AREAS SHALL BE PROVIDED TEMPORARY OR PERMANENT STABILIZATION WITH GROUND COVER AS SOON AS PRACTICABLE BUT IN ANY EVENT WITHIN 14 CALENDAR DAYS FROM THE LAST LAND-DISTURBING ACTIVITY.

1C. CONDITIONS - IN MEETING THE STABILIZATION REQUIREMENTS ABOVE, THE FOLLOWING CONDITIONS OR EXEMPTIONS SHALL APPLY:

1D. EXTENSIONS OF TIME MAY BE APPROVED BY THE PERMITTING AUTHORITY BASED ON WEATHER OR OTHER SITE-SPECIFIC CONDITIONS THAT MAKE COMPLIANCE IMPRACTICABLE.

1E. ALL SLOPES 50' IN LENGTH OR GREATER SHALL APPLY THE GROUND COVER WITHIN 7 DAYS EXCEPT WHEN THE SLOPE IS FLATTER THAN 4:1. SLOPES LESS THAN 50' SHALL APPLY GROUND COVER WITHIN 14 DAYS EXCEPT WHEN SLOPES ARE STEEPER THAN 3:1, THE 7 DAY REQUIREMENT APPLIES.

1F. ANY SLOPED AREA FLATTER THAN 4:1 SHALL BE EXEMPT FROM THE 7 DAY GROUND COVER REQUIREMENT.

1G. SLOPES 10' OR LESS IN LENGTH SHALL BE EXEMPT FROM THE 7 DAY GROUND COVER REQUIREMENT EXCEPT WHEN THE SLOPE IS STEEPER THAN 2:1.

1H. ALTHOUGH STABILIZATION IS USUALLY SPECIFIED AS GROUND COVER, OTHER METHODS, SUCH AS CHEMICAL STABILIZATION, MAY BE ALLOWED ON A CASE-BY-CASE BASIS.

1I. FOR PORTIONS OF PROJECTS WITHIN THE SEDIMENT CONTROL COMMISSION-DEFINED HIGH QUALITY WATER ZONE (15A NCAC 04A. 0105), STABILIZATION WITH GROUND COVER SHALL BE ACHIEVED AS SOON AS PRACTICABLE BUT IN ANY EVENT ON ALL AREAS OF THE SITE WITHIN 7 CALENDAR DAYS FROM THE LAST LAND-DISTURBING ACT.

1J. ADDITIONAL MEASURES TO CONTROL EROSION AND SEDIMENT MAY BE REQUIRED BY A REPRESENTATIVE OF NCDEQ STAFF. ANY LAND-DISTURBING ACTIVITY >1 ACRE REQUIRES COMPLIANCE WITH ALL CONDITIONS OF THE GENERAL PERMIT TO DISCHARGE STORM WATER UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (PERMIT NO.NCG010000). ANY PERMIT NONCOMPLIANCE IS A VIOLATION OF THE CLEAN WATER ACT AND MAY REQUIRE ENFORCEMENT ACTION BY NCDEQ.

2. DISTURBED AREAS DRAINING GREATER THAN ONE ACRE MUST HAVE AN EROSION CONTROL MEASURE THAT DRAINS FROM THE WATER SURFACE ELEVATION.
3. REQUIRED ARMY CORPS 404 PERMIT AND WATER QUALITY 401 CERTIFICATION MUST BE OBTAINED FOR STREAM DISTURBANCES OVER 150 LINEAR FEET.
4. ANY BORROW OR WASTE MATERIAL SHALL BE TAKEN/PLACED ON A SITE THAT HAS AN ACTIVE APPROVED GRADING PERMIT. IF THIS IS NOT OBTAINABLE, THEN CONTRACTOR MAY SUBMIT PLAN FOR APPROVAL TO NCDEQ PRIOR TO ANY OFF-SITE BORROW/WASTE AREAS BEING DENUDED AND ANY GRADING OPERATIONS STARTING ON THIS SITE.
5. ANY GRADING BEYOND THE DENUDED LIMITS SHOWN ON THE PLAN IS A VIOLATION OF THE NCDEQ EROSION CONTROL ORDINANCE AND IS SUBJECT TO A FINE.
6. GRADING MORE THAN ONE ACRE WITHOUT AN APPROVED EROSION CONTROL PLAN IS A VIOLATION OF THE NCDEQ EROSION CONTROL ORDINANCE AND IS SUBJECT TO A FINE.
7. ANY AND ALL SITE FINES IMPOSED BY NCDEQ OR ANY OTHER GOVERNING AGENCY SHALL BE PAID BY THE GRADING CONTRACTOR.
8. SLOPES SHALL BE GRADED NO STEEPER THAN 2:1. FILL SLOPES GREATER THAN 10' REQUIRE ADEQUATE TERRACING.
9. TOTAL DENUDED AREA: ±31.53 ACRES
10. SOIL TYPES:
   - CHEWACLA SANDY LOAM (ChA)
   - ENON SANDY LOAM (EnB, EnD)
   - IREDELL LOAM (IdA)
   - MECKLENBURG LOAM (MeB, MeD)
   - MECKLENBURG-URBAN LAND COMPLEX (MkB)
11. NAME OF RECEIVING WATER COURSE: BACK CREEK
12. CLASSIFICATION OF RECEIVING WATER COURSE: C (AQUATIC LIFE, SECONDARY RECREATION, FRESH WATER)

SELF INSPECTION REQUIREMENTS

1. SELF-INSPECTIONS WILL BE PERFORMED IN ACCORDANCE WITH THE NPDES GENERAL PERMIT FOR CONSTRUCTION ACTIVITIES NCG010000.
2. ALL TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES, INCLUDING SEDIMENTATION CONTROL BASINS, SEDIMENTATION TRAPS, SEDIMENTATION PONDS, ROCK DAMS, TEMPORARY DIVERSIONS, TEMPORARY SLOPE DRAINS, ROCK CHECK DAMS, SEDIMENT FENCE OR BARRIERS, ALL FORMS OF INLET PROTECTION, STORM DRAINAGE FACILITIES, ENERGY DISSIPATERS, STABILIZATION METHODS OF OPEN CHANNELS, AND GROUND COVER SHALL BE INSPECTED BY THE GENERAL CONTRACTOR.
3. THE DIMENSIONS OF THE BASINS SHALL BE CHECKED AND COMPARED TO THE DIMENSIONS ON THE APPROVED SEDIMENTATION AND EROSION CONTROL PLAN. NOTIFY BENESCH IF THE DIMENSIONS OF ANY OF THE EROSION CONTROL MEASURES DEVIATE FROM THE PLANS.
4. A "SELF-INSPECTION REPORT FORM FOR LAND DISTURBING ACTIVITY" (AS REQUIRED BY NCGS 113A-54.1) IS AVAILABLE ON THE NCDEQ WEBSITE OR PROVIDED WITHIN THE PROJECT MANUAL. ALTERNATIVELY THE OWNER OR DESIGNATED REPRESENTATIVE COMPLETING THE INSPECTIONS MAY MAKE NOTATIONS ON THE COPY OF THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN THAT IS KEPT ON THE PROJECT SITE. DOCUMENTATION SHALL BE ACCOMPLISHED BY INITIALING AND DATING EACH MEASURE OR PRACTICE SHOWN ON A COPY OF THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN OR BY COMPLETING, DATING AND SIGNING AN INSPECTION REPORT THAT LISTS EACH MEASURE, PRACTICE OR DEVICE SHOWN ON THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN. ALL DOCUMENTATION AND/OR REPORTS OF INSPECTIONS MUST BE MADE AVAILABLE ON THE SITE.
5. THE SELF-INSPECTION REPORT IS TO BE COMPLETED AFTER EACH PHASE OF THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN IS COMPLETE. THESE PHASES APPLY FOR THIS PROJECT:

5.1. INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROL MEASURES;
5.2. CLEARING AND GRUBBING OF EXISTING GROUND COVER;
5.3. COMPLETION OF ANY PHASE OF GRADING OF SLOPES OR FILLS;
5.4. INSTALLATION OF STORM DRAINAGE FACILITIES;
5.5. COMPLETION OF CONSTRUCTION OR DEVELOPMENT;
5.6. ESTABLISHMENT OF PERMANENT GROUND COVER SUFFICIENT TO RESTRAIN EROSION.

GROUND STABILIZATION REQUIREMENTS

PURSUANT TO NCDWQ GENERAL STORMWATER PERMIT NCG-010000 FOR CONSTRUCTION ACTIVITIES-

A. SOIL STABILIZATION SHALL BE ACHIEVED ON ANY AREA OF A SITE WHERE LAND-DISTURBING ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED ACCORDING TO THE FOLLOWING SCHEDULE (PER THE CONSTRUCTION STORMWATER GENERAL PERMIT NCG010000:

A.A. ALL PERIMETER DIKES, SWALES, DITCHES, PERIMETER SLOPES AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1) SHALL BE PROVIDED TEMPORARY OR PERMANENT STABILIZATION WITH GROUND COVER AS SOON AS PRACTICABLE BUT IN ANY EVENT WITHIN 7 CALENDAR DAYS FROM THE LAST LAND-DISTURBING ACTIVITY.

A.B. ALL OTHER DISTURBED AREAS SHALL BE PROVIDED TEMPORARY OR PERMANENT STABILIZATION WITH GROUND COVER AS SOON AS PRACTICABLE BUT IN ANY EVENT WITHIN 14 CALENDAR DAYS FROM THE LAST LAND-DISTURBING ACTIVITY.

A.C. CONDITIONS - IN MEETING THE STABILIZATION REQUIREMENTS ABOVE, THE FOLLOWING CONDITIONS OR EXEMPTIONS SHALL APPLY:

A.D. EXTENSIONS OF TIME MAY BE APPROVED BY THE PERMITTING AUTHORITY BASED ON WEATHER OR OTHER SITE-SPECIFIC CONDITIONS THAT MAKE COMPLIANCE IMPRACTICABLE.

A.E. ALL SLOPES 50' IN LENGTH OR GREATER SHALL APPLY THE GROUND COVER WITHIN 7 DAYS EXCEPT WHEN THE SLOPE IS FLATTER THAN 4:1. SLOPES LESS THAN 50' SHALL APPLY GROUND COVER WITHIN 14 DAYS EXCEPT WHEN SLOPES ARE STEEPER THAN 3:1, THE 7 DAY REQUIREMENT APPLIES.

A.F. ANY SLOPED AREA FLATTER THAN 4:1 SHALL BE EXEMPT FROM THE 7 DAY GROUND COVER REQUIREMENT.

A.G. SLOPES 10' OR LESS IN LENGTH SHALL BE EXEMPT FROM THE 7 DAY GROUND COVER REQUIREMENT EXCEPT WHEN THE SLOPE IS STEEPER THAN 2:1.

A.H. ALTHOUGH STABILIZATION IS USUALLY SPECIFIED AS GROUND COVER, OTHER METHODS, SUCH AS CHEMICAL STABILIZATION, MAY BE ALLOWED ON A CASE-BY-CASE BASIS.

A.I. FOR PORTIONS OF PROJECTS WITHIN THE SEDIMENT CONTROL COMMISSION-DEFINED "HIGH QUALITY WATER ZONE" (15A NCAC 04A. 0105), STABILIZATION WITH GROUND COVER SHALL BE ACHIEVED AS SOON AS PRACTICABLE BUT IN ANY EVENT ON ALL AREAS OF THE SITE WITHIN 7 CALENDAR DAYS FROM THE LAST LAND-DISTURBING ACT.

A.J. PORTIONS OF A SITE THAT ARE LOWER IN ELEVATION THAN ADJACENT DISCHARGE LOCATIONS AND ARE NOT EXPECTED TO DISCHARGE DURING CONSTRUCTION MAY BE EXEMPT FROM THE TEMPORARY GROUND COVER REQUIREMENTS IF IDENTIFIED ON THE APPROVED E&SC PLAN OR ADDED BY THE PERMITTING AUTHORITY.

LEGEND

EXISTING UTILITY POLE	EXISTING CURB AND GUTTER
R/W RIGHT-OF-WAY	PROPOSED CURB AND GUTTER
EXISTING TREE TO REMAIN	PROPERTY LINE
EXISTING FIRE HYDRANT	EXISTING FENCE
S EXISTING SEWER MANHOLE	UGE EXISTING UNDERGROUND ELECTRIC LINE
D EXISTING STORM MANHOLE	OH/U EXISTING OVERHEAD UTILITY LINE
MH 1 PROPOSED STORM MANHOLE	T EXISTING UNDERGROUND TELEPHONE LINE
EXISTING DRAINAGE STRUCTURE	SS EXISTING SANITARY SEWER LINE
DI 1 PROPOSED DRAINAGE STRUCTURE	W EXISTING WATER LINE
DRAINAGE INLET PROTECTION	XXX EXISTING CONTOUR LINE
TEMPORARY ROCK DAM	XXX PROPOSED CONTOUR LINE
TEMPORARY FILTER BERM BASIN	EXISTING STORM DRAINAGE PIPE
TEMPORARY GRAVEL ENTRANCE	PROPOSED STORM DRAINAGE PIPE
OUTLET PROTECTION	STONE OPENING IN TEMPORARY SILT FENCE
EROSION CONTROL MATTING	TEMPORARY SILT FENCE
TEMPORARY SILT SACK	TEMPORARY TREE PROTECTION BARRICADE
ROCK OPENING SILT FENCE	LIMITS OF GRADING/CONSTRUCTION
EXCAVATED INLET PROTECTION	LINED GRASS SWALE
	GRASS SWALE
	TEMPORARY DIVERSION SWALE

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NORTH

80 0 40 80 160
SCALE: 1"=80'

Project No: 17.000255
Date: 06.18.19
Revisions:

Sheet Title:
OVERALL EROSION CONTROL PLAN

Sheet No:
C300

ZMAX BLVD

FOREST LANE

PARKWAY

HENDERSON CIRC

SOIL BOUNDARY (TYP.)

DRAINAGE BOUNDARY (TYP.)

LIMITS OF DISTURBANCE (TYP.)

8' CLASS "A" BUFFER YARD

30' FRONT SETBACK

TEMPORARY CONSTRUCTION ENTRANCE (2 / C500)

TEMPORARY CHECK DAM (TYP.) (6 / C500)

TEMPORARY DIVERSION DITCH (TYP.) (6 / C500)

STONE OPENING IN SILT FENCE (TYP.) (II / C500)

DOUBLE ROW SILT FENCE (TYP.) (I / C500)

SILT SACK INLET PROTECTION (TYP.) (8 / C500)

TOWN OF HARRISBURG 20' SANITARY SEWER EASEMENT PER DB. 5859, PG. 670 [WIDENED TO 25' PER MB. 37, PG. 109]

TEMPORARY BENCHMARK RR SPIKE SET IN PAVEMENT ELEV.: 627.52' (NAVD 88)

TEMPORARY BENCHMARK, RR SPIKE SET IN 8" SHAGBARK HICKORY ELEV.: 656.82' (NAVD 88)

PROPOSED 60' RIGHT-OF-WAY PER MB. 37, PG. 109

SIMS PARKWAY VARIABLE R/W MB 47 PG 63

SHED

GRAVEL ROAD

GRAVEL DRIVE

LIBRARY 1 STORY MASONRY FFE: 666.00

CONCRETE PATIO

HVAC

CONC WALK

CONC PORCH

BIRDHOUSE

YARDLIGHT

FLAGPOLE

WOODLINE

WOOD FENCE

CHAINLINK FENCE

STREAM BUFFER PROVIDED BY TOWN OF HARRISBURG

WETLAND 25' BUFFER PER USACE

SEE SHEET C300 FOR NOTES.

LEGEND

EXISTING UTILITY POLE	EXISTING CURB AND GUTTER
R/W RIGHT-OF-WAY	PROPOSED CURB AND GUTTER
EXISTING TREE TO REMAIN	PROPERTY LINE
EXISTING FIRE HYDRANT	EXISTING FENCE
S EXISTING SEWER MANHOLE	UGE EXISTING UNDERGROUND ELECTRIC LINE
D EXISTING STORM MANHOLE	OH/U EXISTING OVERHEAD UTILITY LINE
MH I PROPOSED STORM MANHOLE	T EXISTING UNDERGROUND TELEPHONE LINE
EXISTING DRAINAGE STRUCTURE	SS EXISTING SANITARY SEWER LINE
DI I PROPOSED DRAINAGE STRUCTURE	W EXISTING WATER LINE
DRAINAGE INLET PROTECTION	XXX EXISTING CONTOUR LINE
TEMPORARY ROCK DAM	XXX PROPOSED CONTOUR LINE
TEMPORARY FILTER BERM BASIN	EXISTING STORM DRAINAGE PIPE
TEMPORARY GRAVEL ENTRANCE	PROPOSED STORM DRAINAGE PIPE
OUTLET PROTECTION	STONE OPENING IN TEMPORARY SILT FENCE
EROSION CONTROL MATTING	TEMPORARY SILT FENCE
TEMPORARY SILT SACK	TEMPORARY TREE PROTECTION BARRICADE
ROCK OPENING SILT FENCE	LIMITS OF GRADING/CONSTRUCTION
	LINED GRASS SWALE
	GRASS SWALE
	TEMPORARY DIVERSION SWALE

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SCALE: 1"=40'

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Project No: 17.000255
Date: 06.18.19
Revisions:

Sheet Title:

EROSION CONTROL PLAN - PRE-DEVELOPMENT NORTH

Sheet No:

C301

LEGEND

EXISTING UTILITY POLE	EXISTING CURB AND GUTTER
R/W RIGHT-OF-WAY	PROPOSED CURB AND GUTTER
EXISTING TREE TO REMAIN	PROPERTY LINE
EXISTING FIRE HYDRANT	EXISTING FENCE
S EXISTING SEWER MANHOLE	UGE EXISTING UNDERGROUND ELECTRIC LINE
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EROSION CONTROL MATTING	TEMPORARY SILT FENCE
TEMPORARY SILT SACK	TEMPORARY TREE PROTECTION BARRICADE
ROCK OPENING SILT FENCE	LIMITS OF GRADING/CONSTRUCTION
	LINED GRASS SWALE
	GRASS SWALE
	TEMPORARY DIVERSION SWALE

SEE SHEET C300 FOR NOTES.

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SCALE: 1"=40'

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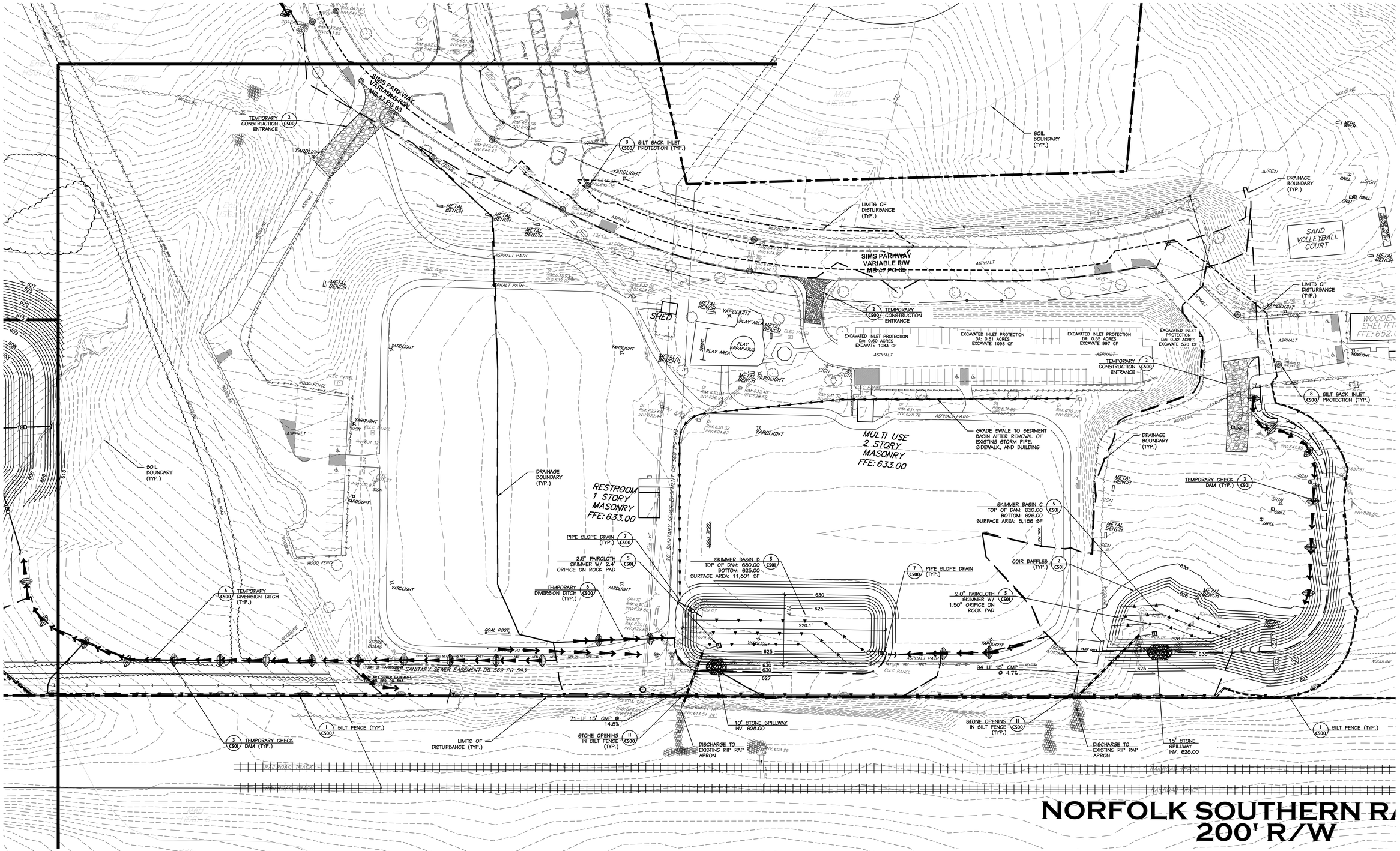
Project No: 17.000255
Date: 06.18.19
Revisions:

Sheet Title:

EROSION CONTROL PLAN - PRE-DEVELOPMENT WEST

Sheet No:

C302



LEGEND

EXISTING UTILITY POLE	EXISTING CURB AND GUTTER
R/W RIGHT-OF-WAY	PROPOSED CURB AND GUTTER
EXISTING TREE TO REMAIN	PROPERTY LINE
EXISTING FIRE HYDRANT	EXISTING FENCE
S EXISTING SEWER MANHOLE	UGE EXISTING UNDERGROUND ELECTRIC LINE
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EROSION CONTROL MATTING	TEMPORARY SILT FENCE
TEMPORARY SILT SACK	TEMPORARY TREE PROTECTION BARRICADE
ROCK OPENING SILT FENCE	LIMITS OF GRADING/CONSTRUCTION
	LINED GRASS SWALE
	GRASS SWALE
	TEMPORARY DIVERSION SWALE

SEE SHEET C300 FOR NOTES.

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Harrisburg, North Carolina

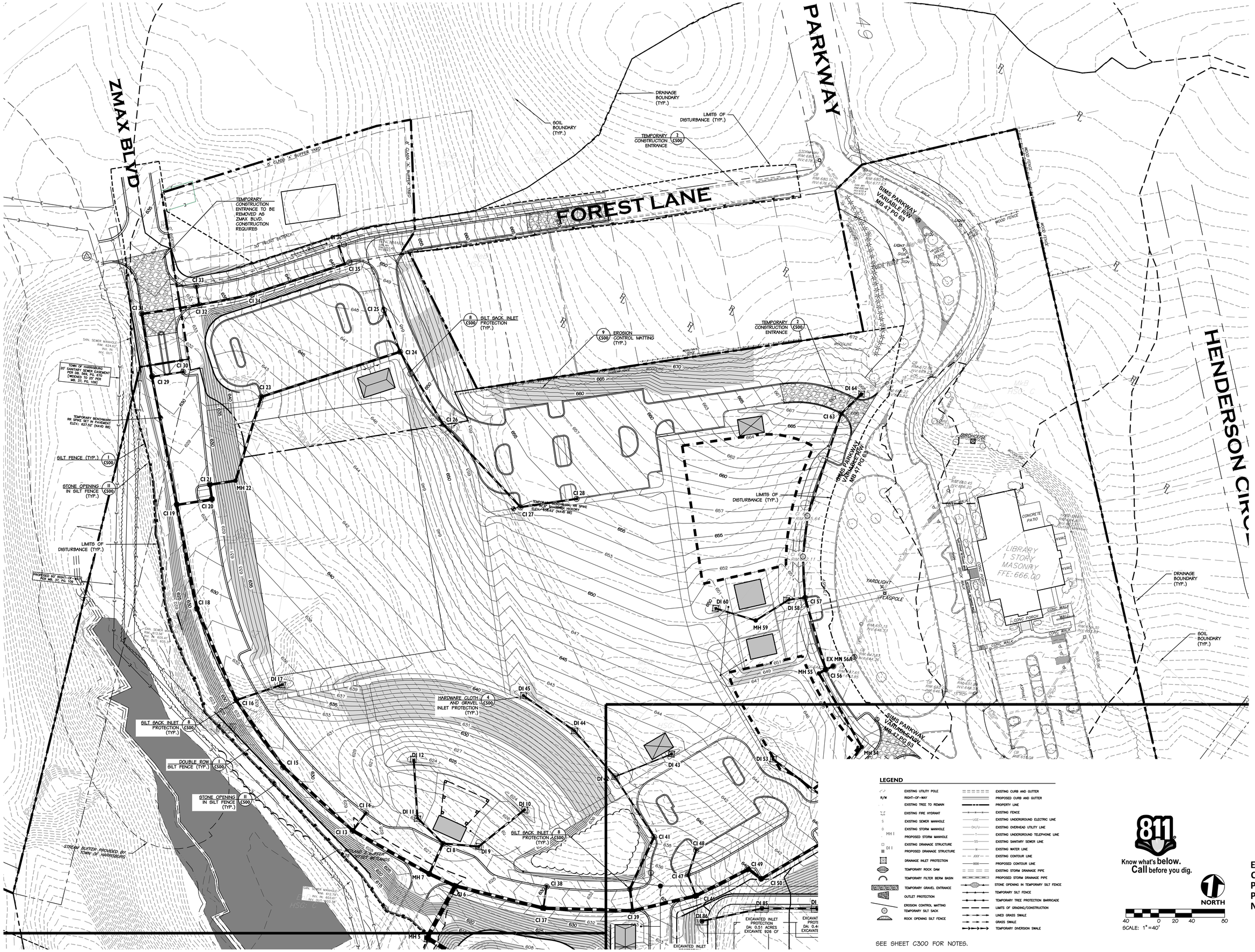
Project No: 17.000255
Date: 06.18.19
Revisions:

Sheet Title:

EROSION CONTROL PLAN - PRE-DEVELOPMENT EAST

Sheet No:

C303



LEGEND

EXISTING UTILITY POLE	EXISTING CURB AND GUTTER
R/W RIGHT-OF-WAY	PROPOSED CURB AND GUTTER
EXISTING TREE TO REMAIN	PROPERTY LINE
EXISTING FIRE HYDRANT	EXISTING FENCE
EXISTING SEWER MANHOLE	EXISTING UNDERGROUND ELECTRIC LINE
EXISTING STORM MANHOLE	EXISTING OVERHEAD UTILITY LINE
MH 1 PROPOSED STORM MANHOLE	EXISTING UNDERGROUND TELEPHONE LINE
EXISTING DRAINAGE STRUCTURE	EXISTING SANITARY SEWER LINE
DI 1 PROPOSED DRAINAGE STRUCTURE	EXISTING WATER LINE
DRAINAGE INLET PROTECTION	EXISTING CONTOUR LINE
TEMPORARY ROCK DAM	PROPOSED CONTOUR LINE
TEMPORARY FILTER BERM BASIN	EXISTING STORM DRAINAGE PIPE
TEMPORARY GRAVEL ENTRANCE	PROPOSED STORM DRAINAGE PIPE
OUTLET PROTECTION	STONE OPENING IN TEMPORARY SILT FENCE
EROSION CONTROL MATTING	TEMPORARY SILT FENCE
TEMPORARY SILT SACK	TEMPORARY TREE PROTECTION BARRICADE
ROCK OPENING SILT FENCE	LIMITS OF GRADING/CONSTRUCTION
	LINED GRASS SWALE
	GRASS SWALE
	TEMPORARY DIVERSION SWALE

SEE SHEET C300 FOR NOTES.

811 Know what's below. Call before you dig.

NORTH

SCALE: 1"=40'

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Harrisburg Park

191 Sims Parkway
Harrisburg, North Carolina

Project No:	17.000255
Date:	06.18.19
Revisions:	

Sheet Title:

EROSION CONTROL PLAN - POST-DEVELOPMENT NORTH

Sheet No:

C304

LEGEND

- EXISTING UTILITY POLE
- R/W RIGHT-OF-WAY
- EXISTING TREE TO REMAIN
- EXISTING FIRE HYDRANT
- S EXISTING SEWER MANHOLE
- D EXISTING STORM MANHOLE
- MH 1 PROPOSED STORM MANHOLE
- EXISTING DRAINAGE STRUCTURE
- DI 1 PROPOSED DRAINAGE STRUCTURE
- DRAINAGE INLET PROTECTION
- TEMPORARY ROCK DAM
- TEMPORARY FILTER BERM BASIN
- TEMPORARY GRAVEL ENTRANCE
- OUTLET PROTECTION
- EROSION CONTROL MATTING
- TEMPORARY SILT SACK
- ROCK OPENING SILT FENCE
- EXISTING CURB AND GUTTER
- PROPOSED CURB AND GUTTER
- PROPERTY LINE
- EXISTING FENCE
- UGE EXISTING UNDERGROUND ELECTRIC LINE
- OH/U EXISTING OVERHEAD UTILITY LINE
- T EXISTING UNDERGROUND TELEPHONE LINE
- SS EXISTING SANITARY SEWER LINE
- W EXISTING WATER LINE
- 100 EXISTING CONTOUR LINE
- XXX PROPOSED CONTOUR LINE
- EXISTING STORM DRAINAGE PIPE
- PROPOSED STORM DRAINAGE PIPE
- STONE OPENING IN TEMPORARY SILT FENCE
- TEMPORARY SILT FENCE
- TEMPORARY TREE PROTECTION BARRICADE
- LIMITS OF GRADING/CONSTRUCTION
- LINED GRASS SWALE
- GRASS SWALE
- TEMPORARY DIVERSION SWALE

SEE SHEET C300 FOR NOTES.

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Harrisburg Park

191 Sims Parkway
Harrisburg, North Carolina

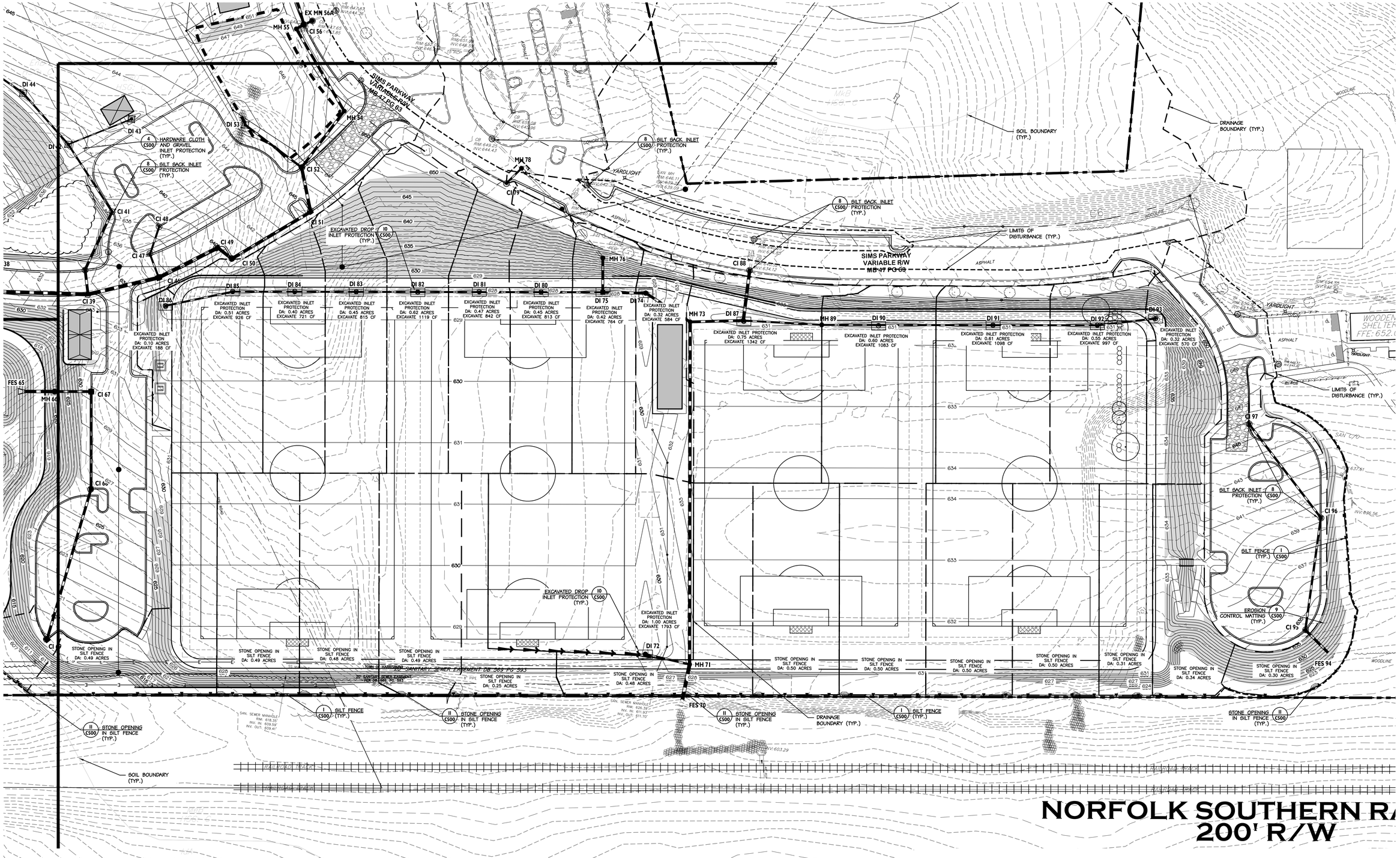
Project No: 17.000255
Date: 06.18.19
Revisions:

Sheet Title:

EROSION CONTROL PLAN - POST-DEVELOPMENT WEST

Sheet No:

C305



LEGEND

EXISTING UTILITY POLE	EXISTING CURB AND GUTTER
R/W RIGHT-OF-WAY	PROPOSED CURB AND GUTTER
EXISTING TREE TO REMAIN	PROPERTY LINE
EXISTING FIRE HYDRANT	EXISTING FENCE
S EXISTING SEWER MANHOLE	UGE EXISTING UNDERGROUND ELECTRIC LINE
D EXISTING STORM MANHOLE	OH/U EXISTING OVERHEAD UTILITY LINE
MH I PROPOSED STORM MANHOLE	T EXISTING UNDERGROUND TELEPHONE LINE
EXISTING DRAINAGE STRUCTURE	SS EXISTING SANITARY SEWER LINE
DI I PROPOSED DRAINAGE STRUCTURE	W EXISTING WATER LINE
DRAINAGE INLET PROTECTION	XXX EXISTING CONTOUR LINE
TEMPORARY ROCK DAM	XXX PROPOSED CONTOUR LINE
TEMPORARY FILTER BERM BASIN	EXISTING STORM DRAINAGE PIPE
TEMPORARY GRAVEL ENTRANCE	PROPOSED STORM DRAINAGE PIPE
OUTLET PROTECTION	STONE OPENING IN TEMPORARY SILT FENCE
EROSION CONTROL MATTING	TEMPORARY SILT FENCE
TEMPORARY SILT SACK	TEMPORARY TREE PROTECTION BARRICADE
ROCK OPENING SILT FENCE	LIMITS OF GRADING/CONSTRUCTION
	LINED GRASS SWALE
	GRASS SWALE
	TEMPORARY DIVERSION SWALE

SEE SHEET C300 FOR NOTES.

Know what's **below.** **Call** before you dig.

NORTH

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SCALE: 1"=40'

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Harrisburg Park

191 Sims Parkway
Harrisburg, North Carolina

Project No:	17.000255
Date:	06.18.19
Revisions:	

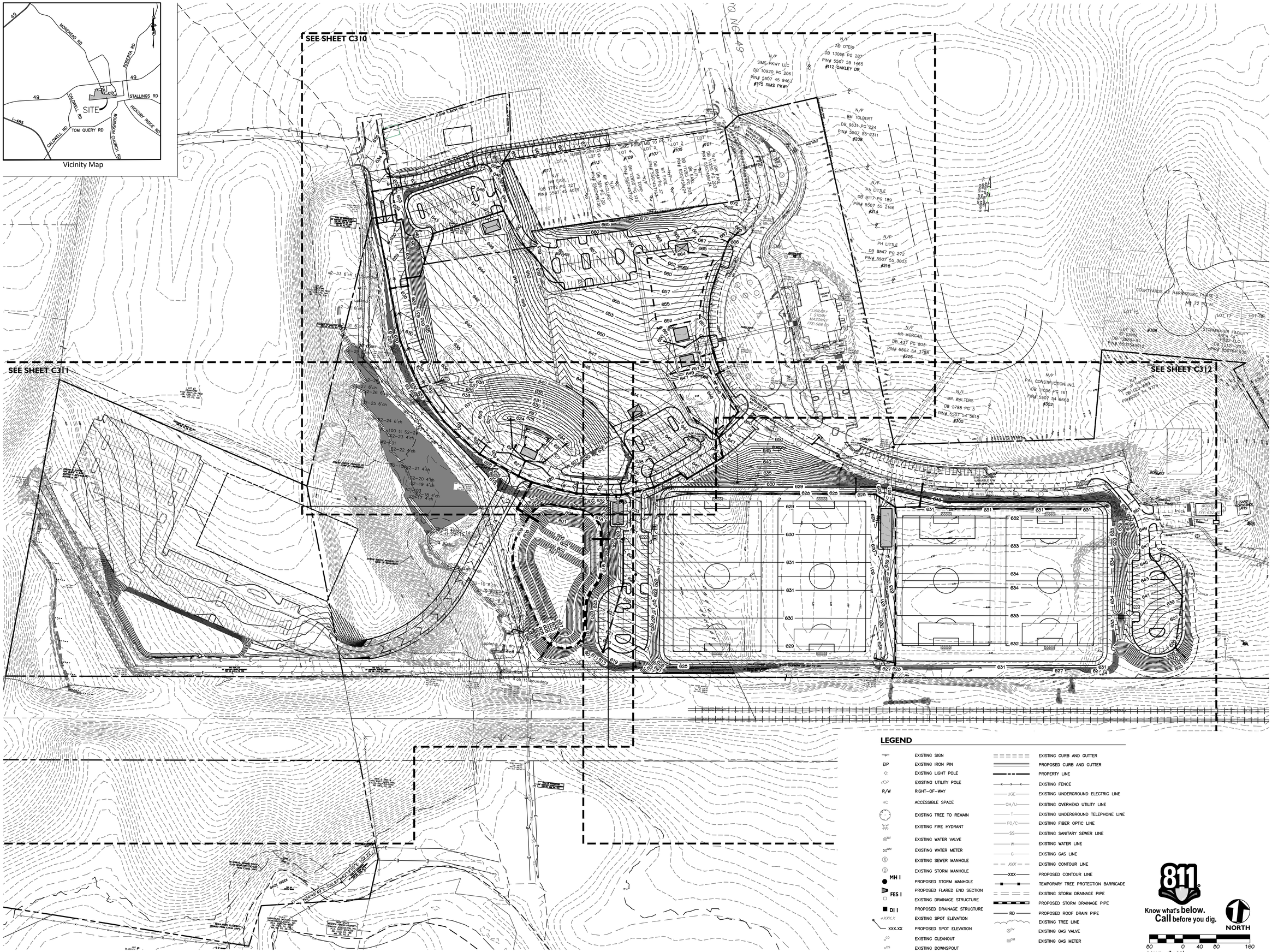
Sheet Title:

EROSION CONTROL PLAN - POST-DEVELOPMENT EAST

Sheet No:

C306

Vicinity Map



LEGEND

	EXISTING SIGN		EXISTING CURB AND GUTTER
EIP	EXISTING IRON PIN		PROPOSED CURB AND GUTTER
	EXISTING LIGHT POLE		PROPERTY LINE
	EXISTING UTILITY POLE	—x—x—x—	EXISTING FENCE
R/W	RIGHT-OF-WAY	—UGE—	EXISTING UNDERGROUND ELECTRIC LINE
HC	ACCESSIBLE SPACE	—OH/U—	EXISTING OVERHEAD UTILITY LINE
	EXISTING TREE TO REMAIN	—T—	EXISTING UNDERGROUND TELEPHONE LINE
	EXISTING FIRE HYDRANT	—FO/C—	EXISTING FIBER OPTIC LINE
WV	EXISTING WATER VALVE	—SS—	EXISTING SANITARY SEWER LINE
WM	EXISTING WATER METER	—W—	EXISTING WATER LINE
S	EXISTING SEWER MANHOLE	—G—	EXISTING GAS LINE
D	EXISTING STORM MANHOLE	—XXX—	EXISTING CONTOUR LINE
MH 1	PROPOSED STORM MANHOLE	—XXX—	PROPOSED CONTOUR LINE
FES 1	PROPOSED FLARED END SECTION		TEMPORARY TREE PROTECTION BARRICADE
	EXISTING DRAINAGE STRUCTURE		EXISTING STORM DRAINAGE PIPE
DI 1	PROPOSED DRAINAGE STRUCTURE		PROPOSED STORM DRAINAGE PIPE
+XXX.X	EXISTING SPOT ELEVATION	—RD—	PROPOSED ROOF DRAIN PIPE
XXX.XX	PROPOSED SPOT ELEVATION		EXISTING TREE LINE
CO	EXISTING CLEANOUT	GV	EXISTING GAS VALVE
DS	EXISTING DOWNSPOUT	GM	EXISTING GAS METER

SEE SHEET C313 FOR NOTES AND STORM PIPE SCHEDULE.

811 Know what's below. Call before you dig.

NORTH

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Harrisburg Park

191 Sims Parkway
Harrisburg, North Carolina

Project No:	17.000255
Date:	06.18.19
Revisions:	

Sheet Title:

OVERALL GRADING PLAN

Sheet No:

C309

NOTE: GRADING SPOTS REFER TO THE BOTTOM OF CURB ELEVATION UNLESS NOTED OTHERWISE.

SEE SHEET C313 FOR STORM PIPE SCHEDULE.

LEGEND

	EXISTING SIGN		EXISTING CURB AND GUTTER
EIP	EXISTING IRON PIN		PROPOSED CURB AND GUTTER
	EXISTING LIGHT POLE		PROPERTY LINE
	EXISTING UTILITY POLE		EXISTING FENCE
R/W	RIGHT-OF-WAY	UGE	EXISTING UNDERGROUND ELECTRIC LINE
HC	ACCESSIBLE SPACE	OH/U	EXISTING OVERHEAD UTILITY LINE
	EXISTING TREE TO REMAIN	T	EXISTING UNDERGROUND TELEPHONE LINE
	EXISTING FIRE HYDRANT	FO/C	EXISTING FIBER OPTIC LINE
WV	EXISTING WATER VALVE	SS	EXISTING SANITARY SEWER LINE
WM	EXISTING WATER METER	W	EXISTING WATER LINE
S	EXISTING SEWER MANHOLE	G	EXISTING GAS LINE
D	EXISTING STORM MANHOLE	XXX	EXISTING CONTOUR LINE
MH 1	PROPOSED STORM MANHOLE	XXX	PROPOSED CONTOUR LINE
FES 1	PROPOSED FLARED END SECTION		TEMPORARY TREE PROTECTION BARRICADE
	EXISTING DRAINAGE STRUCTURE		EXISTING STORM DRAINAGE PIPE
DI 1	PROPOSED DRAINAGE STRUCTURE		PROPOSED STORM DRAINAGE PIPE
+XXXX.X	EXISTING SPOT ELEVATION	RD	PROPOSED ROOF DRAIN PIPE
XXX.XX	PROPOSED SPOT ELEVATION		EXISTING TREE LINE
CO	EXISTING CLEANOUT	GV	EXISTING GAS VALVE
DS	EXISTING DOWNSPOUT	GM	EXISTING GAS METER

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NORTH

SCALE: 1"=40'

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Harrisburg Park

191 Sims Parkway
Harrisburg, North Carolina

Project No: 17.000255
Date: 06.18.19
Revisions:

Sheet Title:
GRADING PLAN ENLARGEMENT NORTH

Sheet No:
C310

NOTE: GRADING SPOTS REFER TO THE BOTTOM OF CURB ELEVATION UNLESS NOTED OTHERWISE.

LEGEND

	EXISTING SIGN		EXISTING CURB AND GUTTER
EIP	EXISTING IRON PIN		PROPOSED CURB AND GUTTER
	EXISTING LIGHT POLE		PROPERTY LINE
	EXISTING UTILITY POLE	—x—x—x—	EXISTING FENCE
R/W	RIGHT-OF-WAY	—UGE—	EXISTING UNDERGROUND ELECTRIC LINE
HC	ACCESSIBLE SPACE	—OH/U—	EXISTING OVERHEAD UTILITY LINE
	EXISTING TREE TO REMAIN	—T—	EXISTING UNDERGROUND TELEPHONE LINE
	EXISTING FIRE HYDRANT	—FO/C—	EXISTING FIBER OPTIC LINE
	EXISTING WATER VALVE	—SS—	EXISTING SANITARY SEWER LINE
WM	EXISTING WATER METER	—W—	EXISTING WATER LINE
S	EXISTING SEWER MANHOLE	—G—	EXISTING GAS LINE
D	EXISTING STORM MANHOLE	— XXX —	EXISTING CONTOUR LINE
MH 1	PROPOSED STORM MANHOLE	—XXX—	PROPOSED CONTOUR LINE
FES 1	PROPOSED FLARED END SECTION		TEMPORARY TREE PROTECTION BARRICADE
	EXISTING DRAINAGE STRUCTURE		EXISTING STORM DRAINAGE PIPE
DI 1	PROPOSED DRAINAGE STRUCTURE		PROPOSED STORM DRAINAGE PIPE
+XXX.X	EXISTING SPOT ELEVATION	—RD—	PROPOSED ROOF DRAIN PIPE
XXX.XX	PROPOSED SPOT ELEVATION		EXISTING TREE LINE
CO	EXISTING CLEANOUT	GV	EXISTING GAS VALVE
DS	EXISTING DOWNSPOUT	GM	EXISTING GAS METER

Know what's **below.** Call before you dig.

NORTH

40 0 20 40 80

SCALE: 1"=40'

SEE SHEET C313 FOR NOTES AND STORM PIPE SCHEDULE.

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Harrisburg Park

191 Sims Parkway
Harrisburg, North Carolina

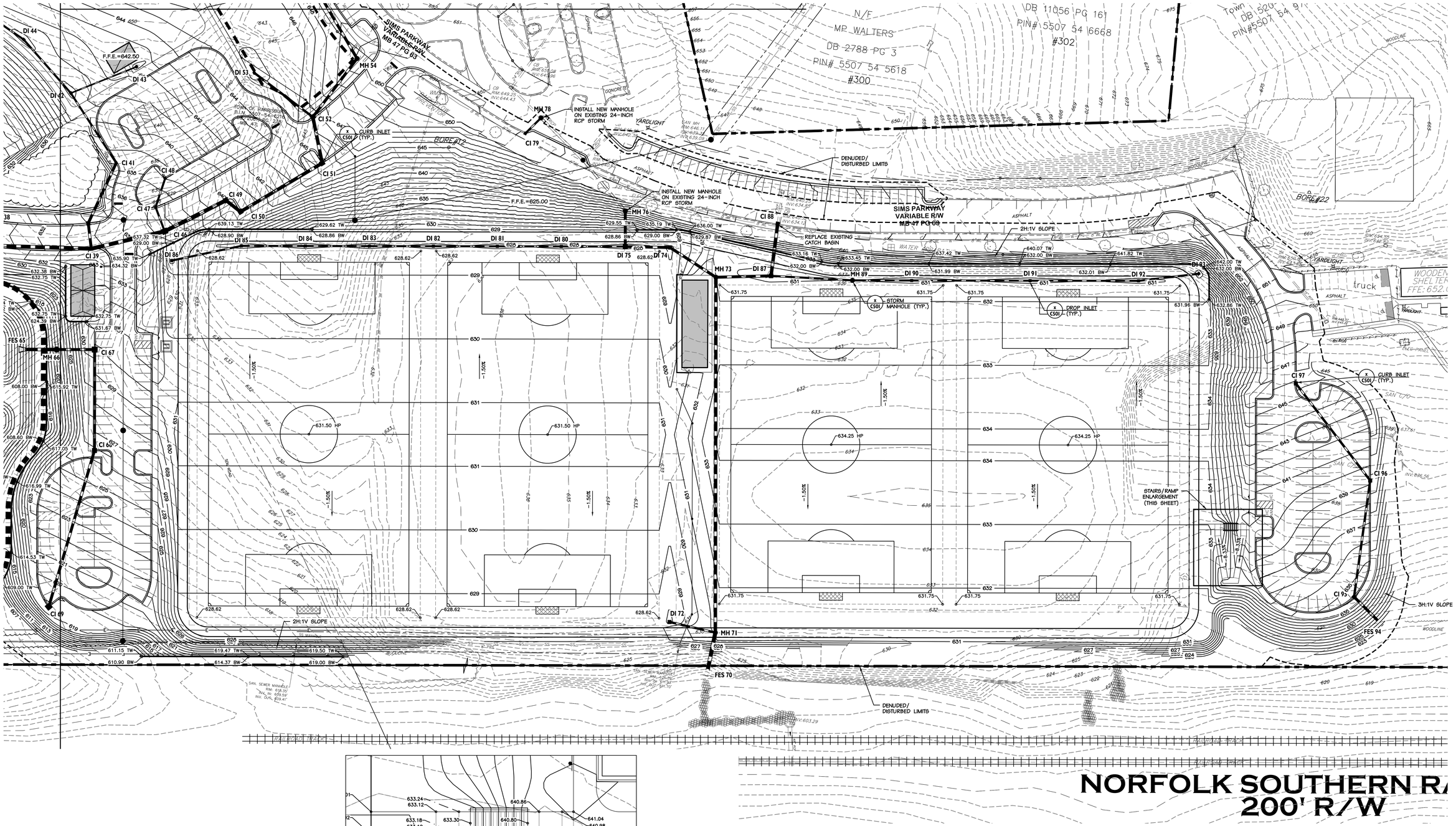
Project No: 17.000255
Date: 06.18.19
Revisions:

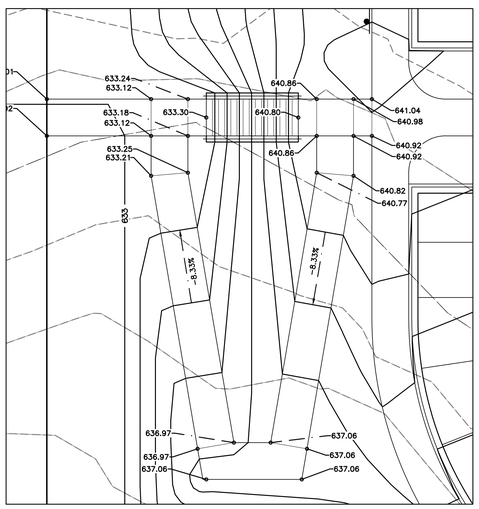
Sheet Title:

GRADING PLAN ENLARGEMENT WEST

Sheet No:

C311





STAIRS AND RAMP ENLARGEMENT - SCALE: 1"=10'

NOTE: GRADING SPOTS REFER TO THE BOTTOM OF CURB ELEVATION UNLESS NOTED OTHERWISE.

SEE SHEET C313 FOR STORM PIPE SCHEDULE.

LEGEND

	EXISTING SIGN		EXISTING CURB AND GUTTER
EIP	EXISTING IRON PIN		PROPOSED CURB AND GUTTER
	EXISTING LIGHT POLE		PROPERTY LINE
	EXISTING UTILITY POLE	x—x—x	EXISTING FENCE
R/W	RIGHT-OF-WAY	UGE	EXISTING UNDERGROUND ELECTRIC LINE
HC	ACCESSIBLE SPACE	OH/U	EXISTING OVERHEAD UTILITY LINE
	EXISTING TREE TO REMAIN	T	EXISTING UNDERGROUND TELEPHONE LINE
	EXISTING FIRE HYDRANT	FO/C	EXISTING FIBER OPTIC LINE
WV	EXISTING WATER VALVE	SS	EXISTING SANITARY SEWER LINE
WM	EXISTING WATER METER	W	EXISTING WATER LINE
S	EXISTING SEWER MANHOLE	G	EXISTING GAS LINE
D	EXISTING STORM MANHOLE	XXX	EXISTING CONTOUR LINE
MH 1	PROPOSED STORM MANHOLE	XXX	PROPOSED CONTOUR LINE
	PROPOSED FLARED END SECTION		TEMPORARY TREE PROTECTION BARRICADE
FES 1	EXISTING DRAINAGE STRUCTURE		EXISTING STORM DRAINAGE PIPE
DI 1	PROPOSED DRAINAGE STRUCTURE		PROPOSED STORM DRAINAGE PIPE
+XXX.X	EXISTING SPOT ELEVATION	RD	PROPOSED ROOF DRAIN PIPE
XXX.XX	PROPOSED SPOT ELEVATION		EXISTING TREE LINE
CO	EXISTING CLEANOUT	GV	EXISTING GAS VALVE
DS	EXISTING DOWNSPOUT	GM	EXISTING GAS METER

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SCALE: 1"=40'

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Harrisburg Park

191 Sims Parkway
Harrisburg, North Carolina

Project No: 17.000255
Date: 06.18.19
Revisions:

Sheet Title:
GRADING PLAN ENLARGEMENT EAST

Sheet No:
C312

STORM SEWER STRUCTURE & PIPE SCHEDULE

UPSTREAM STR.	UPSTREAM RIM EL.	INVERT(S) IN	INVERT OUT	DOWNSTREAM STR.	D.S. PIPE LENGTH (FT)	D.S. PIPE DIA (IN)	D.S. PIPE MATERIAL	D.S. PIPE SLOPE (FT/FT)
FES 1	593.29	589.88 (36" – OS 2)						
FES 65	606.27	602.50 (30" – MH 66)						
FES 3	607.54	602.50 (54" – MH 4)						
CI 69	618.80	614.43 (24" – CI 68)						
FES 70	619.42	616.00 (36" – MH 71)						
FES 94	629.80	627.47 (24" – CI 95)						
OS 2	602.00		590.67	FES 1	77	36	RCP	0.010
MH 4	608.25	603.25 (48" – MH 5)	602.62	FES 3	24	54	RCP	0.005
MH 5	622.41	616.99 (48" – CI 6)	604.11	MH 4	43	48	RCP	0.020
CI 6	627.13	622.00 (36" – CI 37) 618.11 (36" – MH 7)	618.01	MH 5	72	48	RCP	0.014
MH 7	626.97	618.42 (36" – CI 13) 618.42 (24" – CI 8)	618.32	CI 6	35	36	RCP	0.006
CI 8	626.94	618.13 (18" – DI 11) 613.48 (18" – DI 9)	619.71	MH 7	41	24	RCP	0.032
DI 9	626.50	613.75 (18" – DI 10)	613.75	CI 8	43	18	RCP	0.006
CI 13	628.60	619.21 (30" – CI 15) 619.26 (18" – CI 14)	619.06	MH 7	107	36	RCP	0.006
DI 10	623.57		618.87	DI 9	71	18	RCP	0.072
DI 11	626.50	618.34 (18" – DI 12)	618.34	CI 8	44	18	RCP	0.005
CI 15	630.92	620.00 (30" – CI 16)	619.90	CI 13	115	30	RCP	0.006
DI 12	623.50		618.79	DI 11	70	18	RCP	0.006
CI 14	628.37		619.42	CI 13	27	18	RCP	0.006
CI 16	632.00	620.70 (30" – CI 18) 628.00 (18" – DI 17)	620.60	CI 15	99	30	RCP	0.006
DI 17	634.50		628.54	CI 16	59	18	RCP	0.009
CI 18	630.29	621.53 (30" – CI 19)	621.43	CI 16	121	30	RCP	0.006
CI 19	627.98	622.40 (24" – CI 20) 622.40 (24" – CI 29)	622.30	CI 18	128	30	RCP	0.006
CI 20	627.65	622.76 (24" – CI 21)	622.66	CI 19	43	24	RCP	0.006
CI 21	627.72	622.20 (24" – MH 22)	622.87	CI 20	18	24	RCP	0.006
MH 22	636.71	631.00 (24" – CI 23)	625.00	CI 21	32	24	RCP	0.088
CI 23	641.59	636.70 (24" – CI 24)	634.94	MH 22	107	24	RCP	0.037
CI 24	647.99	643.44 (18" – CI 25) 643.44 (18" – CI 26)	646.99	CI 23	177	24	RCP	0.058
CI 25	647.95		643.79	CI 24	57	18	RCP	0.006
CI 26	651.57	647.16 (18" – CI 27)	645.56	CI 24	103	18	RCP	0.021
CI 28	655.12		651.12	CI 27	69	18	RCP	0.014
CI 27	654.03	650.13 (18" – CI 28)	650.03	CI 26	138	18	RCP	0.021
CI 29	630.64	626.40 (24" – CI 31) 626.40 (15" – CI 30)	626.30	CI 19	159	24	RCP	0.025
CI 30	630.63		626.63	CI 29	39	15	RCP	0.006
CI 31	632.23	627.23 (24" – CI 32)	627.13	CI 29	77	24	RCP	0.009
CI 32	633.31	629.17 (18" – CI 34) 629.17 (15" – CI 33)	629.07	CI 31	71	24	RCP	0.026
CI 33	633.31		629.31	CI 32	23	15	RCP	0.006
CI 34	636.55	632.55 (18" – CI 35)	632.45	CI 32	65	18	RCP	0.050
CI 35	646.14	642.53 (15" – CI 36)	642.43	CI 34	119	18	RCP	0.083

STORM SEWER STRUCTURE & PIPE SCHEDULE

UPSTREAM STR.	UPSTREAM RIM EL.	INVERT(S) IN	INVERT OUT	DOWNSTREAM STR.	D.S. PIPE LENGTH (FT)	D.S. PIPE DIA (IN)	D.S. PIPE MATERIAL	D.S. PIPE SLOPE (FT/
CI 36	646.14		642.67	CI 35	23	15	RCP	0.006
CI 37	630.11	625.11 (36" – CI 39) 625.11 (15" – CI 38)	625.41	CI 6	110	36	RCP	0.031
CI 38	630.03		625.38	CI 37	27	15	RCP	0.010
CI 39	633.56	628.56 (24" – CI 40) 628.56 (36" – CI 46)	628.46	CI 37	108	36	RCP	0.031
CI 40	633.55	628.82 (24" – CI 41)	628.72	CI 39	27	24	RCP	0.006
CI 41	638.52	634.02 (15" – DI 42)	637.52	CI 40	69	24	RCP	0.125
DI 42	639.80	635.90 (15" – DI 44) 635.90 (12" – DI 43)	635.80	CI 41	87	15	RCP	0.020
DI 43	641.50		638.50	DI 42	74	12		0.035
DI 44	639.79	636.45 (15" – DI 45)	636.35	DI 42	75	15	RCP	0.006
DI 45	639.79		636.90	DI 44	75	15	RCP	0.006
CI 46	636.96	631.96 (36" – CI 49) 631.96 (15" – CI 47)	631.86	CI 39	79	36	RCP	0.042
CI 47	636.46	635.83 (15" – CI 48)	632.12	CI 46	27	15	RCP	0.006
CI 48	639.30		637.86	CI 47	32	15	RCP	0.064
CI 49	639.93	634.69 (30" – CI 50)	634.59	CI 46	72	36	RCP	0.037
CI 50	639.91	634.91 (30" – CI 51)	634.81	CI 49	19	30	RCP	0.006
CI 51	644.79	638.79 (30" – CI 52)	638.69	CI 50	100	30	RCP	0.038
CI 52	646.60	640.94 (24" – MH 54) 640.94 (18" – DI 53)	640.84	CI 51	49	30	RCP	0.042
DI 53	644.50		641.50	CI 52	77	18	RCP	0.007
MH 54	650.27	641.50 (24" – MH 55)	641.40	CI 52	77	24	RCP	0.006
MH 55	648.49	642.22 (24" – CI 56)	642.12	MH 54	103	24	RCP	0.006
CI 56	647.49	642.38 (24" – CI 57) 643.67 (18" – EX MH 56A)	642.28	MH 55	10	24	RCP	0.006
EX MH 56A	647.66		643.85	CI 56	10	18	RCP	0.018
CI 57	649.68	644.62 (15" – DI 58) 645.18 (18" – CI 61)	643.62	CI 56	91	24	RCP	0.014
DI 58	649.90	644.92 (15" – MH 59)	644.82	CI 57	20	15	RCP	0.010
MH 59	651.63	645.49 (15" – DI 60)	645.39	DI 58	47	15	RCP	0.010
DI 60	649.50		646.00	MH 59	51	15	RCP	0.010
CI 61	652.11	648.11 (18" – CI 62)	648.01	CI 57	50	18	RCP	0.057
CI 62	655.64	652.60 (18" – CI 63)	652.50	CI 61	50	18	RCP	0.088
CI 63	666.17	662.16 (18" – DI 64)	662.06	CI 62	131	18	RCP	0.072
DI 64	667.50		662.36	CI 63	34	18	RCP	0.006
MH 66	620.33	612.52 (24" – CI 67)	602.70	FES 65	40	30	RCP	0.005
CI 67	629.81	612.86 (24" – CI 68)	612.76	MH 66	40	24	RCP	0.006
DI 75	627.62	622.31 (15" – DI 80) 623.62 (24" – MH 76)	622.21	DI 74	47	24	RCP	0.006
MH 76	638.03	631.39 (24" – EX DI 77)	625.48	DI 75	37	24	RCP	0.050
EX DI 77	647.51	640.62 (24" – MH 78)	640.62	MH 76	69	24	RCP	0.133
MH 78	650.00	643.84 (15" – CI 79)	642.84	EX DI 77	62	24	RCP	0.036
CI 79	648.37		644.00	MH 78	23	15	RCP	0.007
DI 80	627.62	622.81 (15" – DI 81)	622.71	DI 75	67	15	RCP	0.006
DI 74	627.83	621.93 (24" – DI 75)	621.73	MH 73	57	24	RCP	0.006

STORM SEWER STRUCTURE & PIPE SCHEDULE

UPSTREAM STR.	UPSTREAM RIM EL.	INVERT(S) IN	INVERT OUT	DOWNSTREAM STR.	D.S. PIPE LENGTH (FT)	D.S. PIPE DIA (IN)	D.S. PIPE MATERIAL	D.S. PIPE SLOPE (FT/FT)
DI 81	627.62	623.31 (15" – DI 82)	623.21	DI 80	67	15	RCP	0.006
DI 82	627.62	623.81 (15" – DI 83)	623.71	DI 81	67	15	RCP	0.006
DI 83	627.62	624.31 (15" – DI 84)	624.21	DI 82	67	15	RCP	0.006
DI 84	627.62	624.81 (15" – DI 85)	624.71	DI 83	67	15	RCP	0.006
DI 90	630.33	625.75 (15" – DI 91)	625.65	MH 89	62	15	RCP	0.006
DI 85	627.62	625.31 (15" – DI 86)	625.21	DI 84	67	15	RCP	0.006
DI 86	627.80		625.76	DI 85	75	15	RCP	0.006
DI 87	630.00	624.67 (15" – MH 89) 626.00 (30" – CI 88)	625.90	MH 73	58	24	RCP	0.006
CI 68	626.37		613.49 625.62	CI 67 CI 69	106 170	24 24	RCP RCP	0.006 0.066
CI 88	642.25		629.30	DI 87	55	30	RCP	0.060
MH 89	631.25	625.28 (15" – DI 90)	625.18	DI 87	85	15	RCP	0.006
DI 91	630.33	626.59 (15" – DI 92)	626.49	DI 90	124	15	RCP	0.006
DI 92	630.49	627.37 (15" – DI 93)	627.27	DI 91	114	15	RCP	0.006
DI 93	630.75		627.75	DI 92	63	15	RCP	0.006
CI 95	634.40	630.00 (18" – CI 96)	629.90	FES 94	42	24	RCP	0.058
CI 96	639.21	635.31 (18" – CI 97)	635.21	CI 95	123	18	RCP	0.042
CI 97	645.85		641.85	CI 96	128	18	RCP	0.051
DI 72	627.82		623.82	MH 71	49	18	RCP	0.005
MH 71	631.09	619.06 (30" – MH 73) 623.57 (18" – DI 72)	616.23	FES 70	46	36	RCP	0.005
MH 73	632.01	625.55 (24" – DI 87) 621.39 (24" – DI 74)	621.29	MH 71	372	30	RCP	0.006

NOTE: GRADING SPOTS REFER TO THE BOTTOM OF CURB ELEVATION UNLESS NOTED OTHERWISE.

GRADING AND DRAINAGE NOTES

1. EARTHWORK QUANTITIES HAVE NOT BEEN ESTIMATED AND SITE AS SHOWN IS NOT ASSUMED TO REPRESENT A BALANCED CUT/FILL CONDITION. CONTRACTOR SHALL PERFORM HIS OWN ESTIMATES AND SHALL PROVIDE ALL EARTHWORK NECESSARY TO ACHIEVE THE DESIGN GRADE.
2. ROOF LEADERS SHALL BE SDR 35 PVC MINIMUM COVER SHALL BE 18", MINIMUM SLOPE SHALL BE 1%. PROVIDE CLEANOUTS AT ALL CONNECTIONS WITH BUILDING DRAIN AND WHERE INDICATED. REFER TO PLUMBING PLANS & ARCH. PLANS FOR THE EXACT LOCATION OF ROOF DRAINS AT THE BUILDING.
3. CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE IN ALL GRADED AREAS, INCLUDING PAVING, LAWN AND LANDSCAPE AREAS.
4. THE CONTRACTOR SHALL IMMEDIATELY REPORT TO OWNER ANY DISCREPANCIES FOUND BETWEEN ACTUAL FIELD CONDITIONS AND CONSTRUCTION DOCUMENTS AND SHALL WAIT FOR INSTRUCTION PRIOR TO PROCEEDING.
5. CONTRACTOR SHALL VERIFY LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO BEGINNING WORK, BOTH PUBLIC AND PRIVATE. CONTRACTOR IS FULLY RESPONSIBLE FOR ALL UNDERGROUND UTILITIES AND SHALL REPAIR ANY DAMAGE AS A RESULT OF THIS CONTRACT.
6. CONTRACTOR SHALL BLEND NEW EARTHWORK SMOOTHLY TO TRANSITION BACK TO EXISTING GRADE.
7. THE PROPOSED CONTOURS AND SPOT ELEVATIONS SHOWN IN DRIVES, PARKING LOTS, AND SIDEWALKS ARE FINISHED ELEVATIONS INCLUDING ASPHALT. REFER TO PAVEMENT CROSS SECTION DATA TO ESTABLISH CORRECT SUBBASE OR AGGREGATE BASE COURSE ELEVATIONS TO BE COMPLETED UNDER THIS CONTRACT. SPOT ELEVATIONS SHOWN REPRESENT THE ELEVATION AT THE GUTTER LINE WHEN SHOWN ALONG THE CURB, UNLESS NOTED OTHERWISE.
8. ON-SITE BURIAL PITS REQUIRE AN ON-SITE DEMOLITION LANDFILL PERMIT FROM THE ZONING ADMINISTRATOR.
9. ADDITIONAL MEASURES TO CONTROL EROSION AND SEDIMENT MAY BE REQUIRED BY A REPRESENTATIVE OF NC DEPT. OF ENVIRONMENTAL AND NATURAL RESOURCES, LAND QUALITY SECTION.
10. ANY GRADING, BEYOND THE LIMITS OF CONSTRUCTION AS SHOWN ON THE GRADING PLAN, IS SUBJECT TO A FINE.
11. GRADING MORE THAN ONE ACRE WITHOUT AN APPROVED EROSION CONTROL PLAN IS SUBJECT TO A FINE.
12. STABILIZATION IS THE BEST FORM OF EROSION CONTROL. TEMPORARY SEEDING IS NECESSARY TO ACHIEVE EROSION CONTROL ON LARGE DENUDED AREAS AND ESPECIALLY WHEN SPECIFICALLY REQUIRED AS PART OF THE CONSTRUCTION SEQUENCE SHOWN ON THE PLAN. ALL GRADED SLOPES MUST BE SEEDED AND MULCHED WITHIN 15 DAYS OF COMPLETION OF GRADING. ALL REMAINING AREAS ARE TO BE SEEDED AND MULCHED WITHIN 30 DAYS.
13. PIPE LENGTHS SHOWN ARE THE ENGINEER'S ESTIMATE USED TO COMPUTE PIPE SLOPES AND INVERTS AND SHALL NOT BE CONSTRUED BY THE CONTRACTOR TO REPRESENT THE ACTUAL QUANTITY OF PIPE REQUIRED.
14. CROSS SLOPE OF SIDEWALKS SHALL BE 1/4"/FT. (MAX).
15. SLOPES SHALL BE GRADED NO STEEPER THAN 3:1.
16. APPROVAL OF THIS PLAN IS NOT AN AUTHORIZATION TO GRADE ADJACENT PROPERTIES. WHEN FIELD CONDITIONS WARRANT OFF-SITE GRADING, PERMISSION MUST BE OBTAINED FROM THE AFFECTED PROPERTY OWNERS.
17. TREE BARRICADES MUST BE INSTALLED BEFORE ANY DEMOLITION/ CLEARING/ GRADING/ CONSTRUCTION, AND NOT REMOVED UNTIL AFTER FINAL INSPECTION BY CITY OF CONCORD.
18. NO DISTURBANCE OR COMPACTION, CONSTRUCTION MATERIALS, TRAFFIC, BURIAL PITS, TRENCHING OR OTHER LAND DISTURBING ACTIVITY ALLOWED IN THE TREE PROTECTION ZONE. TREE BARRICADES MUST BE INSTALLED BEFORE ANY DEMOLITION, GRADING OR CONSTRUCTION BEGINS, AND NOT REMOVED UNTIL FINAL INSPECTION.
19. TREE PROTECTION BARRICADES MUST MEET OR EXCEED TREE ORDINANCE STANDARDS (IN THE CITY OF CONCORD TREE ORDINANCE GUIDELINES APPENDIX 9 OR LAND DEVELOPMENT STANDARDS MANUAL 40.04).
20. BEFORE GRADING/CLEARING/CONSTRUCTION BEGINS, CALL FOR INSPECTION OF TREE PROTECTION BARRICADES BY CITY OF CONCORD.
21. NO GRUBBING WITHIN TREE PROTECTION ZONE. LEAVE SOIL AND LEAF LITTER UNDISTURBED. SUPPLEMENT WITH 1-2 INCHES OF MULCH. RE-SEED WITH GRASS ONLY IN DISTURBED/GRADED AREAS.
22. BRUSH, VINES AND SMALL TREES (<8 IN. DIA., OR AS SMALL AS 2 IN. CALIPER) MAY BE HAND CLEARED ONLY CUT FLUSH WITH GROUND SURFACE. EXISTING TREES MAY BE LIMBED UP 6 FEET (AT LEAST 2/3 OF THE BRANCHES SHOULD BE LEFT) TO IMPROVE VISIBILITY.
23. EXPOSED TREE ROOTS MUST BE CLEANLY CUT WITH A SHARP PRUNING TOOL; BACKFILL ASAP TO MINIMIZE EXPOSURE TO THE AIR.
24. ANY TREES IN TREE PROTECTION SETBACK THAT COUNT TOWARD TREE ORDINANCE REQUIREMENTS THAT DIE DURING CONSTRUCTION WILL BE MITIGATED AS DIRECTED BY CITY OF CONCORD.
25. PIPE LENGTHS SHOWN ON CULVERTS INCLUDE FLARED END SECTIONS.
26. SOIL TYPES ARE IREDELL LOAM (IdA), ENON SANDY LOAM (EnB), AND ARMENIA LOAM (Ar).
27. COORDINATE ALL CURB AND STREET GRADES IN INTERSECTION WITH INSPECTOR.
28. SUBSURFACE DRAINAGE FACILITIES MAY BE REQUIRED IN THE STREET RIGHT-OF-WAY IF DEEMED NECESSARY BY THE INSPECTOR.
29. NON-STANDARD ITEMS (IE PAVERS, IRRIGATION SYSTEMS, ETC.) IN THE RIGHT-OF-WAY REQUIRE A RIGHT-OF-WAY ENCROACHMENT AGREEMENT WITH THE (CONCORD DEPARTMENT OF TRANSPORTATION/NORTH CAROLINA DEPARTMENT OF TRANSPORTATION) BEFORE INSTALLATION.
30. CONTRACTOR SHALL FLAG LIMITS OF WETLAND AND CHANNEL DISTURBANCES FOR REVIEW BY ENGINEER AND ARCHITECT PRIOR TO DISTURBING.
31. CONTRACTOR SHALL MAINTAIN FLAGS OF THESE LIMITS THROUGHOUT JOB.
32. DISTURBANCE OF THE EXISTING WETLANDS, JURISDICTIONAL STREAMS AND/OR WATERS OF THE U.S. BEYOND THE PERMITTED ARE SUBJECT TO FINES. FINES AND PENALTIES IMPOSED DUE TO UNAUTHORIZED/ UNPERMITTED ACTIVITIES BY THE CONTRACTOR SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR..
33. SPECIAL ATTENTION SHALL BE GIVEN TO MAINTENANCE OF SILT FENCING WHERE IT IS THE SOLE EROSION CONTROL MEASURE BELOW FILL SLOPES. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED IN THESE AREAS.
34. UNLESS NOTED OTHERWISE ALL SPOT ELEVATIONS GIVEN AT CURB AND GUTTER ARE AT THE BOTTOM OF CURB FACE.
35. ALL STORM DRAIN INLETS SHALL BE EMBOSSED WITH A FISH LOGO AND "DUMP NO WASTE, DRAINS TO STREAM" OR APPROVED EQUIVALENT LANGUAGE.
36. UPON FUNCTIONAL INSTALL OF THE DRAINAGE SYSTEM, SILT SACS MUST BE INSTALLED WHERE INDICATED. SILT SACS (AND PRIMARY EROSION INLET PROTECTION) MUST BE ADEQUATELY MAINTAINED FOR THE DURATION OF ALL LAND DISTURBING ACTIVITY. THIS INCLUDES BUT IS NOT LIMITED TO THE CLEANING OUT OF ANY SILT SACS WHEN THEY REACH NO GREATER THAN 50% CAPACITY.

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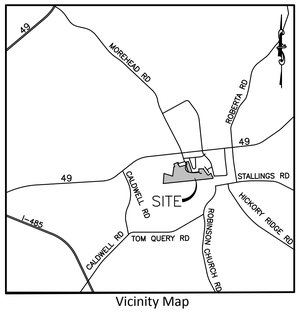
Harrisburg Park

191 Sims Parkway
Harrisburg, North Carolina

Project No: 17.000255
Date: 06.18.19
Revisions:

Sheet Title:
STORM PIPE SCHEDULE

Sheet No:
C313



Vicinity Map

PROTECTION OF EXISTING UTILITIES

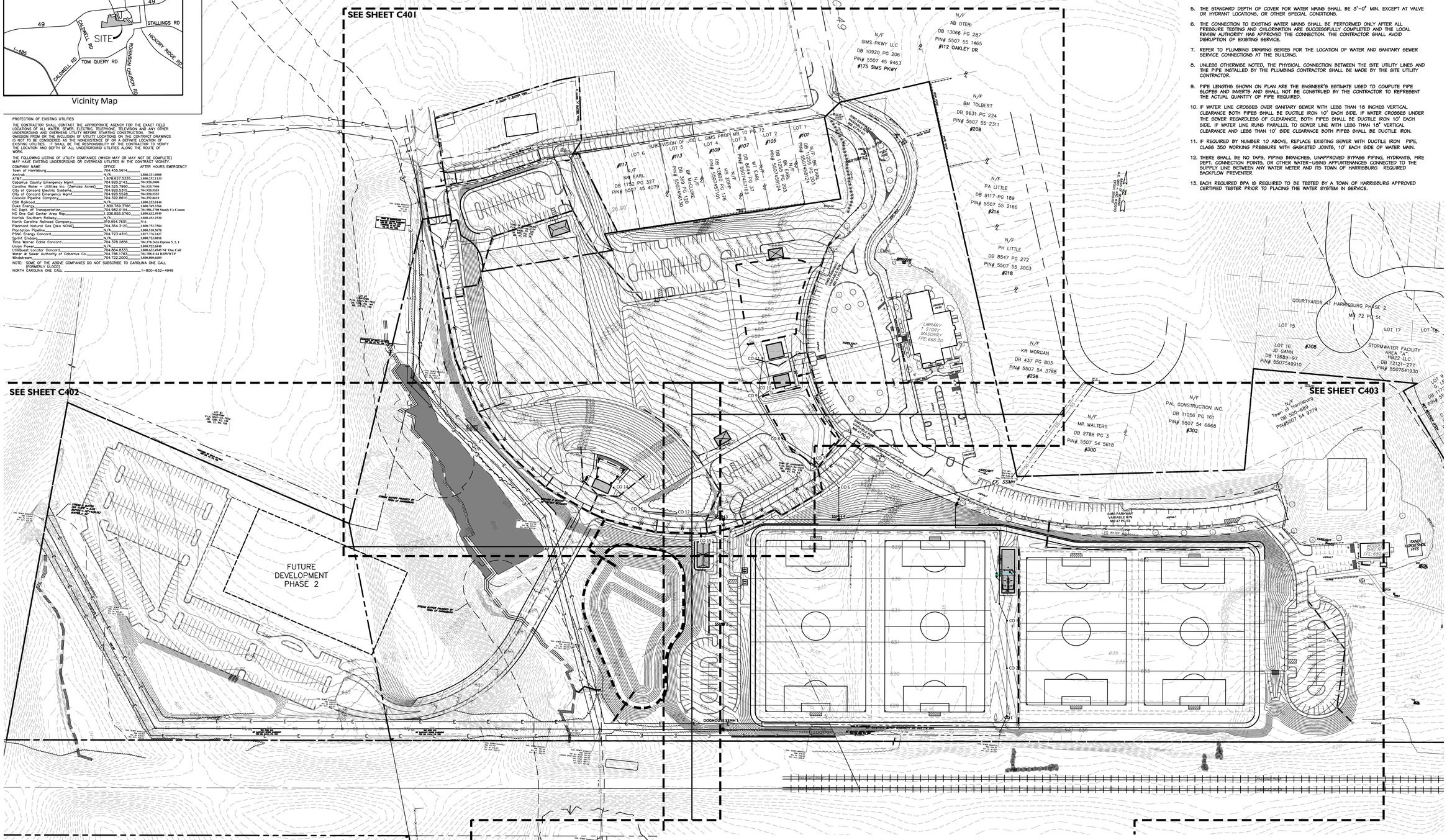
THE CONTRACTOR SHALL CONTACT THE APPROPRIATE AGENCY FOR THE EXACT FIELD LOCATIONS OF ALL WATER, SEWER, ELECTRIC, TELEPHONE, TELEVISION AND ANY OTHER UNDERGROUND AND OVERHEAD UTILITY BEFORE STARTING CONSTRUCTION. THE OWNERS OF THE UTILITIES MAY HAVE THEIR SECURITY LOCATOR OR ENGINEER ON THE PROJECT TO BLAZE OR OTHERWISE MARK THE NONSECURITY LOCATIONS OF ANY OF THE LOCATIONS OF EXISTING UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATION AND DEPTH OF ALL UNDERGROUND UTILITIES ALONG THE ROUTE OF WORK.

THE FOLLOWING LISTING OF UTILITY COMPANIES (WHICH MAY OR MAY NOT BE COMPLETE) MAY HAVE EXISTING UNDERGROUND OR OVERHEAD UTILITIES IN THE CONTRACT VIGINITY.

COMPANY NAME	OFFICE	AFTER HOURS EMERGENCY
Town of Harrisburg	704.455.5614	
Amerigas	N/A	1.800.231.6568
AT&T	1.678.627.5335	1.800.252.1133
Cabarrus County Emergency Mgmt	704.920.2143	704.920.2000
Carolina Water – Utilities Inc. (Zemosa Acres)	704.525.7990	704.525.7990
City of Concord Electric Systems	704.920.5315	704.920.5555
City of Concord Emergency Mgmt	704.920.5528	704.920.5555
Colonial Pipeline Company	704.592.8610	704.592.8610
CSX Railroad	N/A	1.800.232.0144
Duke Energy	1.800.769.3766	1.800.769.3766
NC Dept. of Transportation	704.982.0104	704.982.0104 Cabarrus County Comm
NC One Call Center Area Rep.	704.855.5760	704.855.5760
Norfolk Southern Railway	N/A	1.800.453.2530
North Carolina Railroad Company	919.954.7601	N/A
Piedmont Natural Gas (aka NCNG)	704.364.3120	1.800.752.7504
Plantation Pipeline		1.800.510.5678
PSNC Energy Concord	704.723.4310	1.877.776.7427
Sprint Embarq	N/A	1.888.733.8019
Time Warner Cable Concord	704.378.2856	704.378.2624 Option 5, 2, 1
Union Power	N/A	1.800.922.6848
UtiliQuest Locator Concord	704.864.8333	1.800.632.4949 NC One Call
Water & Sewer Authority of Cabarrus Co.	704.786.1783	704.788.4164 BOB WTP
Windstream	704.722.2000	1.800.800.6689

NOTE: SOME OF THE ABOVE COMPANIES DO NOT SUBSCRIBE TO CAROLINA ONE CALL (FORMERLY ULOCO)

NORTH CAROLINA ONE CALL 1-800-632-4949



LEGEND

	EXISTING SIGN		EXISTING WATER METER		EXISTING CURB AND GUTTER	DW	PROPOSED DOMESTIC WATER LINE
EIP	EXISTING IRON PIN		PROPOSED WATER METER		PROPOSED CURB AND GUTTER	F	PROPOSED FIRE LINE
	EXISTING LIGHT POLE	BFP	PROPOSED BACKFLOW PREVENTER		PROPERTY LINE	XXX	EXISTING CONTOUR LINE
	PROPOSED LIGHT POLE	S	EXISTING SEWER MANHOLE	X X X	EXISTING FENCE	XXX	PROPOSED CONTOUR LINE
	EXISTING UTILITY POLE	SSMH 1	PROPOSED SEWER MANHOLE	UGE	EXISTING UNDERGROUND ELECTRIC LINE		EXISTING STORM DRAINAGE PIPE
R/W	RIGHT-OF-WAY	CO	EXISTING CLEANOUT	OH/U	EXISTING OVERHEAD ELECTRIC LINE		PROPOSED STORM DRAINAGE PIPE
	EXISTING FIRE HYDRANT	CO	PROPOSED CLEANOUT	T	EXISTING UNDERGROUND TELEPHONE LINE	G	EXISTING GAS LINE
FH	PROPOSED FIRE HYDRANT	DI 1	EXISTING DRAINAGE STRUCTURE	SS	EXISTING SANITARY SEWER LINE	G	PROPOSED GAS LINE
	PROPOSED FIRE DEPT. CONNECTION		PROPOSED DRAINAGE STRUCTURE	SS	PROPOSED SANITARY SEWER LINE	D	EXISTING STORM MANHOLE
BV	EXISTING WATER VALVE	GV	EXISTING GAS VALVE	W	EXISTING WATER LINE	MH 1	PROPOSED STORM MANHOLE
	PROPOSED WATER VALVE	GM	EXISTING GAS METER	W	PROPOSED WATER LINE	E	EXISTING EASEMENT
	PROPOSED CHECK VALVE						
	PROPOSED POST INDICATOR VALVE						

811 Know what's below. Call before you dig.

NORTH

80 0 40 80 160
SCALE: 1"=80'

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Harrisburg Park

191 Sims Parkway
Harrisburg, North Carolina

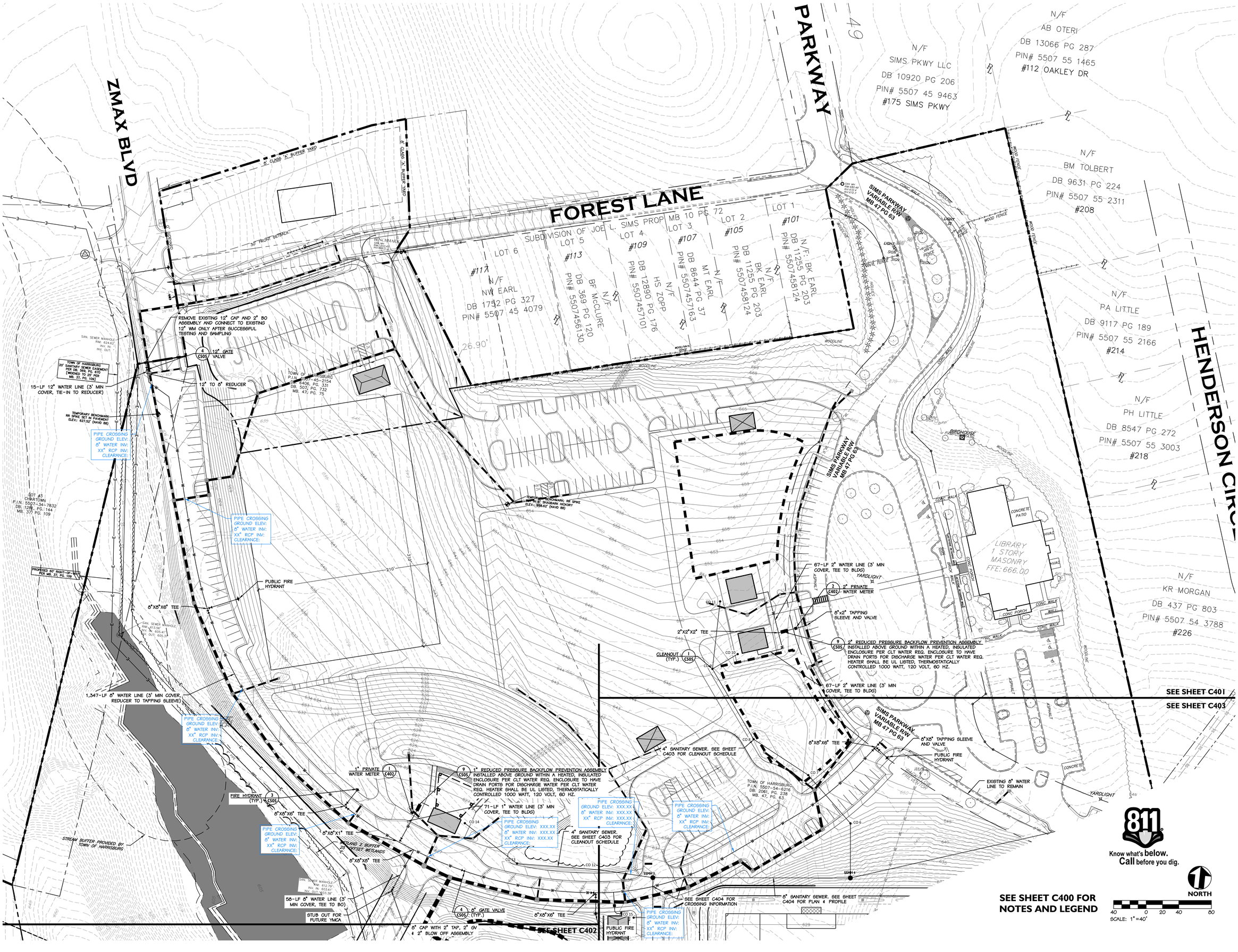
Project No: 17.000255
Date: 06.18.19
Revisions:

Sheet Title:
OVERALL UTILITY PLAN

Sheet No:
C400

UTILITY NOTES

1. UTILITY CONSTRUCTION SHALL BE IN ACCORDANCE WITH ALL APPLICABLE LOCAL AND STATE CODE REQUIREMENTS.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES (STORM DRAINAGE, ELECTRIC, GAS, TELEPHONE, ETC.) PRIOR TO CONSTRUCTION. INFORMATION SHOWN ON THIS PLAN IS FOR REFERENCE ONLY AND SHALL BE FIELD VERIFIED BY THE CONTRACTOR.
3. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER IMMEDIATELY IF ANY DISCREPANCIES BETWEEN THE CONSTRUCTION PLANS AND ACTUAL FIELD CONDITIONS ARE FOUND.
4. MINIMUM COVER FOR ALL SANITARY SEWER MAINS SHALL BE 3'-0". DUCTILE IRON PIPE SHALL BE SUBSTITUTED WHEN MINIMUM COVER CAN NOT BE MAINTAINED.
5. THE STANDARD DEPTH OF COVER FOR WATER MAINS SHALL BE 3'-0" MIN. EXCEPT AT VALVE OR HYDRANT LOCATIONS, OR OTHER SPECIAL CONDITIONS.
6. THE CONNECTION TO EXISTING WATER MAINS SHALL BE PERFORMED ONLY AFTER ALL PRESSURE TESTING AND CHLORINATION ARE SUCCESSFULLY COMPLETED AND THE LOCAL REVIEW AUTHORITY HAS APPROVED THE CONNECTION. THE CONTRACTOR SHALL AVOID DISRUPTION OF EXISTING SERVICE.
7. REFER TO PLUMBING DRAWING SERIES FOR THE LOCATION OF WATER AND SANITARY SEWER SERVICE CONNECTIONS AT THE BUILDING.
8. UNLESS OTHERWISE NOTED, THE PHYSICAL CONNECTION BETWEEN THE SITE UTILITY LINES AND THE PIPE INSTALLED BY THE PLUMBING CONTRACTOR SHALL BE MADE BY THE SITE UTILITY CONTRACTOR.
9. PIPE LENGTHS SHOWN ON PLAN ARE THE ENGINEER'S ESTIMATE USED TO COMPUTE PIPE SLOPES AND INVERTS AND SHALL NOT BE CONSTRUED BY THE CONTRACTOR TO REPRESENT THE ACTUAL QUANTITY OF PIPE REQUIRED.
10. IF WATER LINE CROSSES OVER SANITARY SEWER WITH LESS THAN 18 INCHES VERTICAL CLEARANCE BOTH PIPES SHALL BE DUCTILE IRON 10' EACH SIDE. IF WATER CROSSES UNDER THE SEWER REGARDLESS OF CLEARANCE, BOTH PIPES SHALL BE DUCTILE IRON 10' EACH SIDE. IF WATER LINE RUNS PARALLEL TO SEWER LINE WITH LESS THAN 18" VERTICAL CLEARANCE AND LESS THAN 10' SIDE CLEARANCE BOTH PIPES SHALL BE DUCTILE IRON.
11. IF REQUIRED BY NUMBER 10 ABOVE, REPLACE EXISTING SEWER WITH DUCTILE IRON PIPE, CLASS 350 WORKING PRESSURE WITH WELDED JOINTS, 10' EACH SIDE OF WATER MAIN.
12. THERE SHALL BE NO TAPS, PIPING BRANCHES, UNAPPROVED BYPASS PIPING, HYDRANTS, FIRE DEPT. CONNECTION POINTS, OR OTHER WATER-USING APPURTENANCES CONNECTED TO THE SUPPLY LINE BETWEEN ANY WATER METER AND ITS TOWN OF HARRISBURG REQUIRED BACKFLOW PREVENTER.
13. EACH REQUIRED BPA IS REQUIRED TO BE TESTED BY A TOWN OF HARRISBURG APPROVED CERTIFIED TESTER PRIOR TO PLACING THE WATER SYSTEM IN SERVICE.



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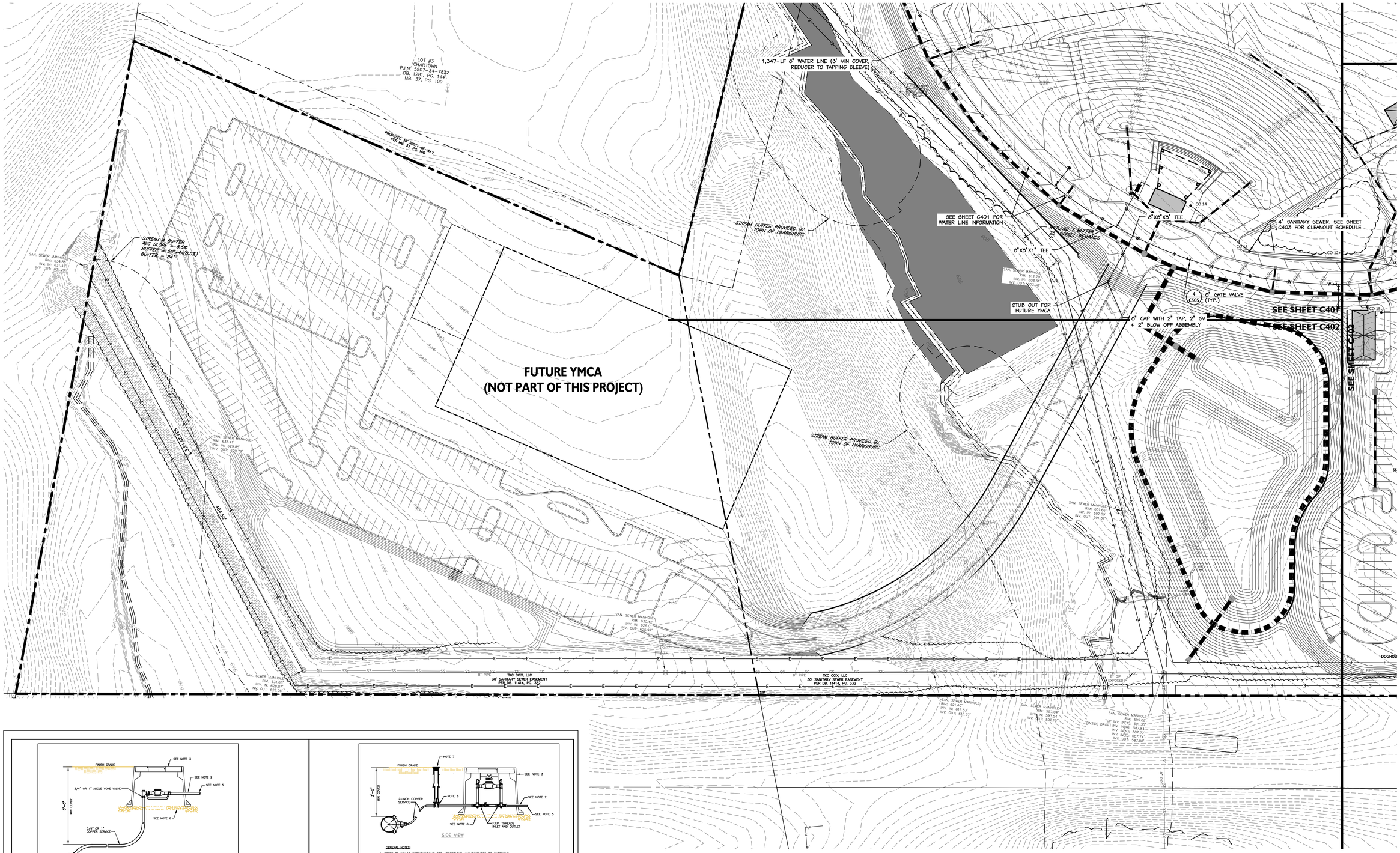
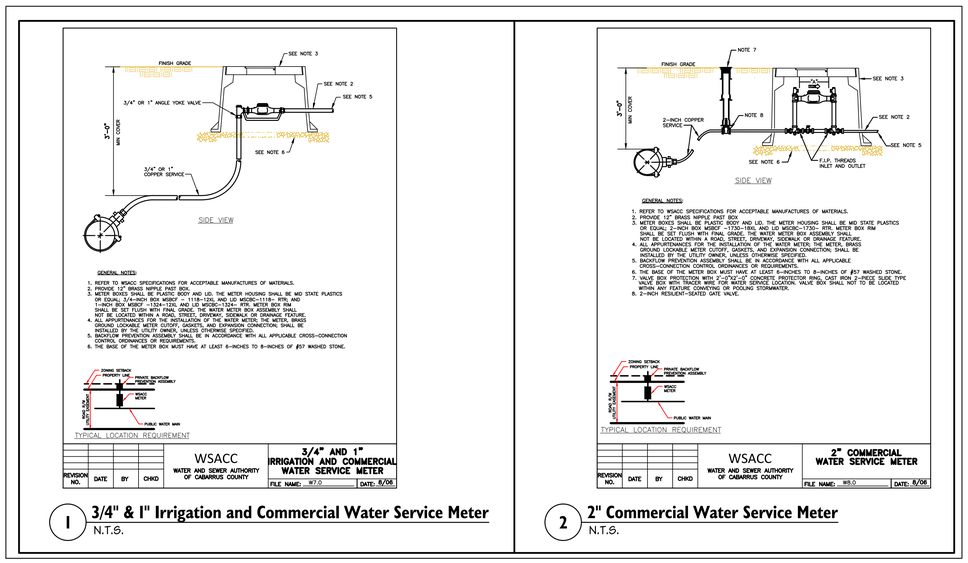
Sheet Title:

UTILITY PLAN ENLARGEMENT NORTH

Sheet No:

C401





1 **3/4" & 1" Irrigation and Commercial Water Service Meter**
N.T.S.

2 **2" Commercial Water Service Meter**
N.T.S.

Know what's **below.**
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SEE SHEET C400 FOR NOTES AND LEGEND

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40 0 20 40 80
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Project No: 17.000255
Date: 06.18.19
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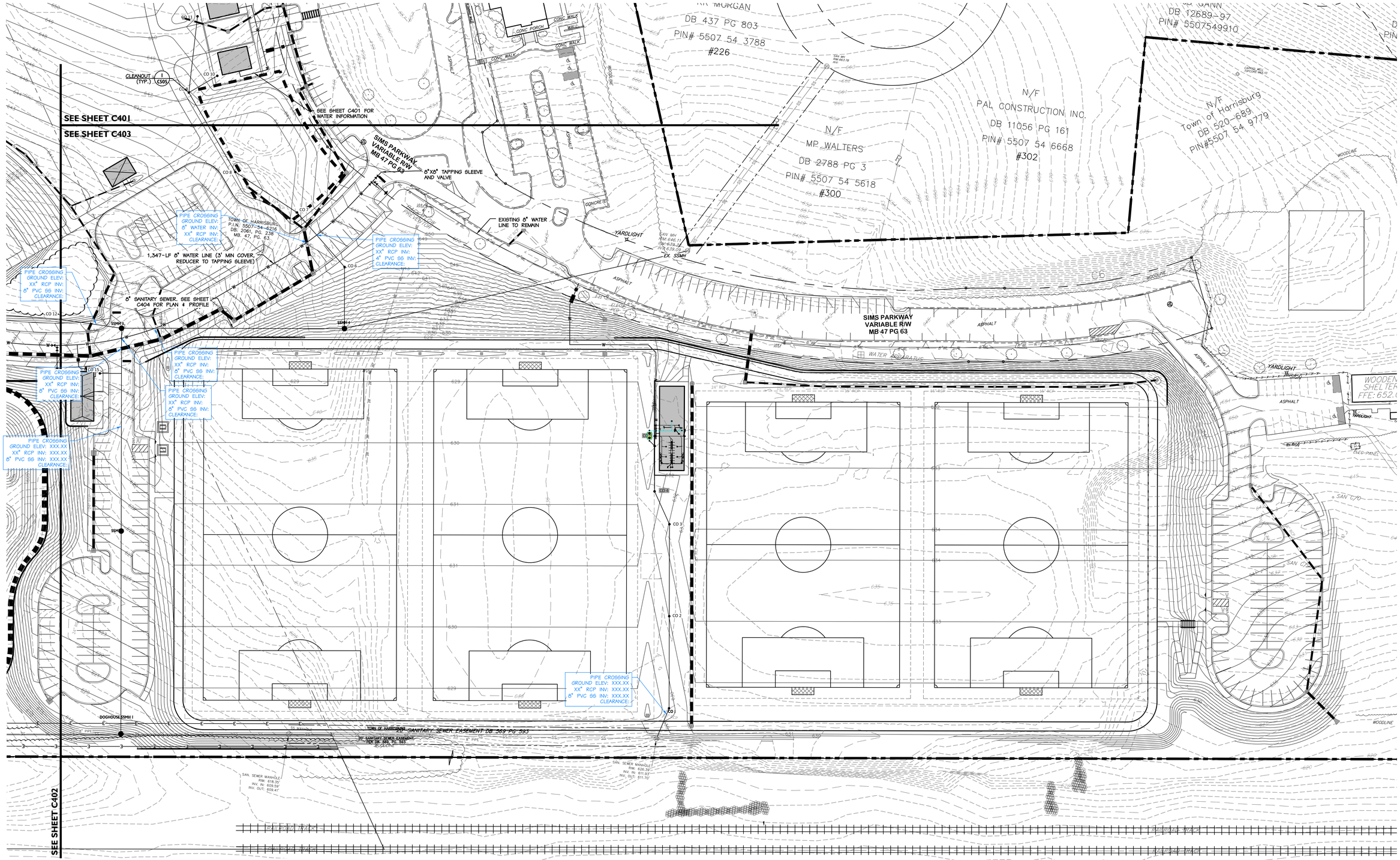
Sheet Title:
UTILITY PLAN ENLARGEMENT WEST

Sheet No:
C402



SANITARY SEWER STRUCTURE & PIPE SCHEDULE

UPSTREAM STR.	UPSTREAM RIM EL.	INVERT(S) IN	INVERT OUT	DOWNSTREAM STR.	D.S. PIPE LENGTH (FT)	D.S. PIPE DIA (IN)	D.S. PIPE MATERIAL	D.S. SLO
CO 1	629.54	614.00 (6" – CO 2)	614.00	EX. SSMH	35.92	6	PVC	
CO 2	631.03	618.83 (6" – CO 3)	618.86	CO 1	100.00	6	PVC	
CO 3	632.05	623.69 (4" – CO 4)	623.69	CO 2	100.00	6	PVC	
CO 4	630.45	625.58 (4" – Structure – (178))	625.58	CO 3	39.18	4	PVC	
CO 5	631.85		629.50	Structure – (178)	10.69	4	PVC	
CO 6	646.30	631.91 (4" – CO 7)	631.91	SSMH 4	67.02	4	PVC	
CO 7	646.60	634.91 (4" – CO 8)	634.91	CO 6	78.55	4	PVC	
CO 8	644.92	637.14 (4" – CO 9)	637.14	CO 7	80.26	4	PVC	
CO 9	647.79	641.65 (4" – CO 10) 641.65 (4" – CO 11)	641.65	CO 8	100.00	4	PVC	
CO 10	651.19		643.00	CO 9	35.93	4	PVC	
CO 11	651.38		646.00	CO 9	83.39	4	PVC	
CO 12	631.15	622.11 (4" – CO 13)	622.11	SSMH 3	66.83	4	PVC	
CO 13	628.75	623.16 (4" – CO 14)	623.16	CO 12	100.71	4	PVC	
CO 14	627.60		624.00	CO 13	81.01	4	PVC	
CO 15	633.65		629.30		23.45	4	PVC	

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SCALE: 1" = 40'

SEE SHEET C400 FOR NOTES AND LEGEND

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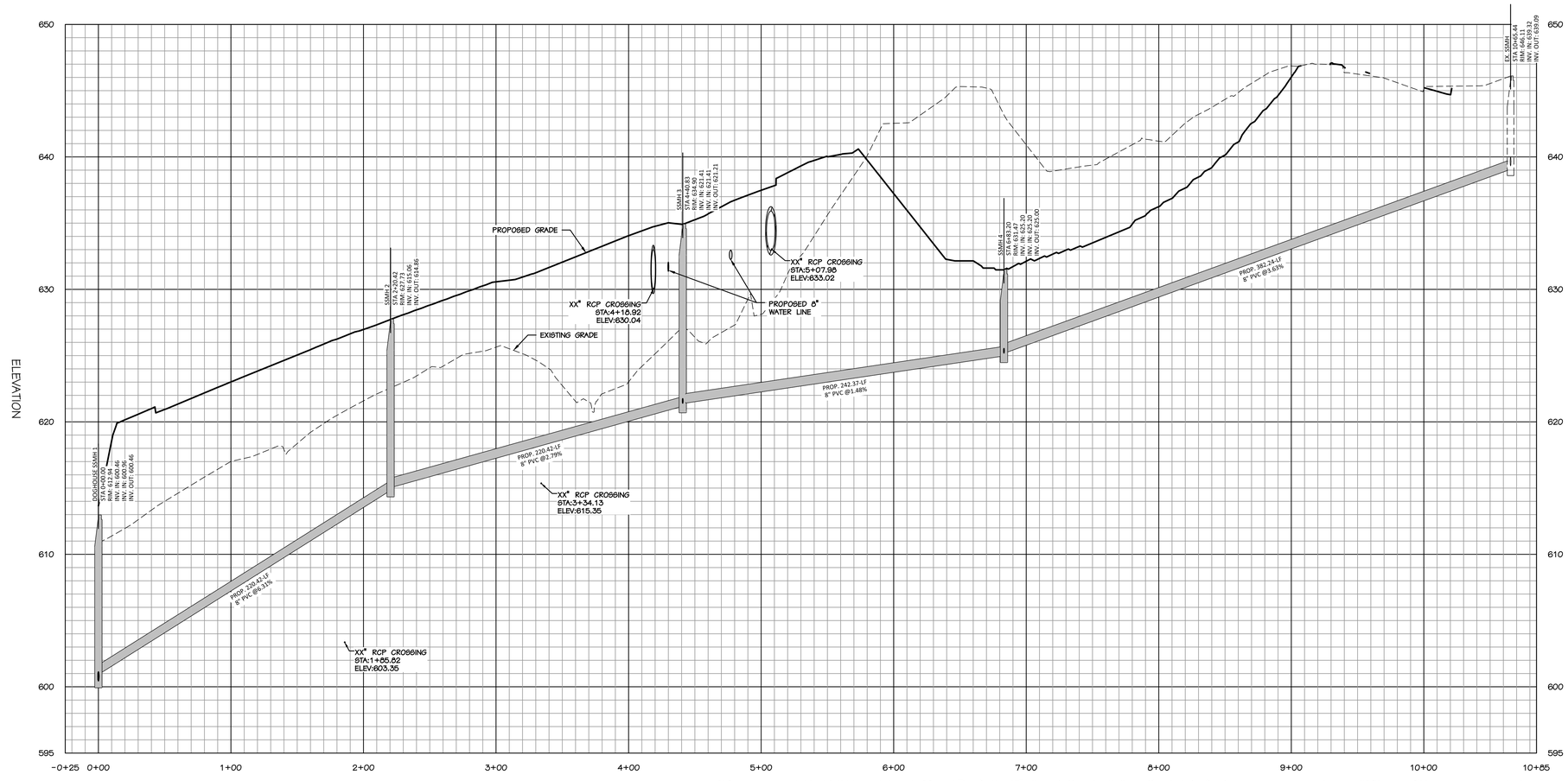
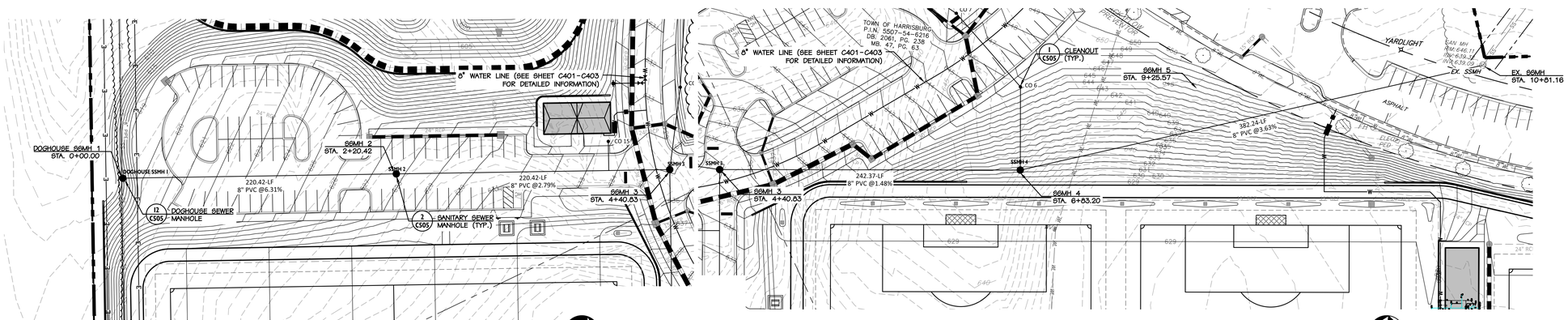
Revisions:

Sheet Title:
UTILITY PLAN ENLARGEMENT EAST

Sheet No:
C403





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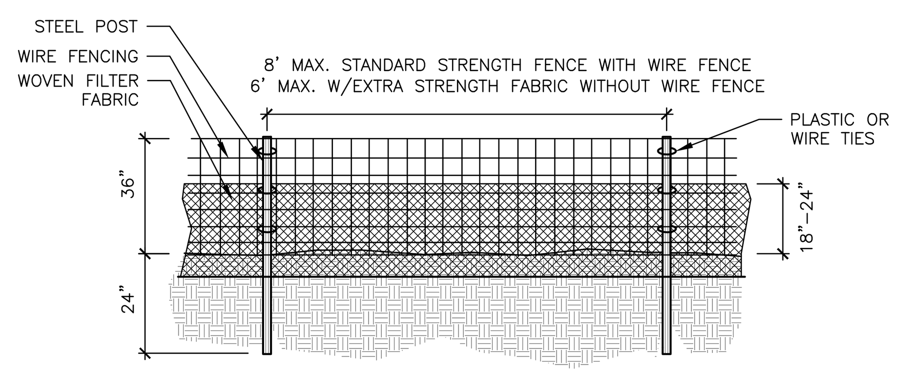
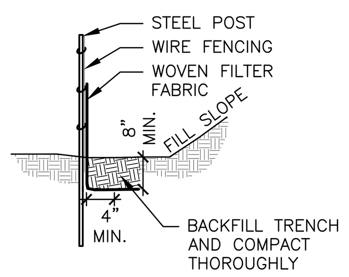
Sheet Title:
UTILITY PLAN & PROFILE

Sheet No:
C404



GENERAL NOTES:

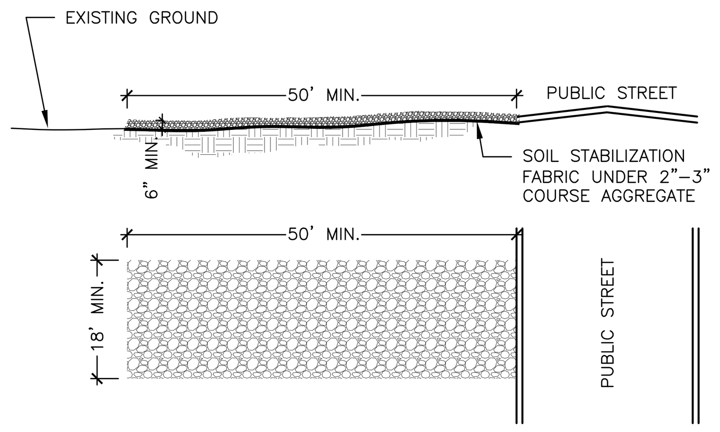
1. FILTER FABRIC FENCE SHALL BE A MINIMUM OF 32" IN WIDTH AND SHALL HAVE A MINIMUM OF 6 LINE WIRES WITH 12" STAY SPACING.
2. WOVEN FILTER FABRIC BE USED WHERE SILT FENCE IS TO REMAIN FOR A PERIOD OF MORE THAN 30 DAYS.
3. STEEL POSTS SHALL BE 5'-0" IN HEIGHT AND BE OF THE SELF-FASTENER ANGLE STEEL TYPE.
4. WIRE FENCING SHALL BE AT LEAST #10 GAGE WITH A MINIMUM OF 6 LINE WIRES WITH 12" STAY SPACING.
5. TURN SILT FENCE UP SLOPE AT ENDS.
6. WIRE MESH SHALL BE MIN. 14 GAGE WITH MAXIMUM 6" OPENINGS.
7. ORANGE SAFETY FENCE IS REQUIRED AT BACK OF SILT FENCE (WITHIN 5 FT.) WHEN GRADING IS ADJACENT TO SWIM BUFFERS OR WETLANDS (REFER TO SWIM BUFFER GUIDELINES).



MAINTENANCE NOTES:

1. INSPECT SEDIMENT FENCES AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL. MAKE ANY REQUIRED REPAIRS IMMEDIATELY.
2. SHOULD THE FABRIC OF A SEDIMENT FENCE COLLAPSE, TEAR, DECOMPOSE OR BECOME INEFFECTIVE, REPLACE IT PROMPTLY.
3. REMOVE SEDIMENT DEPOSITS AS NECESSARY TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN AND TO REDUCE PRESSURE ON THE FENCE. TAKE CARE TO AVOID UNDERMINING THE FENCE DURING CLEANOUT.
4. REMOVE ALL FENCING MATERIALS AND UNSTABLE SEDIMENT DEPOSITS AND BRING THE AREA TO GRADE AND STABILIZE IT AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

1 Temporary Silt Fence
NCDEQ STD. 6.62



NOTES:

1. A STABILIZED ENTRANCE PAD OF 2"-3" COURSE AGGREGATE SHALL BE LOCATED WHERE TRAFFIC WILL ENTER OR LEAVE THE CONSTRUCTION SITE ONTO A PUBLIC STREET.
2. FILTER FABRIC OR COMPACTED CRUSHER RUN STONE MAY BE USED AS A BASE FOR THE CONSTRUCTION ENTRANCE.
3. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC STREETS OR EXISTING PAVEMENT. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS WARRANT AND REPAIR OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
4. ANY SEDIMENT SPILLED, DROPPED, WASHED, OR TRACKED ONTO PUBLIC STREETS MUST BE REMOVED IMMEDIATELY.
5. WHEN APPROPRIATE, WHEELS MUST BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTERING A PUBLIC STREET. WHEN WASHING IS REQUIRED, IT SHALL BE DONE IN AN AREA STABILIZED WITH CRUSHED STONE WHICH DRAINS INTO AN APPROVED SEDIMENT BASIN.
6. SOIL STABILIZATION FABRIC (AS SPECIFIED BY THE DESIGNER) SHALL BE USED.

MAINTENANCE NOTES:

1. MAINTAIN THE GRAVEL PAD IN A CONDITION TO PREVENT MUD OR SEDIMENT FROM LEAVING THE CONSTRUCTION SITE. THIS MAY REQUIRE PERIODIC TOPDRESSING WITH 2-INCH STONE. AFTER EACH RAINFALL, INSPECT ANY STRUCTURE USED TO TRAP SEDIMENT AND CLEAN IT OUT AS NECESSARY. IMMEDIATELY REMOVE ALL OBJECTIONABLE MATERIALS SPILLED, WASHED OR TRACKED ONTO TO PUBLIC ROADWAYS.

2 Temporary Gravel Construction Entrance
NCDEQ STD. 6.06

SEEDING MIXTURE

SPECIES	RATE (LB/ACRE)
RYE (GRAIN)	120

SEEDING DATES
MOUNTAINS-AUG. 15 - DEC. 30
COASTAL PLAIN AND PIEDMONT-AUG. 15 - DEC. 30

SOIL AMENDMENTS
FOLLOW SOIL TESTS OR APPLY 2,000 LB/ACRE GROUND AGRICULTURAL LIMESTONE AND 1,000 LB/ACRE 10-10-10 FERTILIZER.

MULCH
APPLY 4,000 LB/ACRE STRAW. ANCHOR STRAW BY TACKING WITH ASPHALT, NETTING, OR A MULCH ANCHORING TOOL. A DISK WITH BLADES SET NEARLY STRAIGHT CAN BE USED AS A MULCH ANCHORING TOOL.

MAINTENANCE
REPAIR AND RE-FERTILIZE DAMAGED AREAS IMMEDIATELY. TOPDRESS WITH 50 LB/ACRE OF NITROGEN IN MARCH. IF NECESSARY TO EXTENT TEMPORARY COVER BEYOND JUNE 15, OVERSEED WITH 50 LB/ACRE KOBE (PIEDMONT AND COSTAL PLAIN) OR KOREAN (MOUNTAINS) LESPEDEZA IN LATE FEBRUARY OR EARLY MARCH.

TEMPORARY SEEDING RECOMMENDATIONS FOR FALL

SEEDING MIXTURE

SPECIES	RATE (LB/ACRE)
GERMAIN MILLET	40

IN THE PIEDMONT AND MOUNTAINS, A SMALL-STEMMED SUDANGRASS MAY BE SUBSTITUTED AT A RATE OF 50 LB/ACRE.

SEEDING DATES
MOUNTAINS-MAY 15 - AUG. 15
PIEDMONT-MAY 1 - AUG. 15
COASTAL PLAIN-APR. 15 - AUG. 15

SOIL AMENDMENTS
FOLLOW SOIL TESTS OR APPLY 2,000 LB/ACRE GROUND AGRICULTURAL LIMESTONE AND 750 LB/ACRE 10-10-10 FERTILIZER.

MULCH
APPLY 4,000 LB/ACRE STRAW. ANCHOR STRAW BY TACKING WITH ASPHALT, NETTING, OR A MULCH ANCHORING TOOL. A DISK WITH BLADES SET NEARLY STRAIGHT CAN BE USED AS A MULCH ANCHORING TOOL.

MAINTENANCE
REFERTILIZE IF GROWTH IS NOT FULLY ADEQUATE. RESEED, REFERTILIZE, AND MULCH IMMEDIATELY FOLLOWING EROSION OR OTHER DAMAGE.

TEMPORARY SEEDING RECOMMENDATIONS FOR SUMMER

SEEDING MIXTURE

SPECIES	RATE (LB/ACRE)
RYE (GRAIN)	120
ANNUAL LESPEDEZA (KOBE IN PIEDMONT AND COSTAL PLAIN, KOREAN IN MOUNTAINS)	50

OMIT ANNUAL LESPEDEZA WHEN DURATION OF TEMPORARY COVER IS NOT TO EXTEND BEYOND JUNE.

SEEDING DATES
MOUNTAINS-ABOVE 2500 FEET: FEB. 15 - MAY 15
BELOW 2500 FEET: FEB. 1 - MAY 1
PIEDMONT-JAN. 1 - MAY 1
COASTAL PLAIN-DEC. 1 - APRIL 15

SOIL AMENDMENTS
FOLLOW SOIL TESTS OR APPLY 2,000 LB/ACRE GROUND AGRICULTURAL LIMESTONE AND 750 LB/ACRE 10-10-10 FERTILIZER.

MULCH
APPLY 4,000 LB/ACRE STRAW. ANCHOR STRAW BY TACKING WITH ASPHALT, NETTING, OR A MULCH ANCHORING TOOL. A DISK WITH BLADES SET NEARLY STRAIGHT CAN BE USED AS A MULCH ANCHORING TOOL.

MAINTENANCE
REFERTILIZE IF GROWTH IS NOT FULLY ADEQUATE. RESEED, REFERTILIZE, AND MULCH IMMEDIATELY FOLLOWING EROSION OR OTHER DAMAGE.

TEMPORARY SEEDING RECOMMENDATIONS FOR LATE WINTER AND EARLY SPRING

3 Seeding Specifications for Temporary Erosion Control
NCDEQ STD. 6.10

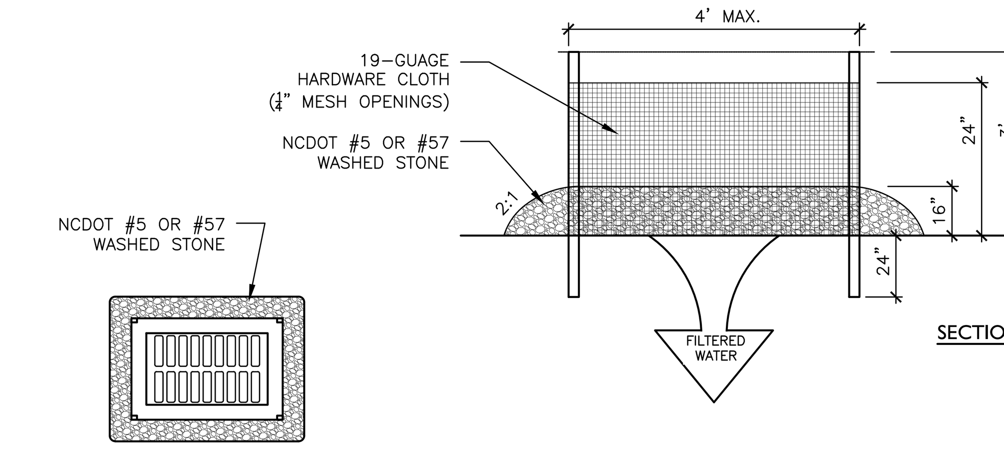


FIGURE 6.51A HARDWARE CLOTH AND GRAVEL INLET PROTECTION
PLAN

CONSTRUCTION SPECIFICATIONS

1. UNIFORMLY GRADE A SHALLOW DEPRESSION APPROACHING INLET.
2. DRIVE 5-FOOT STEEL POSTS 2 FEET INTO THE GROUND SURROUNDING THE INLET. SPACE POST EVENLY AROUND THE PERIMETER OF THE INLET, A MAXIUM OF 4 FEET APART.
3. SURROUND THE POSTS WITH WIRE MESH HARDWARE CLOTH. SECURE THE WIRE MESH TO THE STEEL POSTS AT THE TOP, MIDDLE, AND BOTTOM. PLACING A 2-FOOT FLAP OF WIRE MESH UNDER THE GRAVEL FOR ANCHORING IS RECOMMENDED.
4. PLACE CLEAN GRAVEL (NCDOT#5 OR #57 STONE) ON A 2:1 SLOPE WITH A HEIGHT OF 16 INCHES AROUND THE WIRE, AND SMOOTH TO AN EVEN GRADE.
5. ONCE THE CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED, REMOVE ACCUMULATED SEDIMENT, AND ESTABLISH FINAL GRADING ELEVATIONS.
6. COMPACT THE AREA PROPERLY AND STABILIZED IT WITH GROUNDCOVER.

MAINTENANCE

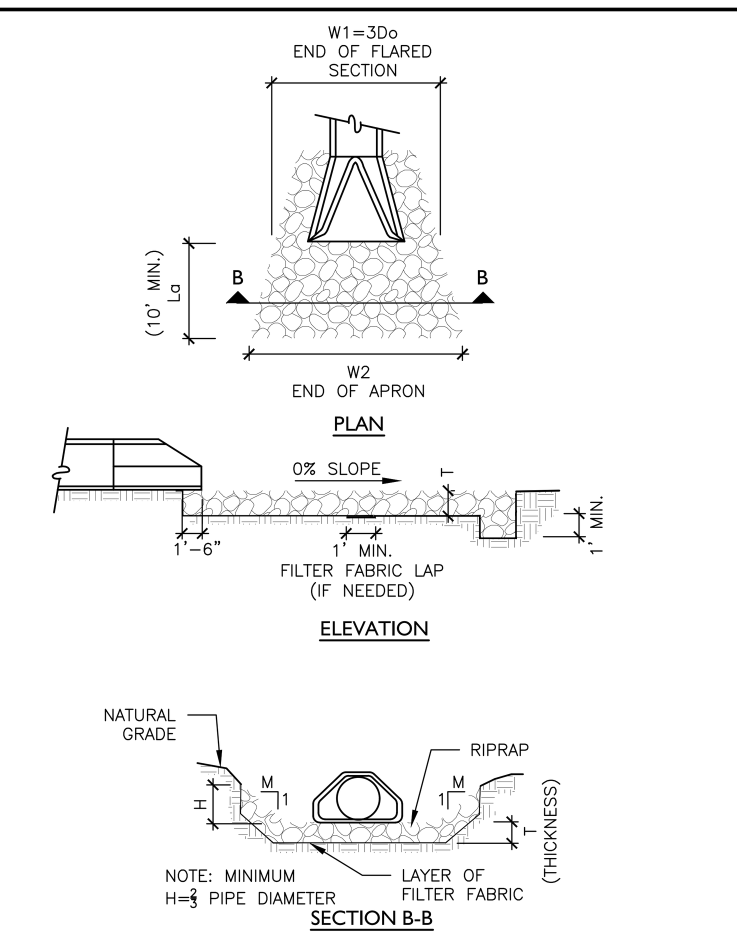
INSPECT INLETS AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (1/2 INCH OR GREATER) RAINFALL EVENT. CLEAR THE MESH WIRE OF ANY DEBRIS OR OTHER OBJECTS TO PROVIDE ADEQUATE FLOW FOR SUBSEQUENT RAINS. TAKE CARE NOT TO DAMAGE OR UNDERCUT THE WIRE MESH DURING SEDIMENT REMOVAL. REPLACE STONE AS NEEDED.

REFERENCES

INLET PROTECTION
6.52, BLOCK AND GRAVEL INLET PROTECTION
6.54, ROCK DOUGHNUT INLET PROTECTION

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATION FOR ROADS AND STRUCTURES

4 Hardware Cloth and Gravel Inlet Protection
NCDEQ STD. 6.51



* d50 (SEE FIG. 8.06 A&B "NC SEDIMENT AND EROSION CONTROL MANUAL"
DMAX = 1.5 X d50
T = 1.5 X DMAX

NOTES:

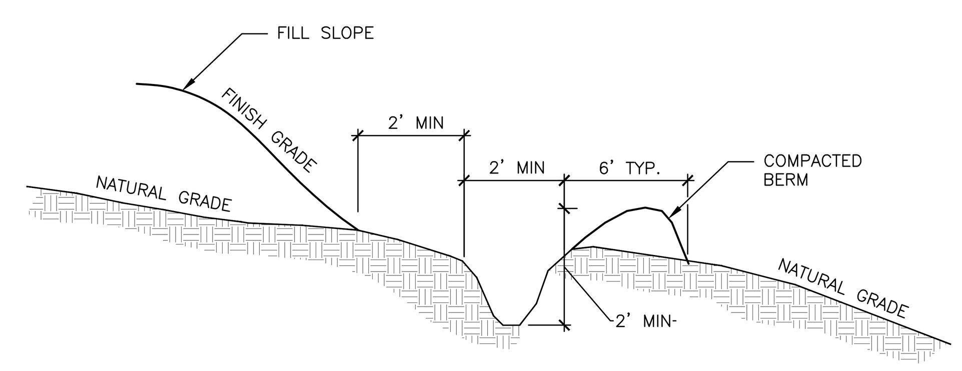
1. CLASS OR MEDIAN SIZE OF RIPRAP AND LENGTH, WIDTH AND DEPTH OF APRON TO BE DESIGNED BY THE ENGINEER.
2. REFER TO THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES' EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL FOR RIPRAP APRON DESIGN STANDARDS.
3. RIPRAP SHOULD EXTEND UP BOTH SIDES OF THE APRON AND AROUND THE END OF THE PIPE OR CULVERT AT THE DISCHARGE OUTLET AT A MAXIMUM SLOPE OF 2:1 AND A HEIGHT NOT LESS THAN TWO THIRDS THE PIPE DIAMETER OR CULVERT HEIGHT.
4. THERE SHALL BE NO OVERFLOW FROM THE END OF THE APRON TO THE SURFACE OF THE RECEIVING CHANNEL. THE AREA TO BE PAVED OR RIPRAPPED SHALL BE UNDERCUT SO THAT THE INVERT OF THE APRON SHALL BE ATTHE SAME GRADE (FLUSH) WITH THE SURFACE OF THE RECEIVING CHANNEL. THE APRON SHALL HAVE A CUTOFF OR TOE WALL AT THE DOWNSTREAM END.
5. THE WIDTH OF THE END OF THE APRON SHALL BE EQUAL TO THE BOTTOM WIDTH OF THE RECEIVING CHANNEL. MAXIMUM TAPER TO RECEIVING CHANNEL 5:1
6. ALL SUBGRADE FOR STRUCTURE TO BE COMPACTED TO 95% OR GREATER.
7. THE PLACING OF FILL, EITHER LOOSE OR COMPACTED IN THE RECEIVING CHANNEL SHALL NOT BE ALLOWED.
8. NO BENDS OR CURVES IN THE HORIZONTAL ALIGNMENT OF THE APRON WILL BE PERMITTED.
9. FILTER FABRIC SHALL BE INSTALLED ON COMPACTED SUBGRADE PRIOR TO PLACEMENT OF RIP RAP.
10. ANY DISTURBED AREA FROM END OF APRON TO RECIEVING CHANNEL MUST BE STABILIZED.

DESIGN DATA TAKEN FROM THE USDA NOMOGRAPH LOCATED IN THE NC SEDIMENT AND EROSION CONTROL MANUAL

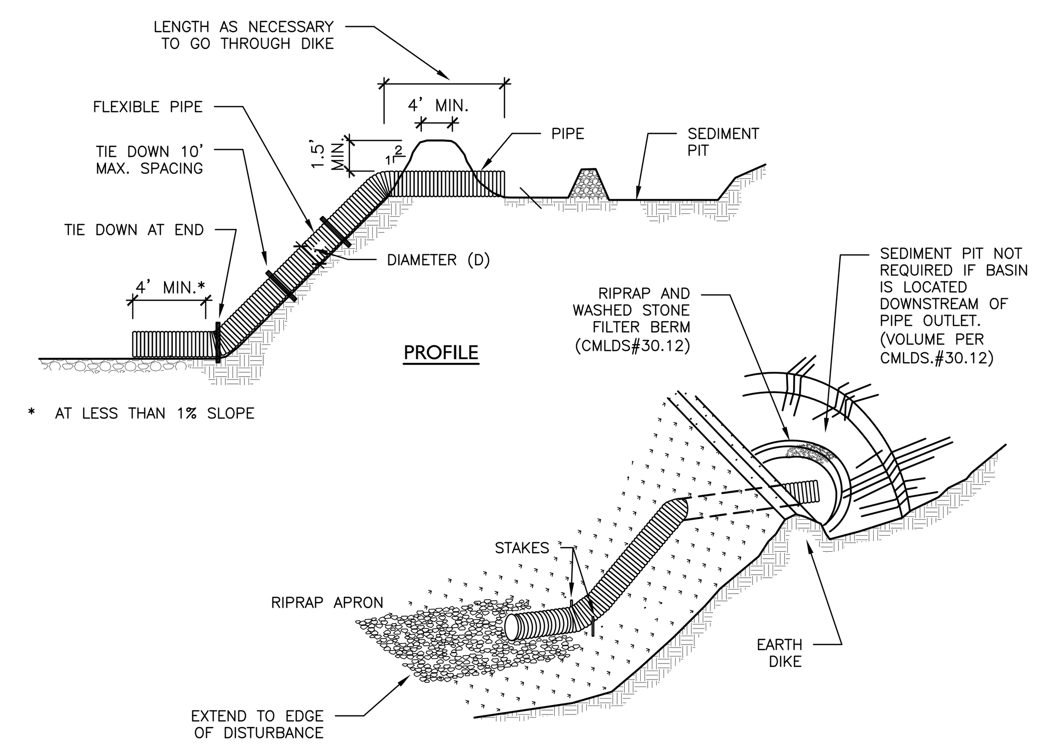
OUTLET PROTECTION SUMMARY

OUTLET	La	W1	W2	*T	H	CLASS RR
FES 1	XX	XX	XX	XX	XX	XX

5 Riprap Outlet Protection
NCDEQ STD. 6.41



6 Temporary Diversion
NCDENR STD. 6.20

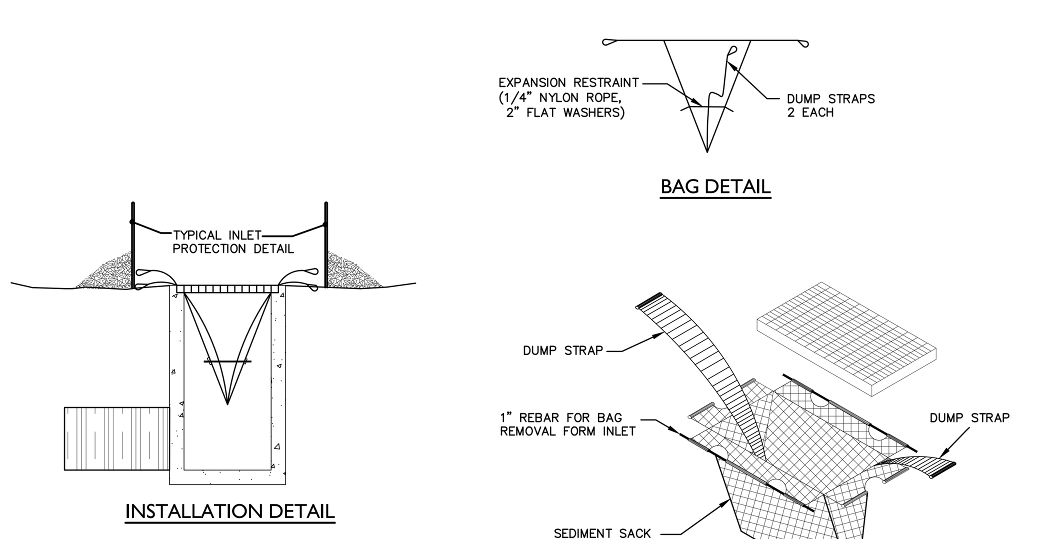


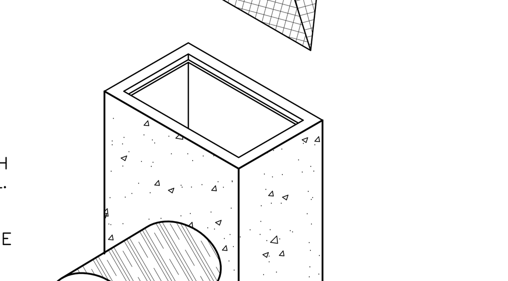
* AT LESS THAN 1% SLOPE

CONSTRUCTION SPECIFICATIONS:

1. THE TOP OF THE EARTH DIKE OVER THE INLET PIPE AND THOSE DIKES CARRYING WATER TOT HE PIPE SHALL BE AT LEAST 1.5 FEET HIGHER AT ALL POINTS THAN THE TOP OF THE INLET PIPE.
2. THE PIPE SHALL BE FLEXIBLE WITH WATER TIGHT CONNECTING BANDS. FLEXIBLE PIPE SHOULD BE STAKED ON EITHER SIDE.
3. A RIPRAP APRON SHALL BE PROVIDED AT THE OUTLET, IF EMPTYING INTO A DISTURBED AREA.
4. THE SOIL AROUND AND UNDER THE INLET PIPE AND ENTRANCE SECTION SHALL BE HAND TAMPED IN 4" LIFTS TO THE TOP OF THE EARTH DIKE.
5. FOLLOW-UP INSPECTION AND ANY NEEDED MAINTENANCE SHALL BE PERFORMED AFTER EACH STORM BY THE FINANCIALLY RESPONSIBLE PARTY OR HIS AGENT.
6. OUTLET PIPE SHOULD BE TAKEN OVER OR THROUGH ANY SILT FENCE, TAKING CARE NOT TO VOID THE EFFECTIVENESS OF THE SILT FENCE.

7 Temporary Pipe Slope Drain
N.T.S.

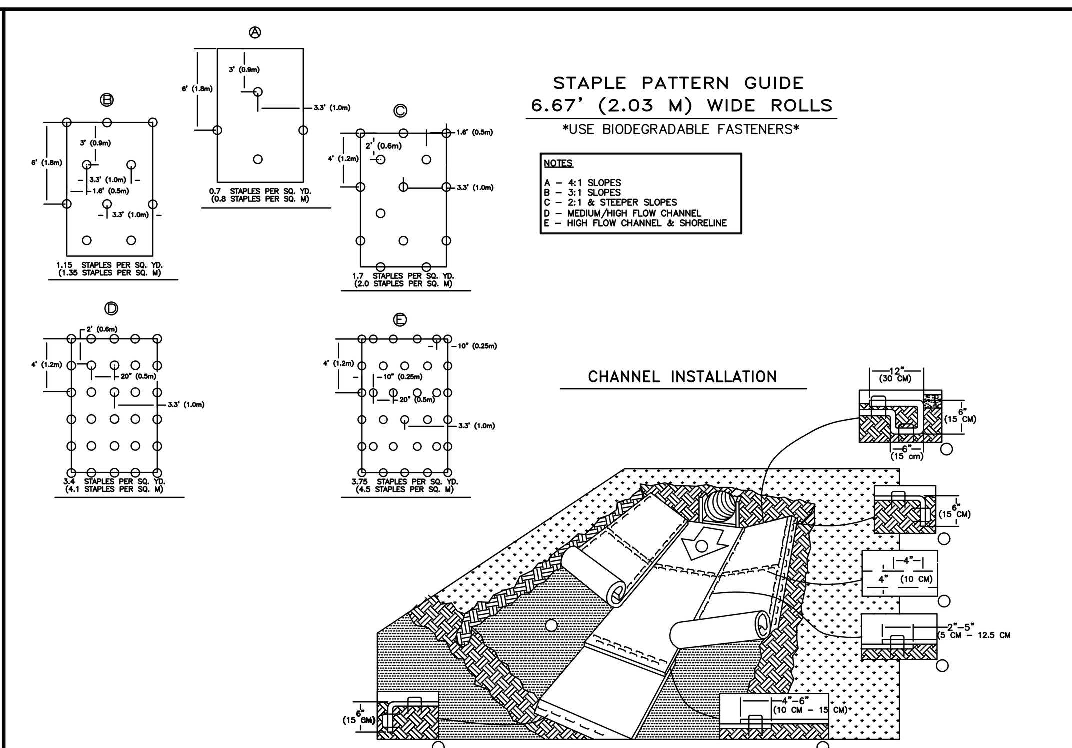




MAINTENANCE NOTES:

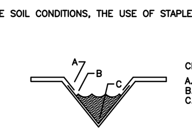
1. SILT SACKS SHALL BE INSPECTED BY THE FINANCIALLY RESPONSIBLE PARTY OR HIS AGENT IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REPAIRS NEEDED SHALL BE MADE IMMEDIATELY.
2. SHOULD THE FABRIC DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE AND THE SILT SACK STILL IS NECESSARY, THE DEVICE SHALL BE REPLACED PROMPTLY.
3. SEDIMENT DEPOSITS SHOULD BE REMOVED WHEN DEPOSITS REACH APPROX. HALF THE HEIGHT OF THE SILT SACKS.

8 Temporary Silt Sack
N.T.S.



1. PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECP's), INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED. NOTE: WHEN USING CELL-O-SEED DO NOT SEED PREPARED AREA. CELL-O-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
2. BEGIN AT THE TOP OF THE CHANNEL BY ANCHORING THE RECP's IN A 6" (15 CM) DEEP X 6" (15 CM) WIDE TRENCH WITH APPROXIMATELY 12" (30 CM) OF RECP's EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE RECP's WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30 CM) APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMAPCT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" (30 CM) PORTION OF RECP's BACK OVER SEED AND COMPACTED SOIL. SECURE RECP's OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" (30 CM) ACROSS THE WIDTH OF THE RECP's.
3. ROLL CENTER RECP's IN DIRECTION OF WATER FLOW IN BOTTOM OF CHANNEL. RECP's WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL RECP's MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING THE DOT SYSTEM™, STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
4. PLACE CONSECUTIVE RECP's END OVER END (SHINGLE STYLE) WITH A 4" - 6" (10 CM -15 CM) OVERLAP. USE A DOUBLE ROW OF STAPLES STAGGERED 4" (10 CM) APART AND 4" (10 CM) ON CENTER TO SECURE RECP's.
5. FULL LENGTH EDGE OF RECP's AT TOP OF SIDE SLOPES MUST BE ANCHORED WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30 CM) APART IN A 6" (15 CM) DEEP X 6" (15 CM) WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
6. ADJACENT RECP's MUST BE OVERLAPPED APPROXIMATELY 2" - 5" (5 CM -12.5 CM) (DEPENDING ON RECP's TYPE) AND STAPLED.
7. IN HIGH FLOW CHANNEL APPLICATIONS, A STAPLE CHECK SLOT IS RECOMMENDED AT 30 TO 40 FOOT (9 M - 12 M) INTERVALS. USE A DOUBLE ROW OF STAPLES STAGGERED 4" (10 CM) APART AND 4" (10 CM) ON CENTER OVER ENTIRE WIDTH OF THE CHANNEL.
8. THE TERMINAL END OF THE RECP's MUST BE ANCHORED WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30 CM) APART IN A 6" (15 CM) DEEP X 6" (15 CM) WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.

NOTE:
* IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15 CM) MAY BE NECESSARY TO PROPERLY ANCHOR THE RECP's.

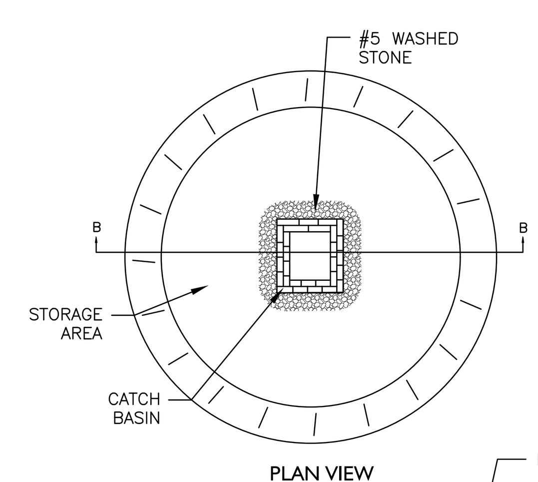


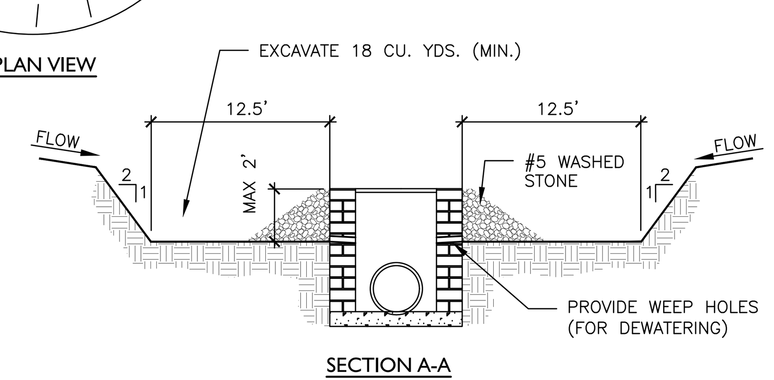
CRITICAL POINTS
A. OVERLAPS AND SEAMS
B. PROJECTED WATER LINE
C. CHANNEL BOTTOM/SIDE SLOPE VERTICES

NOTE:
* HORIZONTAL STAPLE SPACING SHOULD BE ALTERED IF NECESSARY TO ALLOW STAPLES TO SECURE THE CRITICAL POINTS ALONG THE CHANNEL SURFACE.

** IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15 cm) MAY BE NECESSARY TO PROPERLY ANCHOR THE RECP's.

9 Slope Matting/Swale Liner





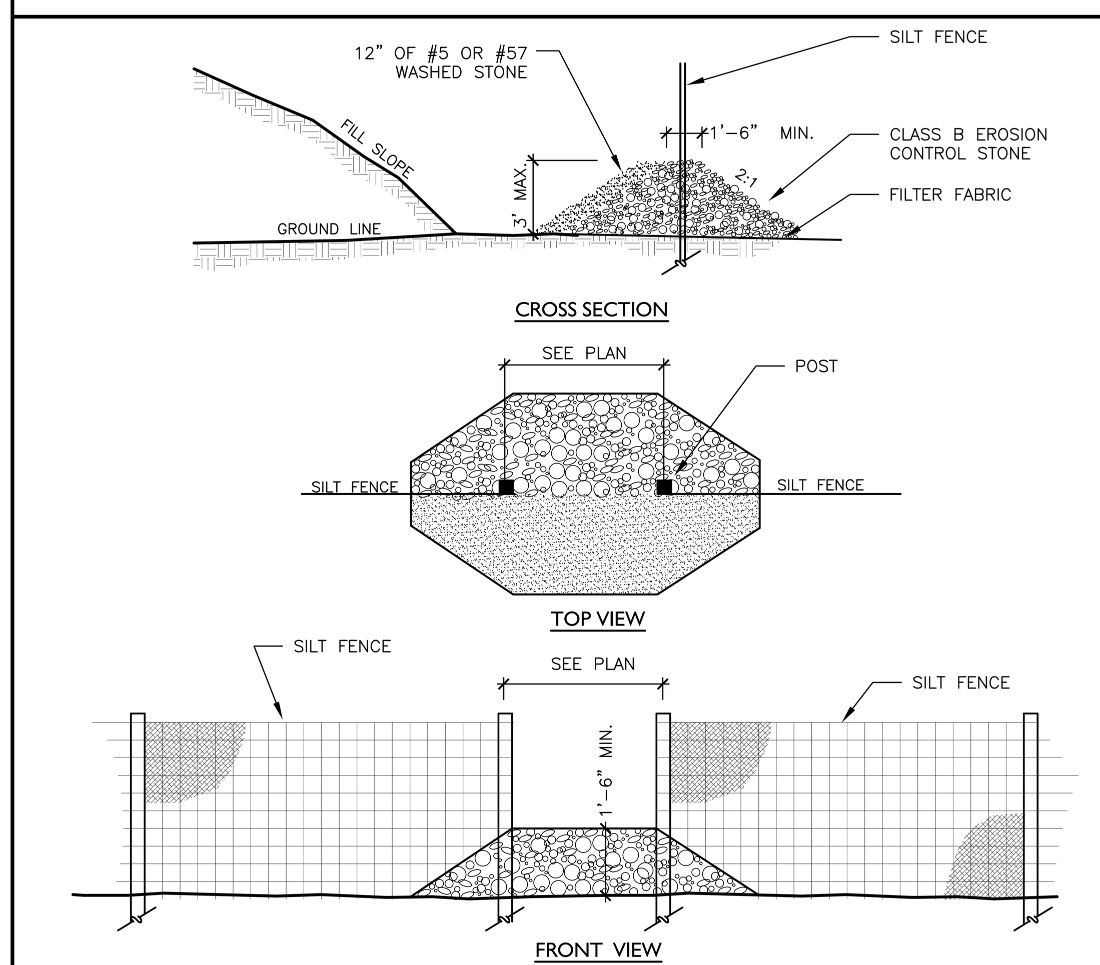
CONSTRUCTION SPECIFICATIONS:

1. CLEAR THE AREA OF ALL DEBRIS THAT MIGHT HINDER EXCAVATION AND DISPOSAL OF SPOIL.
2. GRADE THE APPROACH TO THE INLET UNIFORMLY.
3. PROTECT WEEP HOLES BY GRAVEL.
4. WHEN THE CONTRIBUTING DRAINAGE AREA HAS BEEN PERMANENTLY STABILIZED, SEAL WEEP HOLES, FILL BASIN WITH STABLE SOIL TO FINAL GRADING ELEVATIONS, COMPACT IT PROPERLY, AND STABILIZE.

MAINTENANCE NOTES:

1. INSPECT, CLEAN, AND PROPERLY MAINTAIN THE EXCAVATED BASIN AFTER EVERY STORM UNTIL THE CONTRIBUTING DRAINAGE AREA HAS BEEN PERMANENTLY STABILIZED. TO PROVIDE SATISFACTORY BASIN EFFICIENCY, REMOVE SEDIMENT WHEN THE VOLUME OF THE BASIN HAS BEEN REDUCED BY ONE-HALF. SPREAD ALL EXCAVATED MATERIAL EVENLY OVER THE SURROUNDING LAND AREA OR STOCKPILE AND STABILIZE APPROPRIATELY.

10 Excavated Drop Inlet Protection
NCDENR STD. 6.50



11 Temporary Stone Opening in Silt Fence
N.T.S.

benesch
Alfred Benesch & Company
2359 Perimeter Pointe Parkway, Suite 350
Charlotte, NC 28208
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Seals:

PRELIMINARY
NOT FOR CONSTRUCTION

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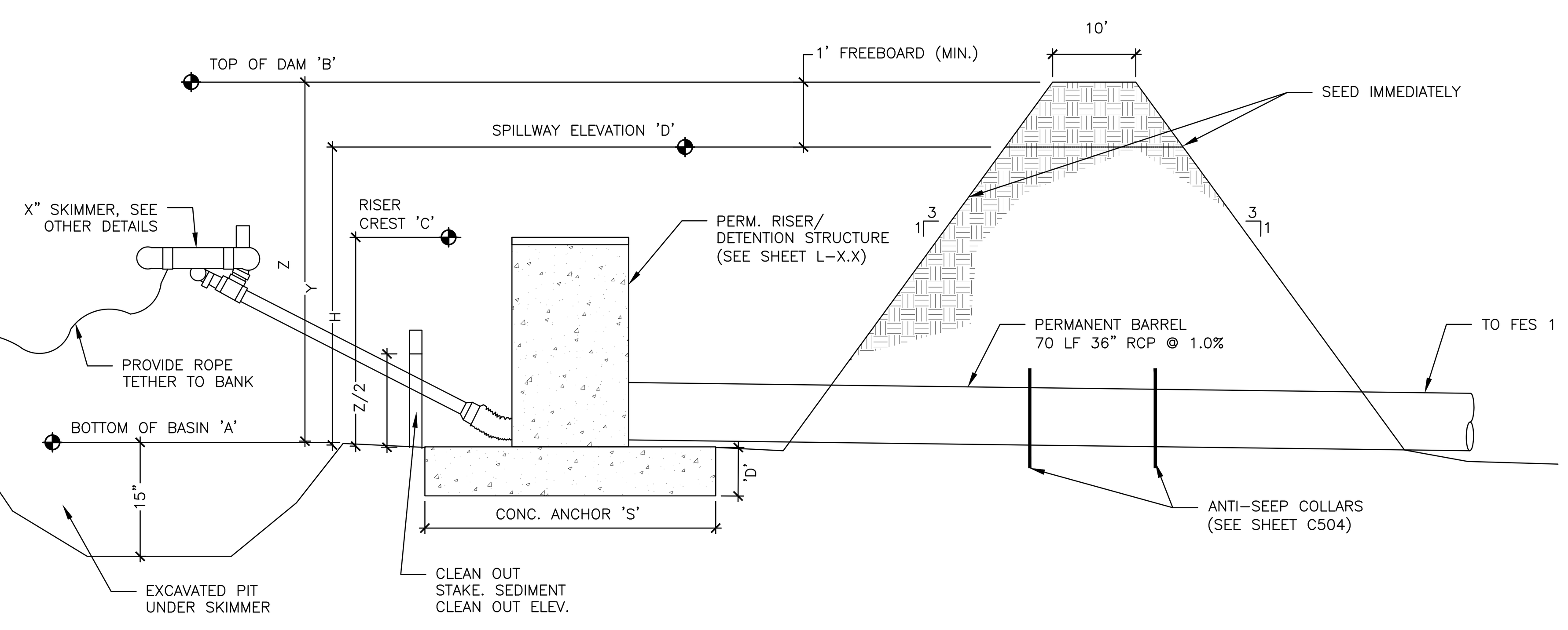
Harrisburg Park
191 Sims Parkway
Harrisburg, North Carolina

Project No: 17.000255
Date: 06.18.19
Revisions:

Sheet Title:
SITE CONSTRUCTION DETAILS

Sheet No:
C500



DATA BLOCK																								
BASIN NO.	DRAINAGE AREA (AC.)	DENUDED AREA (AC.)	Q10 (CFS)	RISER STRUCTURE	BARREL SIZE	BARREL SLOPE	BASIN VOLUME		BASIN SURFACE AREA		CLEANOUT DEPTH (FT.) H/2	D (IN.)	S (FEET)	Y (FEET)	H (FEET)	Z (FEET)	SPILLWAY LENGTH (FEET)	ELEV. A	ELEV. B	ELEV. C	ELEV. D	SKIMMER ø (IN.)	SKIMMER ORIFICE DIA. (IN.)
							REQUIRED (CU. FT.)	PROVIDED (CU. FT.)	REQUIRED (SQ. FT.)	PROVIDED (SQ. FT.)													
A	39.08	28.15	112.8	5' X 5'	36"	1.0%	50670	223542	49074	36963	4	19	8	9.41	8	11	20	597	608	605	606.41	8	6.9

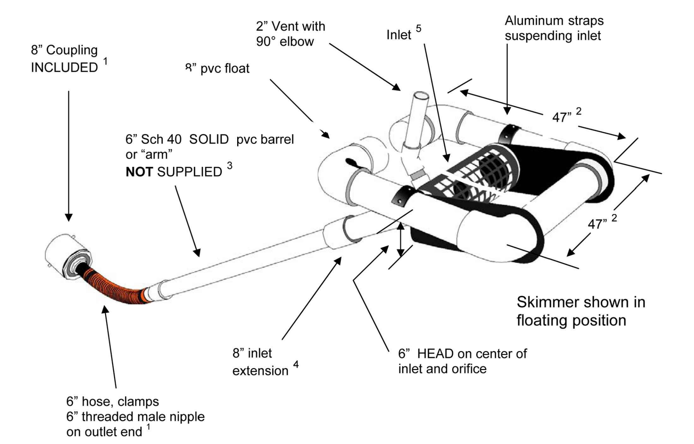
1 Temporary Sediment Basin
NCDENR STD. 6.61

GENERAL NOTES:

1. CONSTRUCTION OPERATION SHALL BE CARRIED OUT IN SUCH A MANNER THAT EROSION AND WATER POLLUTION IS MINIMIZED. CLEAR, GRUB, AND STRIP THE AREA UNDER THE EMBANKMENT OF ALL VEGETATION AND ROOT MAT. REMOVE ALL SURFACE SOIL CONTAINING HIGH AMOUNTS OF ORGANIC MATTER AND STOCKPILE OR DISPOSE OF IT PROPERLY. HAUL ALL OBJECTIONABLE MATERIAL TO THE DESIGNATED DISPOSAL AREA. PLACE TEMPORARY SEDIMENT CONTROL MEASURES BELOW BASIN AS NEEDED.
2. THE FILL MATERIAL FOR THE EMBANKMENT SHALL BE FREE OF ROOTS OR OTHER WOODY VEGETATION AS WELL AS OVERSIZED STONES, ROCKS, ORGANIC MATERIAL, OR OTHER OBJECTIONABLE MATERIAL. THE EMBANKMENT SHALL BE COMPACTED BY TRAVERSING WITH EQUIPMENT WHILE BEING CONSTRUCTED. PLACE THE FILL IN LIFTS NOT TO EXCEED 9 INCHES, AND MACHINE COMPACT IT. OVERFILL THE EMBANKMENT 6 INCHES TO ALLOW FOR SETTLEMENT. SPILLWAYS SHOULD NOT BE CONSTRUCTED THROUGH FILL SECTIONS. ALL SPILLWAYS SHOULD BE LINED AND/OR RIPRAPPED.
3. ALL CUT AND FILL SLOPES SHALL BE 2:1 OR FLATTER, UNLESS CERTIFIED BY REGISTERED GEOTECHNICAL ENGINEER.
4. SEDIMENT BASIN EMBANKMENTS SHOULD BE PROVIDED WITH EROSION CONTROL AND STABILIZATION.
5. STORAGE AREA IS SHOWN AS RECTANGULAR FOR ILLUSTRATIVE PURPOSES ONLY. AND MAY BE CONSTRUCTED IN ANY SHAPE PROVIDED THE MINIMUM STORAGE VOLUME REQUIREMENT IS MET. THE BASIN SHOULD ALSO BE ORIENTED SUCH THAT THE FILTER AND THE MAIN FLOW OF WATER AND SEDIMENT ARE ON OPPOSITE ENDS ON THE LONGER BASIN DIMENSIONS.
6. REQUIRED STORAGE IS 3600 CUBIC FEET OF STORAGE VOLUME PER ACRES OF DISTURBED AREA. MINIMUM REQUIRED SURFACE AREA REQUIRED SHALL BE 435 ST PER CFS OF Q10 PEAK INFLOW.
7. THE LENGTH OF THE STONE OUTLET (SPILLWAY) IS TO BE BASED ON A 10 YEAR STORM. EARTHEN SPILLWAYS–INSTALL THE SPILLWAY IN UNDISTURBED SOIL TO THE GREATEST EXTENT POSSIBLE. THE ACHIEVEMENT OF PLANNED ELEVATIONS, GRADES, DESIGN, WIDTH, AND ENTRANCE AND EXIT CHANNEL SLOPES ARE CRITICAL TO THE SUCCESSFUL OPERATION OF THE SPILLWAY. THE SPILLWAY SHOULD BE LINED WITH LAMINATED PLASTIC OR IMPERMEABLE GEOTEXTILE FABRIC. THE FABRIC MUST BE WIDE AND LONG ENOUGH TO COVER THE BOTTOM AND SIDES AND EXTEND ONTO THE TOP OF THE DAM FOR ANCHORING IN A TRENCH. THE EDGES MAY BE SECURED WITH 8–INCH STAPLES OR PINS. THE FABRIC MUST BE LONG ENOUGH TO EXTEND DOWN THE SLOPE AND EXIT ONTO STABLE GROUND. THE WIDTH OF THE FABRIC MUST BE ONE PIECE, NOT JOINED OR SPLICED; OTHERWISE WATER CAN GET UNDER THE FABRIC. IF THE LENGTH OF THE FABRIC IS INSUFFICIENT FOR THE ENTIRE LENGTH OF THE SPILLWAY, MULTIPLE SECTIONS, SPANNING THE COMPLETE WIDTH, MAY BE USED. THE UPPER SECTIONS(S) SHOULD OVERLAP THE LOWER SECTIONS(S) SO THAT WATER CANNOT FLOW UNDER THE FABRIC. SECURE THE UPPER EDGES AND SIDES OF THE FABRIC IN A TRENCH WITH STAPLES OR PINS.
8. INLETS–DISCHARGE WATER INTO THE BASIN IN A MANNER TO PREVENT EROSION. USE TEMPORARY SLOPE DRAINS OR DIVERSIONS WITH OUTLET PROTECTION TO DIVERT SEDIMENT–LADEN WATER IN UPPER END OF THE TRAP.
9. EROSION CONTROL – CONSTRUCT THE STRUCTURE SO THAT THE DISTURBED AREA IS MINIMIZED. DIVERT SURFACE WATER AWAY FROM BARE AREAS. COMPLETE THE EMBANKMENT BEFORE THE AREA IS CLEARED. STABILIZE THE EMERGENCY SPILLWAY EMBANKMENT AND ALL OTHER DISTURBED AREAS ABOVE THE CREST OF THE PRINCIPAL SPILLWAY IMMEDIATELY AFTER CONSTRUCTION
10. WHENEVER TOPOGRAPHY ALLOWS, THE BASIN LENGTH SHOULD BE TWICE (2X) THE BASIN WIDTH, TO ALLOW FOR SETTLING. BAFFLES SHOULD BE PROVIDED IN THE BASIN, BASED ON SECTION 6.65.
11. CLEANOUT STAKES SHALL BE PLACED IN ALL SEDIMENT BASINS AT THE LOW POINT IN THE BASIN. THE STAKES SHALL BE MARKED SHOWING THE HALF FULL, CLEANOUT POINT, OF THE BASIN.
12. SAFETY FENCING 3' HIGH SHOULD BE PLACED AROUND ALL SEDIMENT TRAPS THAT ARE IN VICINITY TO NON–CONSTRUCTION PEDESTRIAN TRAFFIC AND NOT ALREADY PROTECTED BY FENCING.
13. FOR SLOPES GREATER THAN 10' IN LENGTH AND PROTECTED BY SILT FENCE AT THE TOE OF THE SLOPE, SLOPE TERRACING WILL BE REQUIRED.
14. THE BERM ON SEDIMENT BASINS SHALL BE SEEDED ONCE FINAL GRADE HAS BEEN REACHED. THE SILT FENCE AND BASIN MAY BE REMOVED IF PERMISSION HAS BEEN GRANTED BY NCDENR LAND DEVELOPMENT INSPECTOR AFTER THE GRASS HAS GERMINATED AND STABLE GROUND HAS BEEN ESTABLISHED.
15. ALL EROSION CONTROL MEASURES ARE TO BE DESIGNED TO THE STANDARDS DOCUMENTED IN THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT, HEALTH, AND NATURAL RESOURCES, EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL.

SKIMMER CONSTRUCTION SPECIFICATIONS

1. SHAPE THE BASIN TO THE SPECIFIED DIMENSIONS. PREVENT THE SKIMMING DEVICE FROM SETTLING INTO THE MUD BY EXCAVATING A SHALLOW PIT UNDER THE SKIMMER OR PROVIDING A LOW SUPPORT UNDER THE SKIMMER OF STONE OR TIMBER.
2. PLACE THE BARREL (TYPICALLY 4–INCH LAYERS AND COMPACT IT UNDER AND AROUND THE PIPE OR AT LEAST THE SAME DENSITY AS THE ADJACENT EMBANKMENT. CARE MUST BE TAKEN NOT TO RAISE THE PIPE FROM THE FIRM CONTACT WITH ITS FOUNDATION WHEN COMPACTING UNDER THE PIPE HAUNCHES. PLACE A MINIMUM DEPTH OF 2 FEET OF COMPACTED BACKFILL OVER THE PIPE SPILLWAY BEFORE CROSSING IT WITH CONSTRUCTION EQUIPMENT. IN NO CASE SHOULD THE PIPE CONDUIT BE INSTALLED BY CUTTING A TRENCH THROUGH THE DAM AFTER THE EMBANKMENT IS COMPLETE.
3. ASSEMBLE THE SKIMMER FOLLOWING THE MANUFACTURES INSTRUCTIONS, OR AS DESIGNED.
4. LAY THE ASSEMBLED SKIMMER ON THE BOTTOM OF THE BASIN WITH THE FLEXIBLE JOINT AT THE INLET OF THE BARREL PIPE. ATTACH THE FLEXIBLE JOINT TO THE BARREL PIPE AND POSITION THE SKIMMER OVER THE EXCAVATED PIT OR SUPPORT. BE SURE TO ATTACHA A ROPE TO THE SKIMMER AND ANCHOR IT TO THE SIDE OF THE BASIN. THIS WILL BE USED TO PULL THE SKIMMER TO THE SIDE FOR MAINTENANCE.

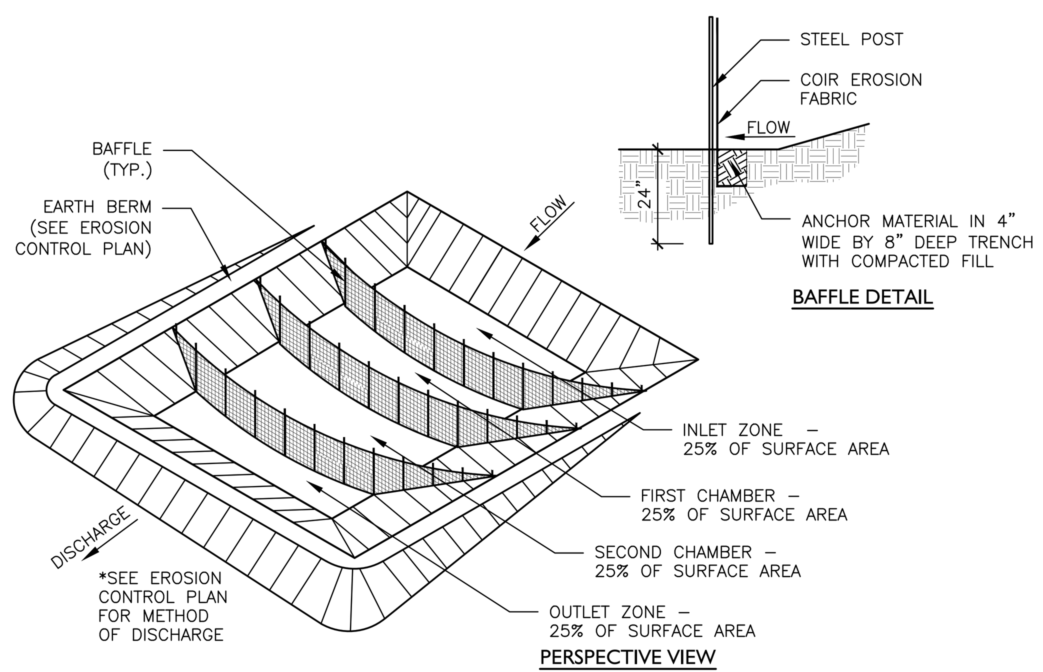


1. Hose can be attached to outlet using the threaded 6" nipple. Typical methods used: on a metal structure a steel stubout welded on the side at the bottom with a 6" threaded coupling or reducers; on a concrete structure with a hole or orifice at the bottom, use a steel plate with a hole and coupling welded to it that will fit over the hole in the concrete and bolted to the structure with sealant.
2. Dimensions are approximate, not intended as plans for construction.
3. Barrel (solid, not foam core pipe) should be 1.4 times the depth of water with a minimum length of 8' so the inlet can be pulled to the side for maintenance. If more than 12' long weight may have to be added to inlet to counter the increased buoyancy.
4. Inlet tapers down from 8" maximum inlet to a 6" barrel and hose. Barrel is smaller to reduce buoyancy and tendency to lift inlet but is sufficient for flow through inlet because of slope. The inlet orifice can be reduced using the plug and cutter provided to control the outflow rate.
5. Inlet is 12" pipe between the straps with slots cut in the inlet and aluminum screen door (smaller than shown in illustration) for access to the inlet and orifice inside.
6. Shipped assembled. User glues inlet extension and barrel, installs vent, cuts orifice in plug and attaches to outlet pipe or structure. Includes flexible hose, rope, orifice cutter, etc.

8" SKIMMER FIXTURE

MAINTENANCE

1. INSPECT SEDIMENT BASINS AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (ONE–HALF INCH OR GREATER) RAINFALL EVENT AND REPAIR IMMEDIATELY. REMOVE SEDIMENT AND RESTORE THE BASIN TO ITS ORIGINAL DIMENSIONS WHEN SEDIMENT ACCUMULATES TO ONE–HALF THE HEIGHT OF THE FIRST BAFFLE. PULL THE SKIMMER TO ONE SIDE SO THAT THE SEDIMENT UNDERNEATH IT CAN BE EXCAVATED. EXCAVATE THE SEDIMENT FROM THE ENTIRE BASIN, NOT JUST AROUND THE SKIMMER OR THE FIRST CELL. MAKE SURE VEGETATION GROWING IN THE BOTTOW OF THE BASIN DOES NOT HOLD DOWN THE SKIMMER.
2. REPAIR THE BAFFLES IF THEY ARE DAMAGED. RE–ANCHOR THE BAFFLES IF WATER IS FLOWING UNDERNEATH OR AROUND THEM.
3. IF THE SKIMMER IS CLOGGED WITH TRASH AND THERE IS WATER IN THE BASIN, USUALYY JERKING ON THE ROPE WILL MAKE THE SKIMMER BOB UP AND DOWN AND DISLODGE THE DEBRIS AND RESTORE FLOW. IF THIS DOES NOT WORK, PULL THE SKIMMER OVER TO THE SIDE OF THE BASIN AND REMOVE THE DEBRIS. ALSO CHECK THE ORIFICE INSIDE THE SKIMMER TO SEE IT IF IS CLOGGED; IF SO REMOVE THE DEBRIS.
4. IF THE SKIMMER ARM OR BARREL PIPE IS CLOGGED, THE ORIFICE CAN BE REMOVED AND THE OBSTRUCTION CLEARED WITH A PLUMBER'S SNAKE OR BY FLUSHING WITH WATER. BE SURE AND REPLACE THE ORIFICE BEFORE REPOSITIONING THE SKIMMER.
5. CHECK THE FABRIC LINED SPILLWAY FOR DAMAGE AND MAKE ANY REQUIRED REPAIRS WITH FABRIC THAT SPANS THE FULL WIDTH OF THE SPILLWAY. CHECK THE EMBANKMENT, SPILLWAYS, AND OUTLET FOR EROSION DAMAGE, AND INSPECT THE EMBANKMENT FOR PIPING AND SETTLEMENT. MAKE ALL NECESSARY REPAIRS IMMEDIATELY. REMOVE ALL TRASH AND OTHER DEBRIS FROM THE SKIMMER AND POOL AREAS.
6. FREEZING WEATHER CAN RESULT IN ICE FORMING IN THE BASIN. SOME SPECIAL PRECAUTIONS SHOULD BE TAKEN IN THE WINTER TO PREVENT THE SKIMMER FROM PLUGGING WITH ICE.



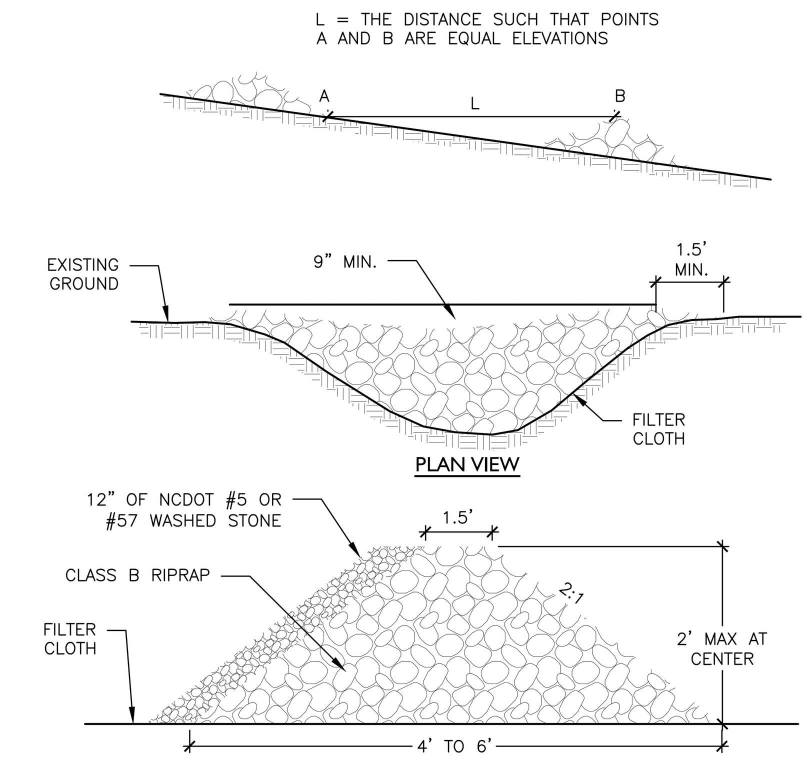
CONSTRUCTION SPECIFICATION

1. GRADE THE BASIN SO THAT THE BOTTOM IS LEVEL FRONT TO BACK AND SIDE TO SIDE.
2. INSTALL POSTS ACROSS THE WIDTH OF THE SEDIMENT TRAP, SEDIMENT BASIN AND/OR SKIMMER BASIN AS SHOWN.
3. STEEL POSTS SHOULD BE DRIVEN TO A DEPTH OF 24 INCHES, SPACED A MAXIMUM OF 4 FEET APART, AND INSTALLED UP THE SIDES OF THE BASIN AS WELL. THE TOP OF THE FABRIC SHOULD BE 6 INCHES HIGHER THAN THE INVERT OF THE SPILLWAY. TOPS OF BAFFLES SHOULD BE 2 INCHES LOWER THAN THE TOP OF THE BERMS.
4. BAFFLE MATERIAL SHALL BE 700 G/M^2 COIR EROSION FABRIC.
5. INSTALL AT LEAST THREE ROWS OF BAFFLES BETWEEN THE INLET AND OUTLET DISCHARGE POINT. BASINS LESS THAN 20 FEET IN LENGTH MAY USE 2 BAFFLES THAT DIVIDES THE BASIN IN THIRDS.
6. ADD A SUPPORT WIRE OR ROPE ACROSS THE TOP OF THE MEASURE TO PREVENT SAGGING.
7. WRAP BAFFLE MATERIAL OVER THE TOP WIRE. ATTACH FABRIC TO A ROPE AND A SUPPORT STRUCTURE WITH ZIP TIES, WIRE, OR STAPLES. USE 3 TIES PER POST ALL WITHIN TOP 8" OF FABRIC.
8. THE BOTTOM AND SIDES OF THE FABRIC SHOULD BE ANCHORED IN A TRENCH 8" DEEP. IN LIEU OF EXCAVATING A TRENCH, THE FABRIC MAY BE INSTALLED WITH A PIECE OF EQUIPMENT SPECIFICALLY DESIGNED TO SLICE THE GROUND WITH A DISC.
9. DO NOT SPLICE THE FABRIC, BUT USE A CONTINUOUS PIECE ACROSS THE BASIN.

MAINTENANCE

- INSPECT BAFFLES AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL. MAKE ANY REQUIRED REPAIRS IMMEDIATELY.
- BE SURE TO MAINTAIN ACCESS TO THE BAFFLES. SHOULD THE FABRIC OF A BAFFLE COLLAPSE, TEAR, DECOMPOSE, OR BECOME INEFFECTIVE, REPLACE IT PROMPTLY.
- REMOVE SEDIMENT DEPOSITS WHEN IT REACHES HALF FULL TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN AND TO REDUCE PRESSURE ON THE BAFFLES. TAKE CARE TO AVOID DAMAGING THE BAFFLES DURING CLEANOUT. SEDIMENT DEPTH SHOULD NEVER EXCEED HALF THE DESIGNED STORAGE DEPTH.

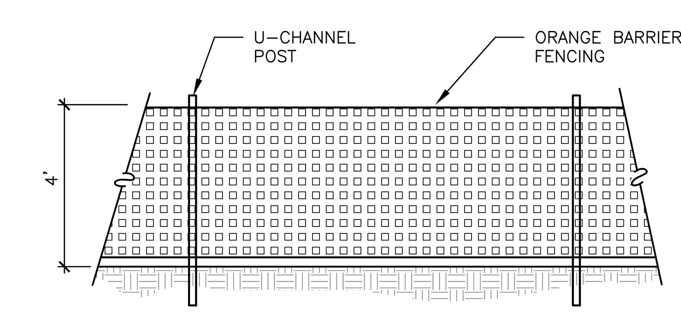
2 Temporary Porous Baffle
NCDEQ STD. 6.65



NOTES:

1. PLACE STONE TO THE LINES AND DIMENSIONS SHOWN IN THE PLAN ON A FILTER FABRIC FOUNDATION.
2. KEE THE CENTER STONE SECTION AT LEAST 9 INCHES BELOW NATURAL GROUND LEVEL WHERE THE DAM ABUTS THE CANNEL BANKS.
3. EXTEND STONE AT LEAST 1.5 FEET BEYOND THE DITCH BANK TO KEEP WATER FROM CUTTING AROUND THE ENDS OF THE CHECK DAM.
4. SET SPACING BETWEEN DAMS TO ASSURE THAT THE ELEVATION AT THE TOP OF THE LOWER DAM IS THE SAME AS THE TOE ELEVATION OF THE UPPER DAM.
5. PROTECT THE CHANNEL AFTER THE LOWEST CHECK DAM FROM HEAVY FLOW THAT COULD CAUSE EROSION.
6. MAKE SURE THAT THE CHANNEL REACH ABOVE THE MOST UPSTREAM DAM IS STABLE.
7. ENSURE THAT OTHER AREAS OF THE CHANNEL, SUCH AS CULVERT ENTRANCES BELOW THE CHECK DAMS, ARE NOT SUBJECT TO DAMAGE OR BLOCKAGE FORM DISPLACED STONES.

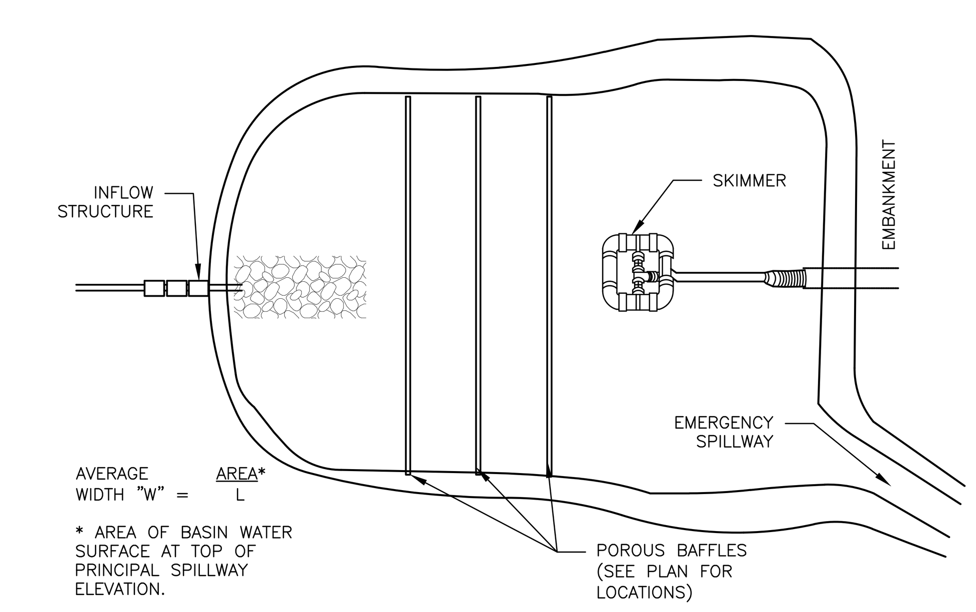
3 Check Dam
NCDEQ STD. 6.83

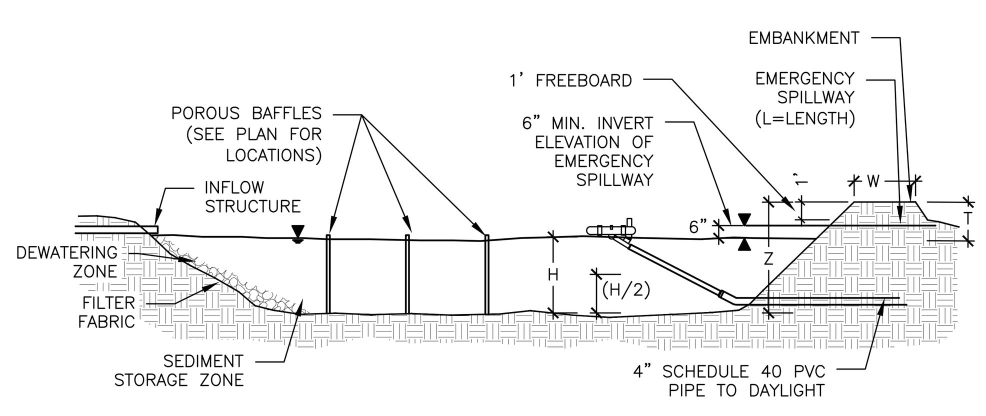


NOTES

1. CONTRACTOR TO INSTALL AND MAINTAIN ORANGE BARRIER FENCING AROUND EXISTING TREES WHERE DELINEATED ON PLAN.
2. NO PARKING OF EQUIPMENT OR MATERIALS SHALL BE PERMITTED INSIDE THIS AREA.
3. MAINTAIN BARRIER FENCING THROUGH CONSTRUCTION. REMOVE ALL BARRIERS UPON COMPLETION OF PROJECT.
4. REFER TO NCDENR STANDARDS FOR GENERAL SPECIFICATIONS REGARDING TREE PROTECTION.
5. 6' MINIMUM WIDTH FOR 2" CAL. TREES OR SMALLER.
6. ONE FOOT OF LINEAR DISTANCE FROM THE TREE TRUNK FOR EACH INCH OF TRUNK DIAMETER, OR $\frac{1}{2}$ HEIGHT OF THE TREE WHICHEVER IS GREATER UNLESS OTHERWISE SHOWN ON PLAN.

4 Temporary Tree Protection Barricade
N.T.S.





5 Temporary Skimmer Basin
NCDENR STD. 6.64

GENERAL NOTES:

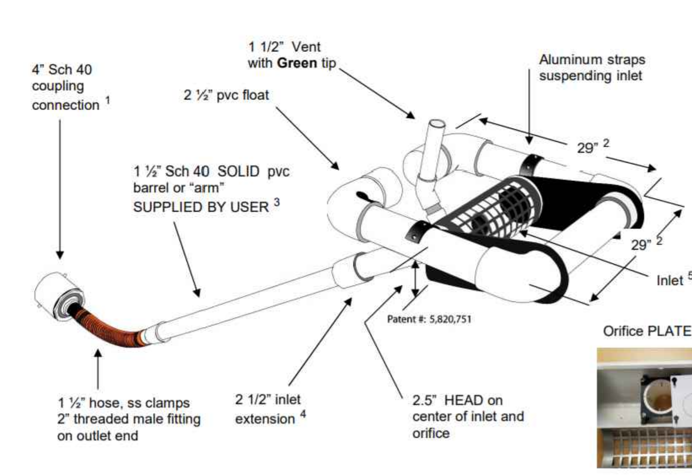
1. CONSTRUCTION OPERATION SHALL BE CARRIED OUT IN SUCH A MANNER THAT EROSION AND WATER POLLUTION IS MINIMIZED. CLEAR, GRUB, AND STRIP THE AREA UNDER THE EMBANKMENT OF ALL VEGETATION AND ROOT MAT. REMOVE ALL SURFACE SOIL CONTAINING HIGH AMOUNTS OF ORGANIC MATTER AND STOCKPILE OR DISPOSE OF IT PROPERLY. PLACE TEMPORARY SEDIMENT CONTROL MEASURES BELOW BASIN AS NEEDED.
2. THE FILL MATERIAL FOR THE EMBANKMENT SHALL BE FREE OF ROOTS OR OTHER WOODY VEGETATION AS WELL AS OVERSIZED STONES, ROCKS, ORGANIC MATERIAL, OR OTHER OBJECTIONABLE MATERIAL. THE EMBANKMENT SHALL BE COMPACTED BY TRAVERSING WITH EQUIPMENT WHILE BEING CONSTRUCTED. PLACE THE FILL IN LIFTS NOT TO EXCEED 9 INCHES, AND MACHINE COMPACT IT. OVERFILL THE EMBANKMENT 6 INCHES TO ALLOW FOR SETTLEMENT. SPILLWAYS SHOULD NOT BE CONSTRUCTED THROUGH FILL SECTIONS. ALL SPILLWAYS SHOULD BE LINED AND/OR RIPRAPPED.
3. ALL CUT AND FILL SLOPES SHALL BE 2:1 OR FLATTER, UNLESS CERTIFIED BY REGISTERED GEOTECHNICAL ENGINEER.
4. SEDIMENT BASIN EMBANKMENTS SHOULD BE PROVIDED WITH EROSION CONTROL AND STABILIZATION.
5. STORAGE AREA IS SHOWN AS RECTANGULAR FOR ILLUSTRATIVE PURPOSES ONLY. AND MAY BE CONSTRUCTED IN ANY SHAPE PROVIDED THE MINIMUM STORAGE VOLUME REQUIREMENT IS MET. THE BASIN SHOULD ALSO BE ORIENTED SUCH THAT THE FILTER AND THE MAIN FLOW OF WATER AND SEDIMENT ARE ON OPPOSITE ENDS ON THE LONGER BASIN DIMENSIONS.
6. REQUIRED STORAGE IS 1800 CUBIC FEET OF STORAGE VOLUME PER ACRES OF DISTURBED AREA. MINIMUM REQUIRED SURFACE AREA REQUIRED SHALL BE 325 ST PER CFS OF Q10 PEAK INFLOW.
7. THE LENGTH OF THE STONE OUTLET (SPILLWAY) IS TO BE BASED ON A 10 YEAR STORM. EARTHEN SPILLWAYS–INSTALL THE SPILLWAY IN UNDISTURBED SOIL TO THE GREATEST EXTENT POSSIBLE. THE ACHIEVEMENT OF PLANNED ELEVATIONS, GRADES, DESIGN, WIDTH, AND ENTRANCE AND EXIT CHANNEL SLOPES ARE CRITICAL TO THE SUCCESSFUL OPERATION OF THE SPILLWAY. THE SPILLWAY SHOULD BE LINED WITH LAMINATED PLASTIC OR IMPERMEABLE GEOTEXTILE FABRIC. THE FABRIC MUST BE WIDE AND LONG ENOUGH TO COVER THE BOTTOM AND SIDES AND EXTEND ONTO THE TOP OF THE DAM FOR ANCHORING IN A TRENCH. THE EDGES MAY BE SECURED WITH 8–INCH STAPLES OR PINS. THE FABRIC MUST BE LONG ENOUGH TO EXTEND DOWN THE SLOPE AND EXIT ONTO STABLE GROUND. THE WIDTH OF THE FABRIC MUST BE ONE PIECE, NOT JOINED OR SPLICED; OTHERWISE WATER CAN GET UNDER THE FABRIC. IF THE LENGTH OF THE FABRIC IS INSUFFICIENT FOR THE ENTIRE LENGTH OF THE SPILLWAY, MULTIPLE SECTIONS, SPANNING THE COMPLETE WIDTH, MAY BE USED. THE UPPER SECTION(S) SHOULD OVERLAP THE LOWER SECTION(S) SO THAT WATER CANNOT FLOW UNDER THE FABRIC. SECURE THE UPPER EDGES AND SIDES OF THE FABRIC IN A TRENCH WITH STAPLES OR PINS.
8. INLETS–DISCHARGE WATER INTO THE BASIN IN A MANNER TO PREVENT EROSION. USE TEMPORARY SLOPE DRAINS OR DIVERSIONS WITH OUTLET PROTECTION TO DIVERT SEDIMENT–LADEN WATER IN UPPER END OF THE TRAP.
9. EROSION CONTROL – CONSTRUCT THE STRUCTURE SO THAT THE DISTURBED AREA IS MINIMIZED. DIVERT SURFACE WATER AWAY FROM BARE AREAS. COMPLETE THE EMBANKMENT BEFORE THE AREA IS CLEARED. STABILIZE THE EMERGENCY SPILLWAY EMBANKMENT AND ALL OTHER DISTURBED AREAS ABOVE THE CREST OF THE PRINCIPAL SPILLWAY IMMEDIATELY AFTER CONSTRUCTION.
10. WHENEVER TOPOGRAPHY ALLOWS, THE BASIN LENGTH SHOULD BE TWICE (2X) THE BASIN WIDTH, TO ALLOW FOR SETTLING. BAFFLES SHOULD BE PROVIDED IN THE BASIN, BASED ON SECTION 6.65.
11. CLEANOUT STAKES SHALL BE PLACED IN ALL SEDIMENT BASINS AT THE LOW POINT IN THE BASIN. THE STAKES SHALL BE MARKED SHOWING THE HALF FULL, CLEANOUT POINT, OF THE BASIN.
12. SAFETY FENCING 3' HIGH SHOULD BE PLACED AROUND ALL SEDIMENT TRAPS THAT ARE IN VICINITY TO NON–CONSTRUCTION PEDESTRIAN TRAFFIC AND NOT ALREADY PROTECTED BY FENCING.
13. FOR SLOPES GREATER THAN 10' IN LENGTH AND PROTECTED BY SILT FENCE AT THE TOE OF THE SLOPE, SLOPE TERRACING WILL BE REQUIRED.
14. THE BERM ON SEDIMENT BASINS SHALL BE SEEDED ONCE FINAL GRADE HAS BEEN REACHED. THE SILT FENCE AND BASIN MAY BE REMOVED IF PERMISSION HAS BEEN GRANTED BY NCDENR LAND DEVELOPMENT INSPECTOR AFTER THE GRASS HAS GERMINATED AND STABLE GROUND HAS BEEN ESTABLISHED.
15. ALL EROSION CONTROL MEASURES ARE TO BE DESIGNED TO THE STANDARDS DOCUMENTED IN THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT, HEALTH, AND NATURAL RESOURCES, EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL.

SKIMMER CONSTRUCTION SPECIFICATIONS

1. SHAPE THE BASIN TO THE SPECIFIED DIMENSIONS. PREVENT THE SKIMMING DEVICE FROM SETTLING INTO THE MUD BY EXCAVATING A SHALLOW PIT UNDER THE SKIMMER OR PROVIDING A LOW SUPPORT UNDER THE SKIMMER OF STONE OR TIMBER.
2. PLACE THE BARREL (TYPICALLY 4–INCH LAYERS AND COMPACT IT UNDER AND AROUND THE PIPE OR AT LEAST THE SAME DENSITY AS THE ADJACENT EMBANKMENT. CARE MUST BE TAKEN NOT TO RAISE THE PIPE FROM THE FIRM CONTACT WITH ITS FOUNDATION WHEN COMPACTING UNDER THE PIPE HAUNCHES. PLACE A MINIMUM DEPTH OF 2 FEET OF COMPACTED BACKFILL OVER THE PIPE SPILLWAY BEFORE CROSSING IT WITH CONSTRUCTION EQUIPMENT. IN NO CASE SHOULD THE PIPE CONDUIT BE INSTALLED BY CUTTING A TRENCH THROUGH THE DAM AFTER THE EMBANKMENT IS COMPLETE.
3. ASSEMBLE THE SKIMMER FOLLOWING THE MANUFACTURER'S INSTRUCTIONS, OR AS DESIGNED.
4. LAY THE ASSEMBLED SKIMMER ON THE BOTTOM OF THE BASIN WITH THE FLEXIBLE JOINT AT THE INLET OF THE BARREL PIPE. ATTACH THE FLEXIBLE JOINT TO THE BARREL PIPE AND POSITION THE SKIMMER OVER THE EXCAVATED PIT OR SUPPORT. BE SURE TO ATTACH A ROPE TO THE SKIMMER AND ANCHOR IT TO THE SIDE OF THE BASIN. THIS WILL BE USED TO PULL THE SKIMMER TO THE SIDE FOR MAINTENANCE.

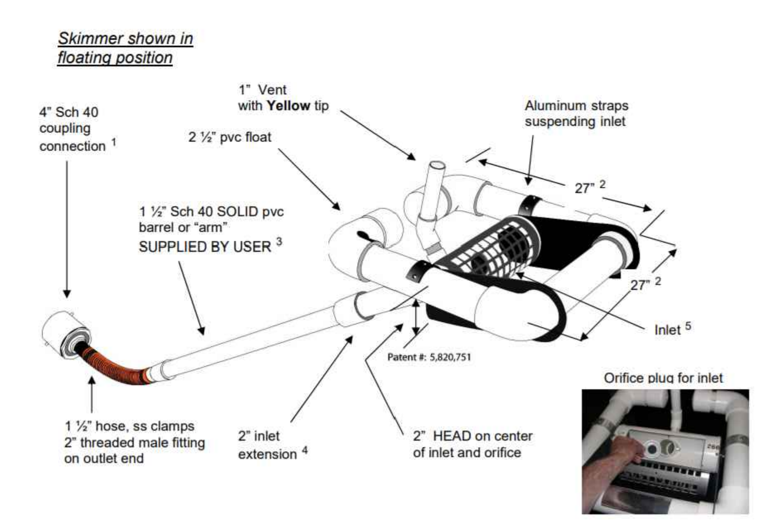
MAINTENANCE

1. INSPECT SEDIMENT BASINS AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (ONE–HALF INCH OR GREATER) RAINFALL EVENT AND REPAIR IMMEDIATELY. REMOVE SEDIMENT AND RESTORE THE BASIN TO ITS ORIGINAL DIMENSIONS WHEN SEDIMENT ACCUMULATES TO ONE–HALF THE HEIGHT OF THE FIRST BAFFLE. PULL THE SKIMMER TO ONE SIDE SO THAT THE SEDIMENT UNDERNEATH IT CAN BE EXCAVATED. EXCAVATE THE SEDIMENT FROM THE ENTIRE BASIN, NOT JUST AROUND THE SKIMMER OR THE FIRST CELL. MAKE SURE VEGETATION GROWING IN THE BOTTOM OF THE BASIN DOES NOT HOLD DOWN THE SKIMMER.
2. REPAIR THE BAFFLES IF THEY ARE DAMAGED. RE–ANCHOR THE BAFFLES IF WATER IS FLOWING UNDERNEATH OR AROUND THEM.
3. IF THE SKIMMER IS CLOGGED WITH TRASH AND THERE IS WATER IN THE BASIN, USUALLY JERKING ON THE ROPE WILL MAKE THE SKIMMER BOB UP AND DOWN AND DISLODGE THE DEBRIS AND RESTORE FLOW. IF THIS DOES NOT WORK, PULL THE SKIMMER OVER TO THE SIDE OF THE BASIN AND REMOVE THE DEBRIS. ALSO CHECK THE ORIFICE INSIDE THE SKIMMER TO SEE IF IT IS CLOGGED; IF SO REMOVE THE DEBRIS.
4. IF THE SKIMMER ARM OR BARREL PIPE IS CLOGGED, THE ORIFICE CAN BE REMOVED AND THE OBSTRUCTION CLEARED WITH A PLUMBER'S SNAKE OR BY FLUSHING WITH WATER. BE SURE AND REPLACE THE ORIFICE BEFORE REPOSITIONING THE SKIMMER.
5. CHECK THE FABRIC LINED SPILLWAY FOR DAMAGE AND MAKE ANY REQUIRED REPAIRS WITH FABRIC THAT SPANS THE FULL WIDTH OF THE SPILLWAY. CHECK THE EMBANKMENT, SPILLWAYS, AND OUTLET FOR EROSION DAMAGE, AND INSPECT THE EMBANKMENT FOR PIPING AND SETTLEMENT. MAKE ALL NECESSARY REPAIRS IMMEDIATELY. REMOVE ALL TRASH AND OTHER DEBRIS FROM THE SKIMMER AND POOL AREAS.
6. FREEZING WEATHER CAN RESULT IN ICE FORMING IN THE BASIN. SOME SPECIAL PRECAUTIONS SHOULD BE TAKEN IN THE WINTER TO PREVENT THE SKIMMER FROM PLUGGING WITH ICE.



1. Skimmer can be attached to a straight 4" sch 40 pipe through the dam but the pipe may need to be anchored to the bottom at the connection so it is secure. Coupling can be removed and hose attached to outlet using the threaded 2" fitting. Typical methods used: on a metal structure a steel stubout welded on the side at the bottom with a 2" threaded coupling or reducers; on a concrete structure with a hole or orifice at the bottom, use a steel plate with a hole cut in it and coupling welded to it that will fit over the hole in the concrete and bolted to the structure with sealant: grout a 4" pvc pipe in a hole in the concrete to connect the skimmer.
2. Dimensions are approximate, not intended as plans for construction.
3. Barrel (solid, not foam core pipe) should be 1.4 times the depth of water with a minimum length of 6' so the inlet can be pulled to the side for maintenance. If more than 8' long weight may have to be added to inlet to counter the increased buoyancy.
4. Inlet tapers down from 2 ½" maximum inlet to a 1½" barrel and hose. Barrel is smaller to reduce buoyancy and tendency to lift inlet but is sufficient for flow through inlet because of slope. The inlet orifice can be reduced using the plug and cutter provided to control the outflow rate.
5. Inlet is 5" pipe between the straps with aluminum screen door for access to the 2½" inlet and orifice inside.
6. **Capacity** 6,234 cubic feet per day maximum with 2½" inlet and 2.5 head. Inlet can be reduced by installing a smaller orifice using the plug and cutter provided to adjust flow rate for the particular basin volume and drawdown time required.
7. Shipped assembled. User glues inlet extension and barrel, installs vent, cuts orifice in plug and attaches to outlet pipe or structure. Includes flexible hose, rope, orifice cutter, etc.

2.5" SKIMMER FIXTURE



1. Skimmer can be attached to a straight 4" sch 40 pipe through the dam but the pipe may need to be anchored to the bottom at the connection so it is secure. Coupling can be removed and hose attached to outlet using the threaded 2" fitting. Typical methods used: on a metal structure a steel stubout welded on the side at the bottom side with a 2" threaded coupling or reducers; on a concrete structure with a hole or orifice at the bottom, use a steel plate with a hole cut in it and coupling welded to it that will fit over the hole in the concrete and bolted to the structure with sealant: grout a 4" pvc pipe in a hole in the concrete to connect the skimmer.
2. Dimensions are approximate, not intended as plans for construction.
3. Barrel (solid, not foam core pipe) should be 1.4 times the depth of water with a minimum length of 6' so the inlet can be pulled to the side for maintenance. If more than 8' long weight may have to be added to inlet to counter the increased buoyancy.
4. Inlet tapers down from 2" maximum inlet to a 1 ½" barrel and hose. Barrel is smaller to reduce buoyancy and tendency to lift inlet but is sufficient for flow through inlet because of slope. The inlet orifice can be reduced using the plug and cutter provided to control the outflow rate.
5. Inlet is 4" pipe between the straps with aluminum screen door for access to the inlet and orifice inside.
6. **Capacity** 3,283 cubic feet per day maximum with 2" inlet and 2" head. Inlet can be reduced by installing a smaller orifice using the plug and cutter provided to adjust flow rate for the particular basin volume and drawdown time required.
7. Shipped assembled. User glues inlet extension and barrel, installs vent, cuts orifice in plug and attaches to outlet pipe or structure. Includes flexible hose, rope, orifice cutter, etc.

2.0" SKIMMER FIXTURE

DATA BLOCK															
BASIN NO.	DRAINAGE AREA (AC.)	DENUDED AREA (AC.)	Q10 (CFS)	BASIN VOLUME		BASIN SURFACE AREA		CLEANOUT DEPTH (FT.) H/2	H (FEET)	Z (FEET)	L (FEET)	T (FEET)	W (FEET)	SKIMMER ø (IN.)	SKIMMER ORIFICE ø (IN.)
				REQUIRED (CU. FT.)	PROVIDE (CU. FT.)	REQUIRED (SQ. FT.)	PROVIDE (SQ. FT.)								
B	6.62	6.62	26.98	11,916	20,696	8,769	11,801	1.00	2.00	5	10.0	3	5.00	2.5	2.4
C	2.74	2.10	11.27	3,780	10,928	3,664	9,146	1	2	4	15	2	5	2.0	1.5

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Seals:

PRELIMINARY
NOT FOR
CONSTRUCTION

Corp. NC License: F-1320

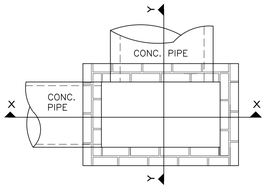
Harrisburg Park
191 Sims Parkway
Harrisburg, North Carolina

Project No: 17.000255
Date: 06.18.19
Revisions:

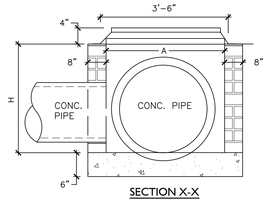
Sheet Title:
SITE CONSTRUCTION DETAILS

Sheet No:
C501

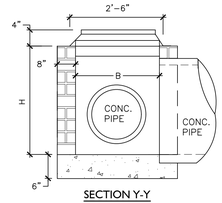
NOTES:
1. ALL DROP INLETS OVER 3'-6" IN DEPTH TO BE PROVIDED WITH STEPS 1'-2" ON CENTERS.
2. ALL CONCRETE TO BE 3000 P.S.I. COMPRESSIVE STRENGTH.
3. MORTAR JOINTS SHOULD BE BETWEEN $\frac{3}{8}$" AND $\frac{5}{8}$" THICK.
4. BRICK MASONRY DROP INLET NOT TO BE USED IN LOCATIONS SUBJECT TO TRAFFIC, FOR STRUCTURES WITHIN TRAFFIC BARING ARES, USE PRE-CAST STRUCTURE INSTEAD.
5. JUMBO BRICK WILL BE PERMITTED. CONCRETE BRICK OR 4" SOLID CONCRETE BLOCKS MAY BE USED IN LIEU OF HARD COMMON CLAY BRICK.
6. FOR 8'-0" IN HEIGHT OR LESS USE 8" WALL OVER 8'-0" IN HEIGHT USE 12" WALL TO 6'-0" FROM TOP OF WALL AND 8" WALL FOR THE REMAINING 6'-0". QUANTITIES TO BE ADJUSTED ACCORDINGLY.
7. ALL PIPE IN STORM DRAIN STRUCTURE TO BE STRUCK EVEN WITH THE INSIDE WALL, GROUTED AND BRUSHED SMOOTH.
8. ALL SLABS SHALL BE FORMED.
9. FRAME AND GRATE FOR THIS STRUCTURE IN ALL SITUATIONS SHALL BE "US FOUNDRY" #4139 & #6429 OR APPROVED EQUAL WITH H20 LOADING CAPACITY.
10. REFER TO NCDOT STRUCTURE DETAILS FOR PIPE SIZES LARGER THAN 24".
11. USE CONCRETE MASONRY UNITS OR (2) 6" PRECAST GRADE RINGS TO SET GRATES. ALLOW FOR TOP 1" TO BE ADJUSTED ACCORDINGLY.
12. PRE-CAST BOXES CAN BE SUBSTITUTED. SUBMIT SHOP DRAWINGS ON ALL STRUCTURES.



PLAN



SECTION X-X

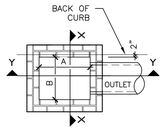


SECTION Y-Y

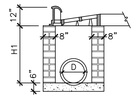
DIMENSIONS AND QUANTITIES					
DIMENSIONS OF BOX & PIPE				CONC.	TOTAL BRICK MASONRY			DEDUCTIONS	
PIPE	SPAN	WIDTH	HEIGHT	IN BASE	PER FT.	BRICK	MIN.	FOR ONE PIPE	
SIZE	A	B	H (MIN.)	C.U. YDS.	HEIGHT	COPING	H	C.M.	R.C.
12"	3'-0"	2'-0"	2'-8"	0.267	0.313	0.037	0.871	0.020	0.032
15"	/	/	3'-0"	/	/	/	0.976	0.031	0.047
18"	/	/	3'-5"	/	/	/	1.106	0.044	0.065
24"	3'-0"	2'-0"	4'-0"	0.267	0.313	0.037	1.289	0.078	0.113

1 Drop Inlet Detail
N.T.S.

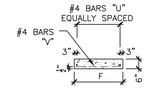
DIMENSIONS AND QUANTITIES FOR BRICK CATCH BASIN																			
DIMENSIONS OF BOX AND PIPE							COVER DIMENSION		REINFORCING								CUBIC YARDS OF CONCRETE IN BOX			BRICK MASONRY H1	
PIPE	SPAN	WIDTH	WIDTH	SPAN	HEIGHT	HEIGHT			BARS-U		BARS-V		BARS-W		TOTAL						
D	A	B	C	G	MIN.H1	H2	E	F	NO	LENGTH	NO	LENGTH	NO	LENGTH	LBS.	TOP SLAB	FLOOR	TOTAL	CU. YDS.	PER FT. HT.
15"	3'-0"	2'-4"	–	–	2'-6"	–	–	–	–	–	–	–	–	–	–	–	0.294	0.294	0.823	0.329	
18"	3'-0"	2'-4"	–	–	2'-10"	–	–	–	–	–	–	–	–	–	–	–	0.294	0.294	0.933	ABOVE	
24"	3'-0"	2'-4"	–	–	3'-4"	–	–	–	–	–	–	–	–	–	–	–	0.294	0.294	1.098	MIN. H1	
30"	3'-0"	2'-4"	3'-4"	3'-0"	3'-2"	A	1'-10"	4'-4"	4	1'-6"	3	4'-1"	3	4'-1"	45	0.147	0.374	0.522	1.306		
36"	3'-0"	2'-4"	3'-10"	3'-0"	3'-8"	R	2'-4"	4'-4"	4	2'-0"	4	4'-1"	3	4'-1"	49	0.187	0.415	0.602	1.870	0.329	
42"	3'-0"	2'-4"	–	4'-5"	4'-4"	A	2'-1"	3'-6"	4	1'-9"	3	3'-3"	3	3'-3"	38	0.135	0.390	0.525	1.847	H2	
48"	3'-0"	2'-4"	–	5'-0"	4'-10"	B	2'-8"	3'-6"	4	2'-6"	4	3'-3"	3	3'-3"	40	0.173	0.430	0.603	2.185		
54"	3'-0"	2'-4"	–	5'-7"	5'-4"	L	3'-3"	3'-6"	4	3'-0"	6	3'-3"	3	3'-3"	48	0.211	0.470	0.680	2.553		



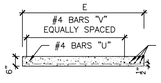
PLAN



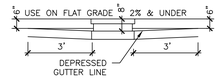
SECTION X-X



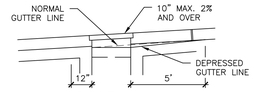
SECTION S-S



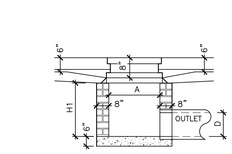
SECTION R-R



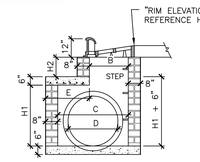
ELEVATION
STANDARD CURB & GUTTER ON LIGHT GRADES



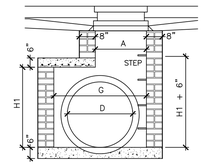
ELEVATION
STANDARD CURB & GUTTER ON STEEP GRADES



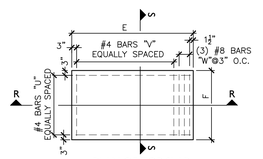
SECTION Y-Y



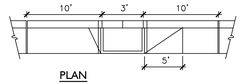
END ELEVATION/SECTION J-J
WHERE 30" TO 36" PIPE IS USED



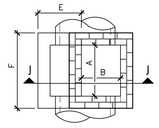
SIDE ELEVATION/SECTION M-M
WHERE 42" TO 54" PIPE IS USED



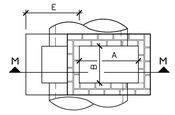
PLAN OF TOP SLAB



PLAN
CURB AND GUTTER WITH CATCH BASIN ON STEEP GRADES



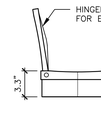
PLAN



PLAN

NOTES:
1. MORTAR JOINTS SHOULD BE BETWEEN $\frac{1}{4}$" ± $\frac{1}{4}$" THICK.
2. ALL CONCRETE TO BE 3000 P.S.I. COMPRESSIVE STRENGTH.
3. PRE-CAST CAN BE SUBSTITUTED. SUBMIT SHOP DRAWINGS ON ALL STRUCTURES.
4. ALL CATCH BASINS OVER 3'-6" IN DEPTH SHALL BE PROVIDED WITH STEPS 12" ON CENTERS IN ACCORDANCE WITH NCDOT STD. #840.66.
5. CONCRETE BRICK MAY BE USED IN LIEU OF HARD COMMON CLAY BRICK.
6. JUMBO BRICK WILL BE PERMITTED.
7. FOR 8'-0" IN HEIGHT OR LESS USE 8" WALL OVER 8'-0" IN HEIGHT USE 12" WALL TO 6'-0" FROM TOP OF WALL AND 8" WALL FOR THE REMAINING 6'-0". QUANTITIES TO BE ADJUSTED ACCORDINGLY.
8. ALL PIPE IN STORM DRAIN STRUCTURE TO BE STRUCK EVEN WITH THE INSIDE WALL, GROUTED AND BRUSHED SMOOTH.
9. WEEP HOLE(S) SHALL BE PLACED IN BACK WALL. A STONE DRAIN CONSISTING OF 1 (ONE) CUBIC FOOT OF NUMBER 78M STONE CONTAINED IN A BAG OF POROUS FABRIC SHALL BE PLACED AT WEEP HOLE.
10. BRICK SHALL BE BONDED WITH FULL HEADERS EVERY 3 COURSES.
11. FRAME AND GRATE SHALL BE IN ACCORDANCE WITH NCDOT STD. NO. 840.03 WITH DIRECTIONAL GRATES AS APPROPRIATE.

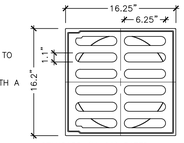
2 Curb Inlet Detail
N.T.S.



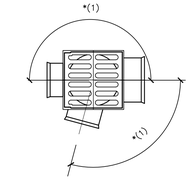
MATERIAL: CAST IRON

QUALITY: MATERIAL SHALL CONFORM TO ASTM A48 – CLASS 30B

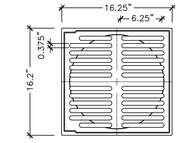
PAINT: CASTINGS ARE FURNISHED WITH A BLACK PAINT



STANDARD (H-20) RATED DRAIN AREA = 92.5 SQ. INCH

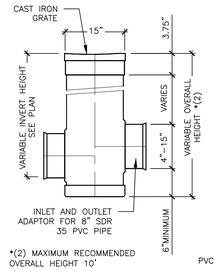


*(1) ADAPTORS CAN BE MOUNTED ON ANY ANGLE 0° TO 359°. TO DETERMINE MINIMUM ANGLE BETWEEN ADAPTORS SEE PLAN.

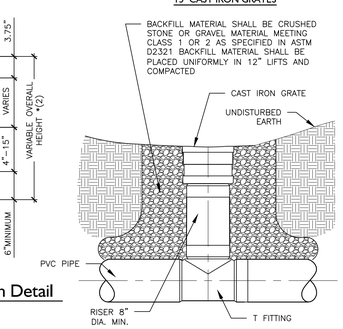


PEDESTRIAN (H-10) RATED DRAIN AREA = 79.3 SQ. INCH

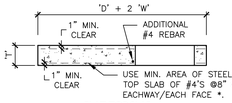
15" CAST IRON GRATES



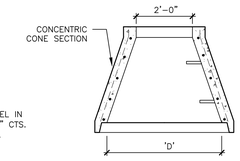
*(2) MAXIMUM RECOMMENDED OVERALL HEIGHT 10'



3 15" Area Drain Detail
N.T.S.

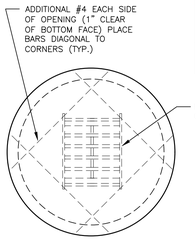


FLAT TOP SLAB

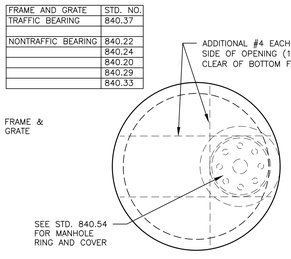


ALTERNATE CONE SECTION

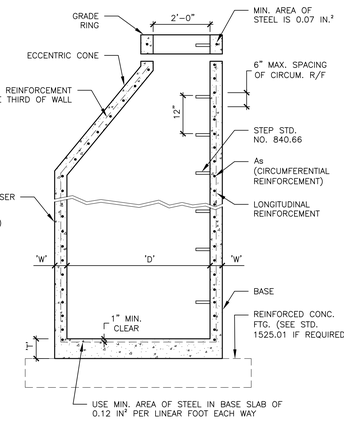
FRAME AND GRATE	STD. NO.
TRAFFIC BEARING	840.37
NONTRAFFIC BEARING	840.22
	840.24
	840.20
	840.29
	840.33



GRATED INLET OPTION



MANHOLE OPTION

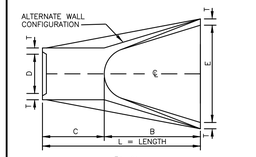


TYPICAL MANHOLE SECTION

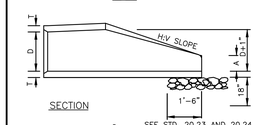
GENERAL NOTES
1. USE 4000 PSI MINIMUM COMPRESSIVE STRENGTH CONCRETE.
2. FABRICATE, ASSEMBLE AND DESIGN PRECAST MANHOLE COMPONENTS ACCORDANCE WITH AASHTO M199.
3. ASSEMBLE RISER AND GRADE RINGS WITH THE STEPS SPACED 12" FROM THE TOP TO THE BOTTOM OF THE MANHOLE.
4. WHERE THE MANHOLE IS EXPOSED TO ROAD TRAFFIC, CONSTRUCT THE TOP OF MANHOLE FLUSH WITH THE GROUND AND A MINIMUM OF 9" ABOVE THE GROUND AT OTHER LOCATIONS.
5. LIMIT DEPTH OF FILL TO 30'-0" FROM FINISH GRADE TO TOP OF BOTTOM SLAB.
6. THE MIN. SLAB THICKNESS 'T' IS THE DIMENSION OF THE THINNEST PORTION OF THE TOP/BOTTOM SLAB.
7. * TOP MAT OF REINFORCEMENT MAY BE NEGLECTED IF TOP SLAB HAS A DISTINGUISHABLE TOP AND BOTTOM.

D	W	T	As
INTERNAL DIAMETER (FT.)	MIN. WALL THICKNESS (IN.)	MIN. TOP/BOTTOM SLAB THICKNESS (IN.)	MIN. CIRCUM-FERENTIAL AREA OF STEEL PER VERTICAL FT. (SQ. IN.)
4	4	6	0.12
5	5	8	0.15
6	6	8	0.18

4 Precast Storm Manhole 12" Thru 48" Pipe
NCDOT STD. 840.52

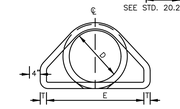


PLAN



SECTION

SEE STD. 20.23 AND 20.24

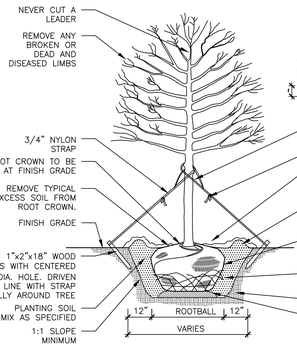


END VIEW

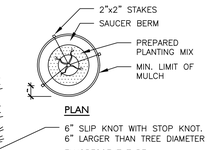
TABLE OF DIMENSIONS								
D	T	A	B	C	E	L	H/V	WT.
12"	2-1/4"	4"	2'-0"	4'-1"	2'-0"	6'-1"	3:1	730
15"	2-1/4"	6"	2'-3"	3'-10"	2'-0"	6'-1"	3:1	730
18"	2-1/2"	9"	2'-3"	3'-10"	3'-0"	6'-1"	3:1	1190
24"	3"	10"	3'-8"	2'-6"	4'-0"	6'-2"	3:1	1770
30"	3-1/2"	1'-0"	4'-6"	1'-8"	5'-0"	6'-2"	3:1	2380
36"	4"	1'-3"	5'-3"	2'-11"	6'-0"	8'-2"	3:1	5320
42"	4-1/2"	1'-9"	5'-3"	2'-11"	6'-6"	8'-2"	3:1	5920
48"	5"	2'-0"	6'-0"	2'-2"	7'-0"	8'-2"	3:1	7470
54"	5-1/2"	2'-3"	5'-6"	2'-10"	7'-6"	8'-4"	3:1	8810
60"	6"	2'-6"	5'-0"	3'-3"	8'-0"	8'-3"	3:1	11180
66"	6-1/2"	3'-0"	6'-0"	2'-3"	8'-6"	8'-3"	3:1	12530
72"	7"	3'-0"	6'-6"	1'-9"	9'-0"	8'-3"	3:1	13980

GENERAL NOTES:
1. SEE FORMER NCDOT STANDARD 310.01 FOR DETAILS.
2. REINFORCEMENT SHALL CONFORM TO THE REQUIREMENTS OF REINFORCED CONCRETE PIPE OF LIKE DIAMENTER PER AASHTO M170, TABLE 2, WALL B.
3. ALL CONCRETE TO BE 4000 P.S.I COMPRESSIVE STRENGTH.
4. PROVIDE TONGUE OR SPIGOT JOINT AT INLET END SECTION.
5. PROVIDE GROOVE OR BELL JOINT AT OUTLET END SECTION.
6. THE DIMENSIONS FOR END SECTIONS SHALL SUBSTANTIALLY AGREE WITH THE TABLE. MINOR VARIATIONS WILL BE PERMITTED BASED ON THE MANUFACTURER'S STANDARD FORMS AND TEMPLATES.
7. NOT TO BE USED IN NCDOT MAINTAINED RIGHT OF WAY.

5 Flared End Section
N.T.S.



SECTION



PLAN

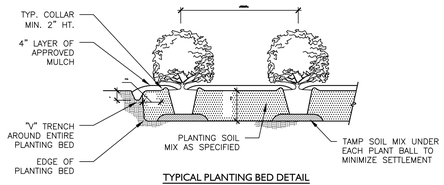
- 6" SLIP KNOT WITH STOP KNOT. 6" LARGER THAN TREE DIAMETER
- FLUORESCENT TAPE
- 4" MAXIMUM LAYER OF MULCH. TAPER TO TRUNK. KEEP MULCH AWAY FROM TRUNK 1-2"
- 4" HIGH/ 6" WIDE MAXIMUM BERM OUTSIDE OF ROOTBALL
- REMOVE TOP 1/3 OF BURLAP, AND ANY NAILS/PINS, ETC FROM B&B TREES
- REMOVE TOP 2/3 OF WIRE BASKET WHERE PRESENT
- UNDISTURBED SOIL
- RAISE PIT BOTTOM TO SET ROOT CROWN AT THE CORRECT HEIGHT. FIRM SOIL UNDER ROOT BALL.

ALL TREES SHALL MEET AMERICAN STANDARD FOR NURSERY STOCK (ANSI Z60.1-2004)

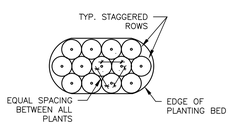
FOR EXAMPLE: CALIPER	HEIGHT (RANGE)	MAX. HT.	MIN. ROOT BALL DIA.	MIN. ROOT BALL DEPTH
2"	12-14'	16'	24"	16"
3"	14-16'	18'	32"	21"

NOTES
1. ALL TREES ARE TO BE NURSERY GROWN, BALL AND BURLAP (B&B) PREFERRED.
2. REMOVE ALL TREATED OR PLASTIC-COATED BURLAP, STRAPPING, WIRE OR NYLON TWINE FROM ROOT BALL AND CANOPY. AFTER SETTING IN HOLE, CUT AWAY TOP 2/3 OF WIRE BASKET, IF PRESENT, AND TOP 1/3 OF BURLAP.
3. SOAK PLANT BALL AND PIT IMMEDIATELY AFTER INSTALLATION.
4. INSTALL TOP OF PLANT BALL 2" ABOVE FINISH GRADE.
5. 4" SAUCER WILL BE OUTSIDE OF BACKFILL.
6. NO BACKFILL ALLOWED ON TOP OF ROOT BALL.
7. WHERE STRAPPING OR GUYING IS INSTALLED, CONTRACTOR SHALL REMOVE ALL STAKES, GUYING ETC. AT END OF WARRANTY PERIOD.
8. SEE SPECIFICATIONS FOR OTHER REQUIREMENTS.
9. REMOVE EXCESS SOIL FROM SITE AND DISPOSE OF IN A LEGAL MANNER.
10. RE-SEED UNMULCHED, DISTURBED AREAS.
11. STAKING IS REQUIRED FOR ALL TREES IN R.O.W. OR UPON REQUEST OF ARBORIST.

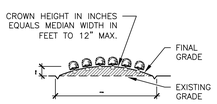
6 Tree Planting Detail
N.T.S.



TYPICAL PLANTING BED DETAIL



TYPICAL PLANTING BED PLAN



TYPICAL BED CROWNING

NOTES
1. SCARIFY ROOT MASS OF CONTAINERIZED PLANT MATERIAL.
2. INSTALL CONTAINERIZED PLANTS AT FINISHED GRADE.
3. TAMP PLANTING MIX FIRMLY AS PIT IS FILLED AROUND EACH PLANT BALL.
4. OMIT COLLAR AROUND EACH SHRUB WHEN IRRIGATION SYSTEM IS PRESENT.
5. SOAK EACH PLANT BALL AND PIT IMMEDIATELY AFTER INSTALLATION.
6. SEE SPECIFICATIONS FOR FURTHER SOIL AND PLANTING REQUIREMENTS.

7 Shrub Planting Detail
N.T.S.

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Seals:

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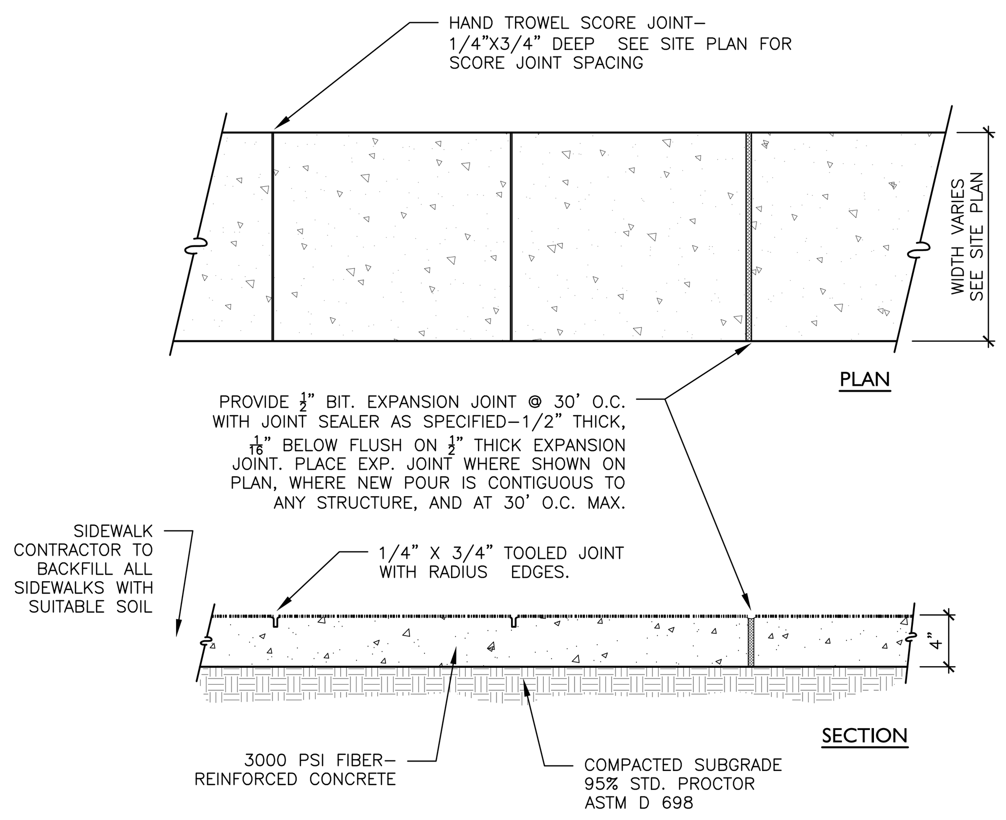
Harrisburg Park
191 Sims Parkway
Harrisburg, North Carolina

Project No: 17.000255
Date: 06.18.19
Revisions:

Sheet Title:
SITE CONSTRUCTION DETAILS

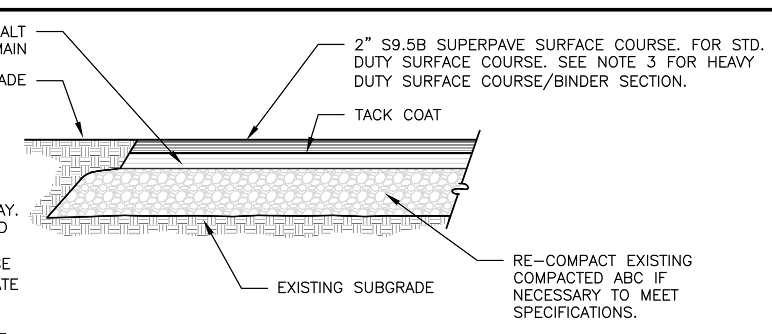
Sheet No:
C502

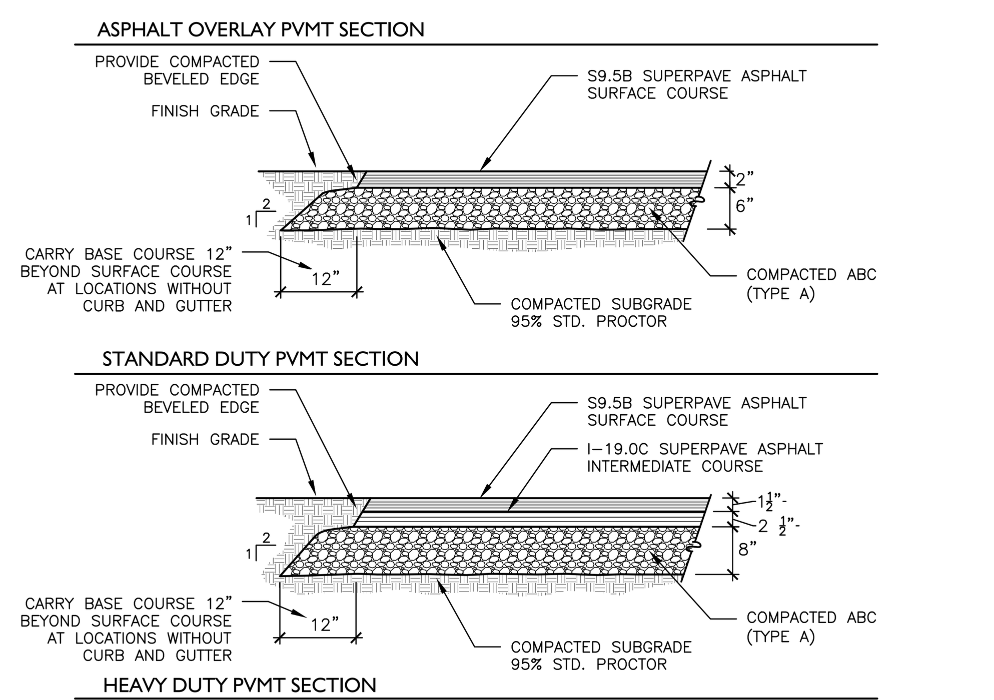


NOTES
1. EXPOSED AGGREGATE CONCRETE PAVEMENT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.
2. COLOR(S) AND FINISH(ES) TO BE SELECTED BY OWNER.
3. CONTRACTOR TO CONSTRUCT MOCK–UP PANELS FOR OWNER REVIEW.
4. CONCRETE PAVEMENT SHALL BE SEALED WITH DAYTON SUPERIOR JB CURE AND SEAL.

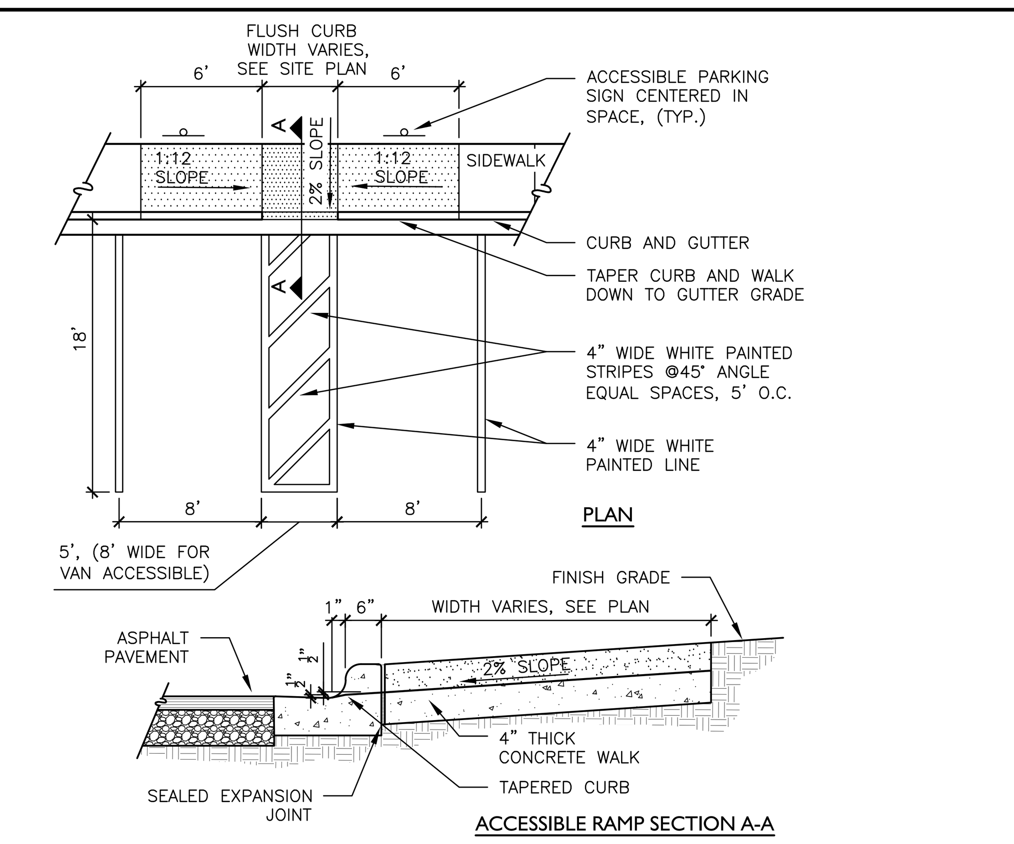
1 Exposed Aggregate Concrete Sidewalk Detail
N.T.S.

NOTES
1. SEE SPECIFICATIONS FOR OTHER REQUIREMENTS.
2. SPRAY HERBICIDE TO KILL ALL VEGETATION PRIOR TO APPLYING OVERLAY.
3. HEAVY DUTY PAVEMENT AREAS INDICATED TO RECEIVE A NEW SURFACE/BINDER COURSE ON THE EXISTING BASE COURSE SHALL USE 2½" OF I–19.0B INTERMEDIATE COURSE AND 1½" OF SF9.5A SURFACE COURSE.
4. ASPHALT MIX SHALL NOT CONTAIN MORE THAN 30% RECYCLED ASPHALT PRODUCT (RAP).

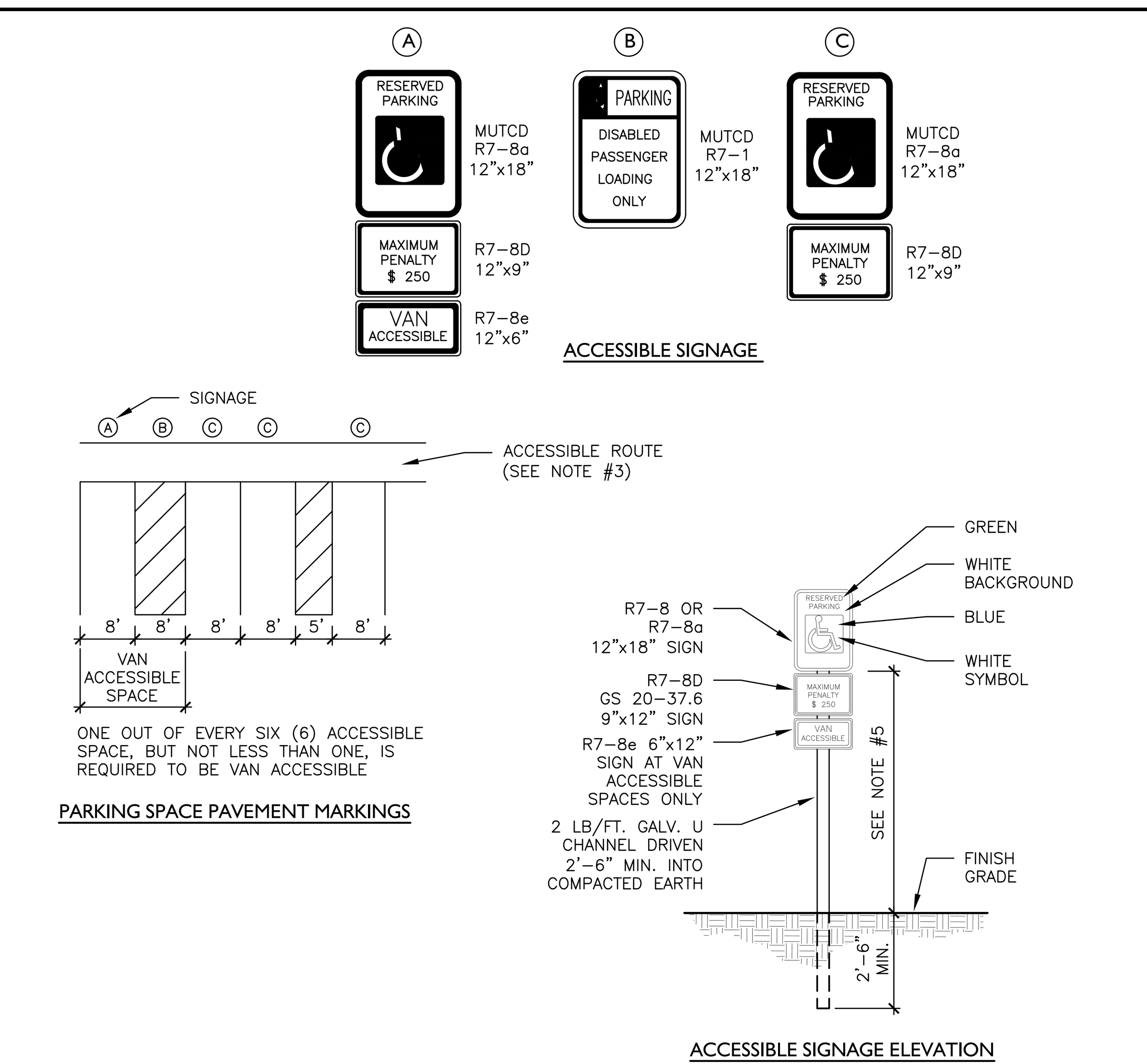




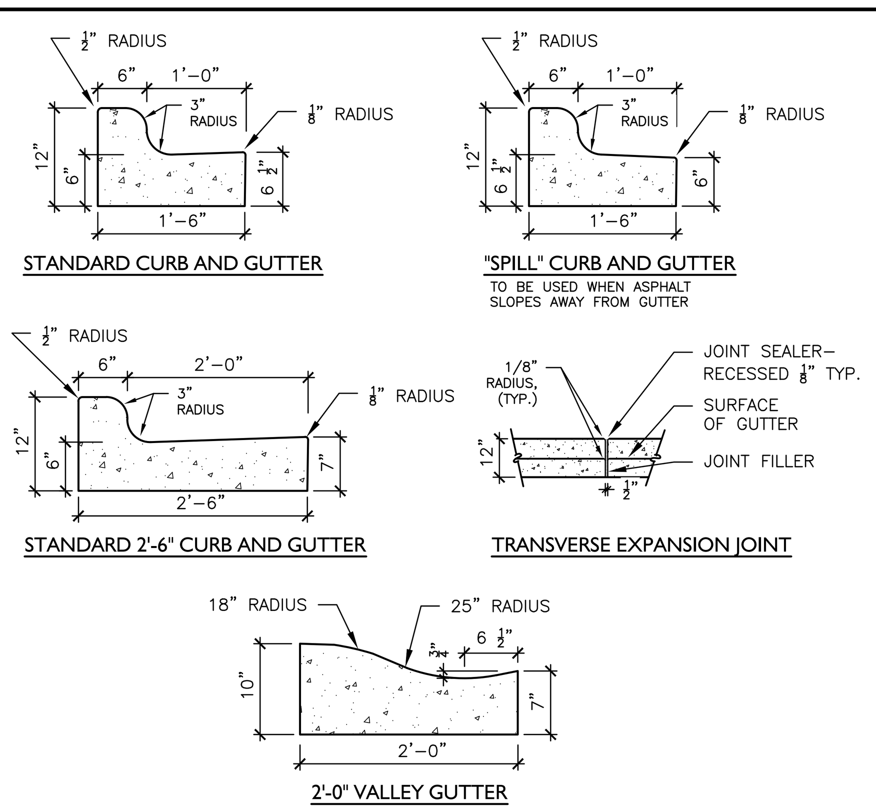
2 Asphalt Pavement Detail
N.T.S.



NOTES
1. RAMP AND WING SLOPES SHALL NOT BE STEEPER THAN 1:12.
2. GUTTER FLOW LINE AND PLAN PROFILE SHALL BE MAINTAINED THROUGH THE RAMP AREA.
3. IF ACCESSIBLE ROUTE IS A RAISED SIDEWALK AREA, THEN RAMPS ARE REQUIRED AT LOADING ZONE AREA.
4. COORDINATE CONSTRUCTION TO COMPLY WITH LOCAL AND FEDERAL ADA STANDARDS.
5. ALL 12"x18" ACCESSIBLE SIGNS (R7–8a AND R7–1) SHALL BE MOUNTED AT 7 FEET FROM GRADE TO BOTTOM EDGE OF SIGN FACE (MUTCD). MOUNTING HEIGHT CAN BE REDUCED TO 5 FEET IF PLACED IN AN AREA BETWEEN SIDEWALK AND BUILDING FACE IN WHICH PEDESTRIANS ARE NOT EXPECTED TO USE.
6. REFER TO MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, (MUTCD) U.S. DEPARTMENT OF TRANSPORTATION AND NORTH CAROLINA DEPARTMENT OF TRANSPORTATION SUPPLEMENT.
7. THE SURFACE OF THE RAMP SHALL BE FLUSH WITH THE FLOWLINE OF THE CURB AND GUTTER.

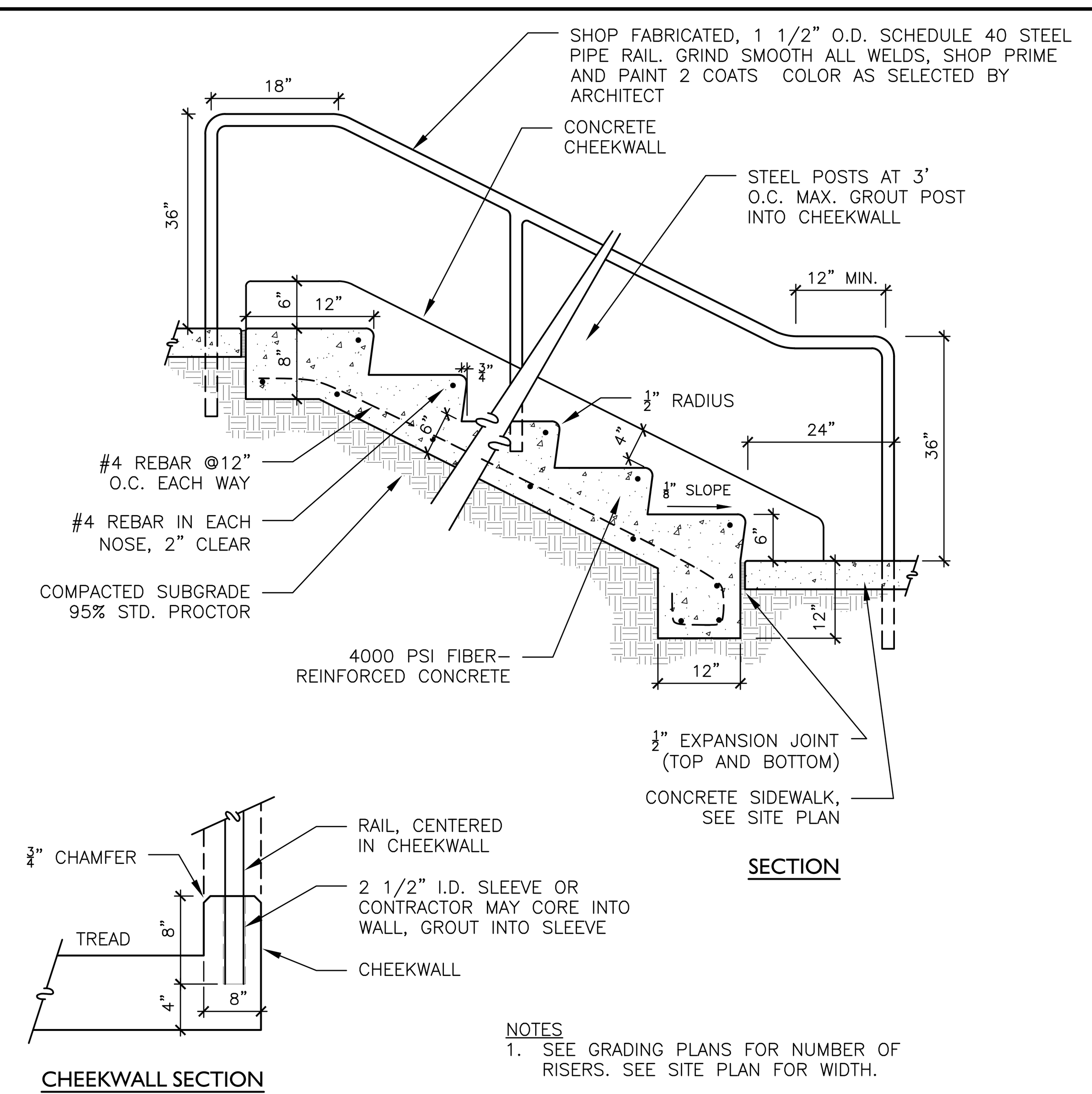


3 Accessible Parking/Signage/Striping Detail
N.T.S.



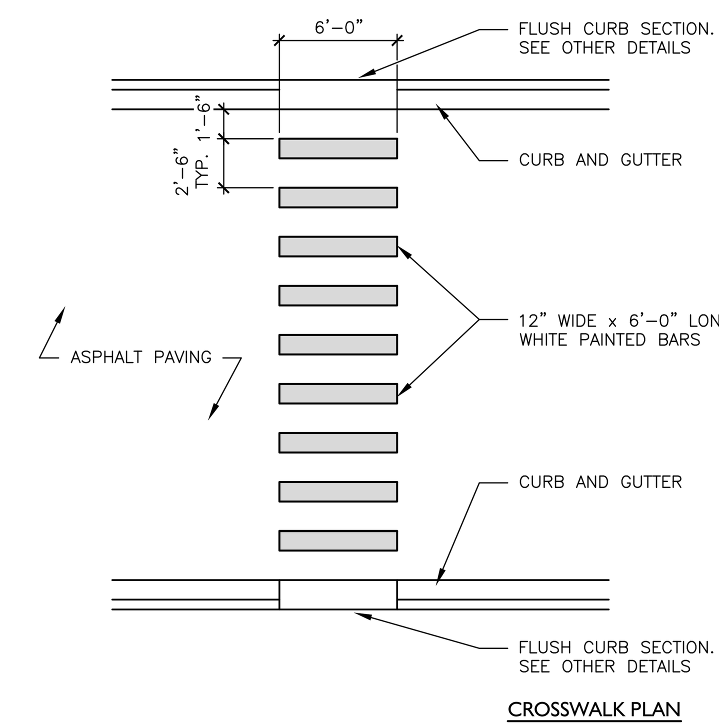
NOTES
1. CONTRACTION JOINTS SHALL BE SPACED AT 10–FOOT INTERVALS. FOR VALLEY GUTTER, A 15–FOOT SPACING MAY BE USED WHEN A MACHINE IS USED. JOINT SPACING MAY BE ALTERED BY THE ENGINEER TO PREVENT UNCONTROLLED CRACKING.
2. CONTRACTION JOINTS MAY BE INSTALLED BY THE USE OF TEMPLATES OR FORMED BY OTHER APPROVED METHODS WHERE SUCH JOINTS ARE NOT FORMED BY TEMPLATES, A MINIMUM DEPTH OF 1 1/2" SHALL BE OBTAINED.
3. ALL EXPANSION JOINTS SHALL BE SPACED AT 90 FOOT INTERVALS, AND ADJACENT TO ALL RIGID OBJECTS. JOINTS SHALL MATCH LOCATIONS WITH JOINTS IN ABUTTING SIDEWALK.
4. TOP 6" OF SUBGRADE BENEATH THE CURB AND GUTTER SHALL BE COMPACTED TO 100% STANDARD PROCTOR DENSITY.
5. CURB SHALL BE DEPRESSED AT INTERSECTIONS TO PROVIDE FOR FUTURE ACCESSIBLE RAMPS.
6. CONCRETE COMPRESSIVE STRENGTH SHALL BE 3600 P.S.I. IN 28 DAYS.

4 Concrete Curb and Gutter Detail
N.T.S.

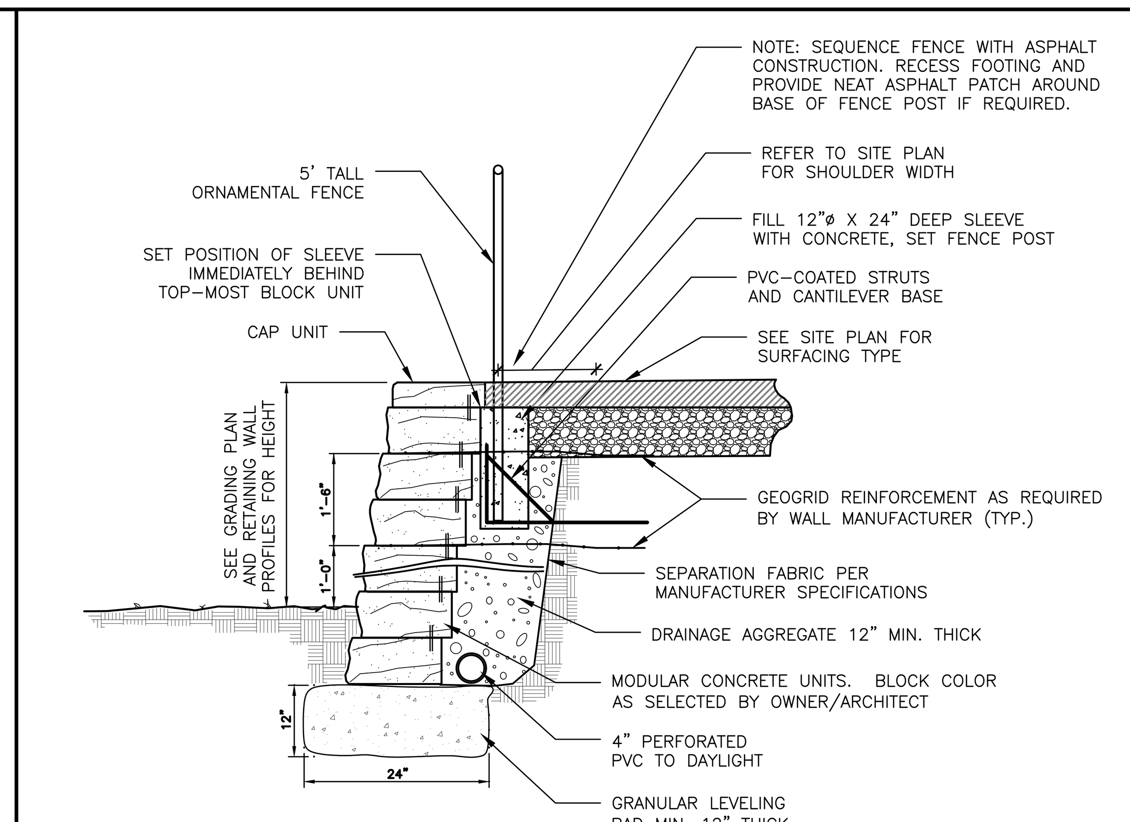


NOTES
1. SEE GRADING PLANS FOR NUMBER OF RISERS. SEE SITE PLAN FOR WIDTH.

5 Concrete Steps with Handrail
N.T.S.



6 Painted Crosswalk
N.T.S.



NOTES:

GENERAL CONTRACTOR SHALL EMPLOY PROFESSIONAL ENGINEER, LICENSED IN THE STATE OF NORTH CAROLINA, TO PREPARE & SEAL FULL CONSTRUCTION SHOP DRAWINGS INCLUDING BUT NOT LIMITED TO THE FOLLOWING:

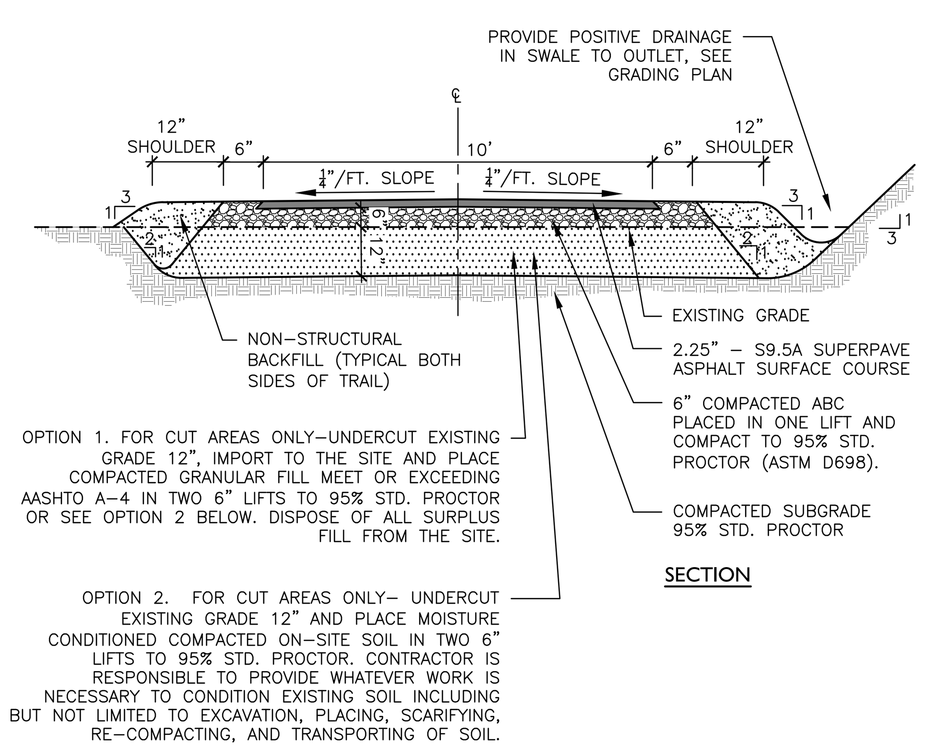
1. TYPICAL SECTION SHOWING FULL RANGE OF WALL HEIGHTS & CONDITIONS, GRID PLACEMENTS.
2. WALL ELEVATION INDICATING TOP, BOTTOM & EXTENT OF WALL, GRID SPACING.
3. WALL HEIGHT/GEOGRID SCHEDULE FOR ALL CONDITIONS GIVING LENGTH, SPACING, GRID SPECIFICATIONS, ETC.
4. WALL CAPPING DETAIL.
5. CONSTRUCTION SPECIFICATIONS FOR ALL MATERIALS, METHODS, EXECUTIONS.

THE ABOVE DATA SHALL BE SUBMITTED TO THE CONSULTANT FOR APPROVAL PRIOR TO BEGINNING EARTHWORK.

APPROVED MANUFACTURERS: VERSA–A–LOK, KEYSTONE, RIDGEROCK, ALLAN BLOCK, OR APPROVED EQUAL.

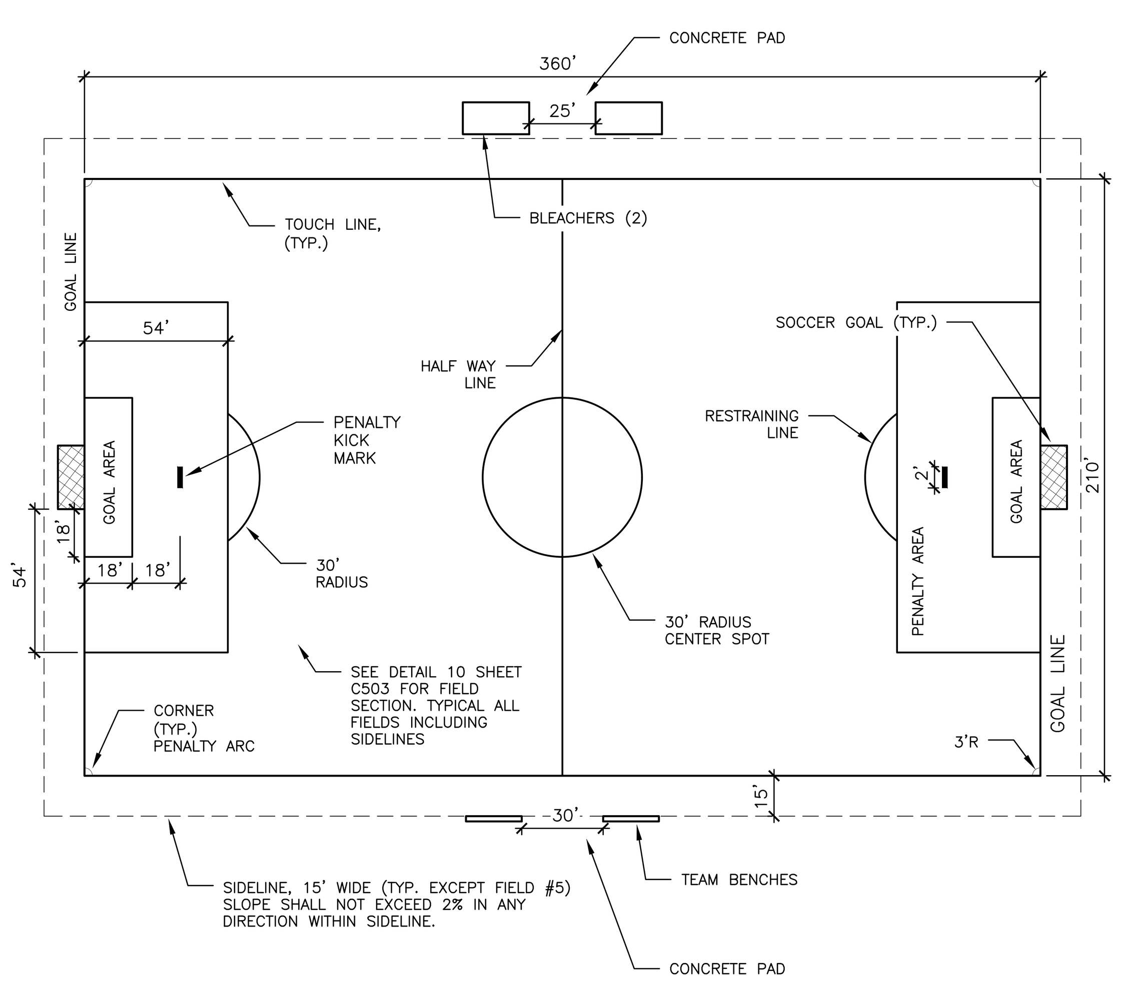
CONTRACTOR SHALL PROVIDE ALL WALL CERTIFICATIONS OR SPECIAL INSPECTIONS IF REQUIRED. FOOTING SYSTEM MUST BE INSTALLED DURING WALL CONSTRUCTION (GENERAL CONTRACTOR'S WALL INSTALLER MUST COORDINATE POST LOCATIONS WITH FENCE OR RAILING INSTALLER).

7 Modular Block Retaining Wall

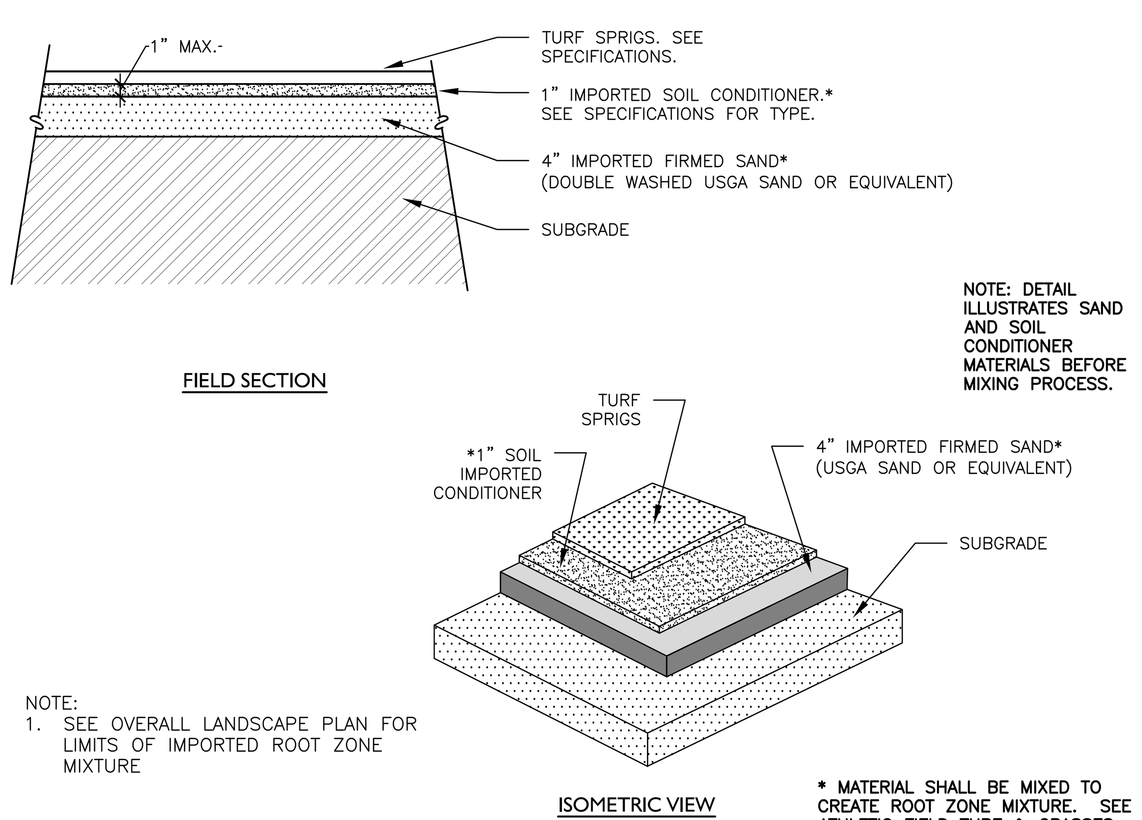


NOTES
1. EXTEND ABC BASE 6" BEYOND ASPHALT EDGE.
2. HAND COMPACT ASPHALT EDGE (SIDE)
3. SEED AND STRAW ALL DISTURBED AREAS PER SPECIFICATIONS.

8 Asphalt Trail Detail (Crown Pattern)
N.T.S.



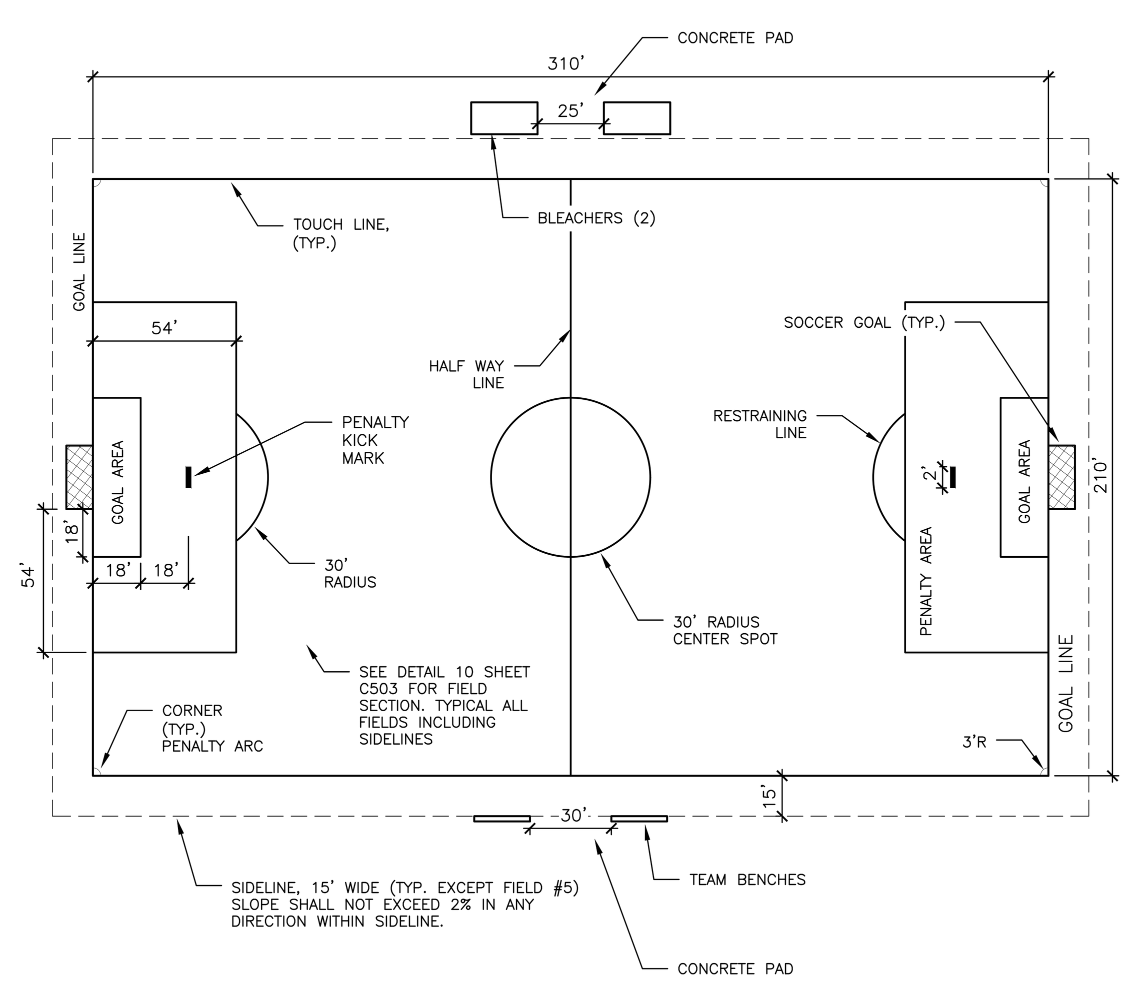
9 Soccer Field Layout
N.T.S.



NOTE:
1. SEE OVERALL LANDSCAPE PLAN FOR LIMITS OF IMPORTED ROOT ZONE MIXTURE

* MATERIAL SHALL BE MIXED TO CREATE ROOT ZONE MIXTURE. SEE ATHLETIC FIELD TURF & GRASSES SPECS. FOR MORE INFORMATION.

10 Multi-Sport Field Section



11 Soccer Field Layout
N.T.S.

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Project No:	17.000255
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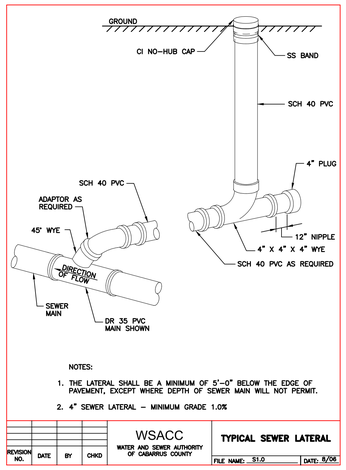
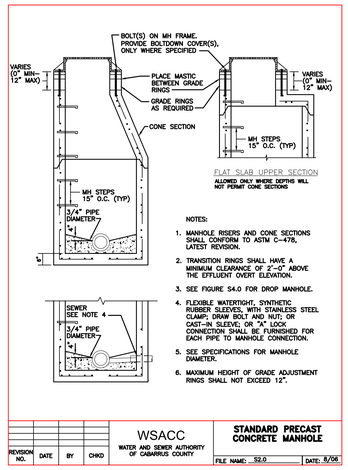
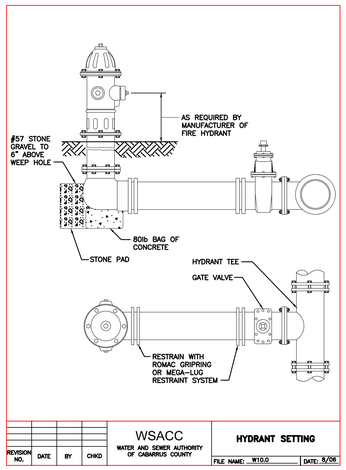
Sheet No:
C503



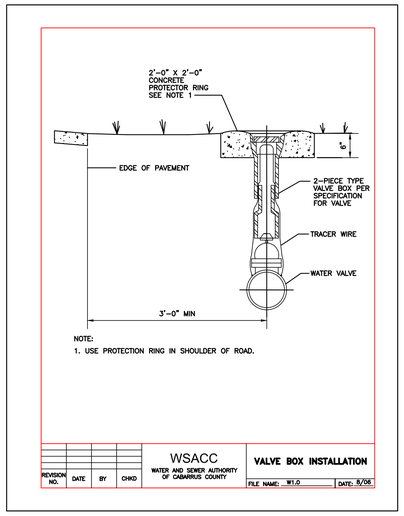
1 Cleanout
N.T.S.



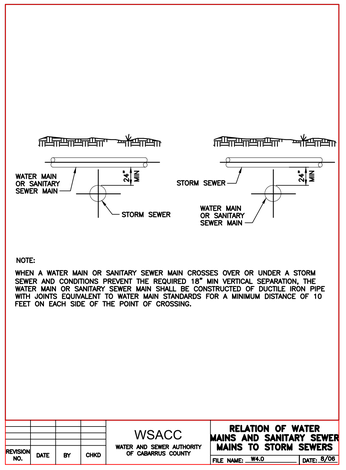
2 Precast Sanitary Sewer Manhole
N.T.S.



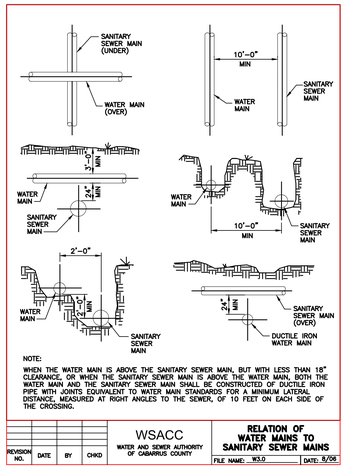
3 Fire Hydrant Assembly
N.T.S.



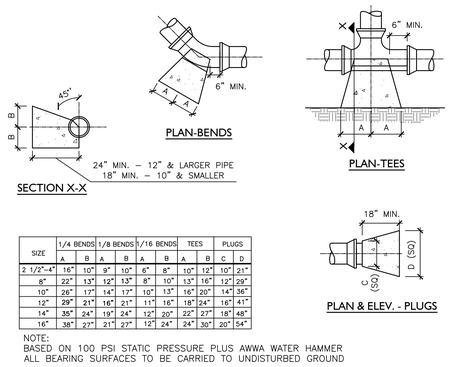
4 Valve Box Installation
N.T.S.



5 Relation of Water Mains and Sanitary Sewer Mains to Storm Sewers
N.T.S.



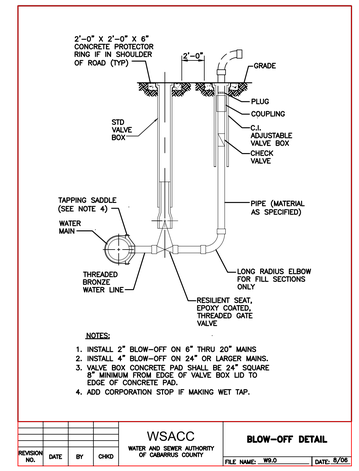
6 Relation of Water Mains to Sanitary Sewer Mains
N.T.S.



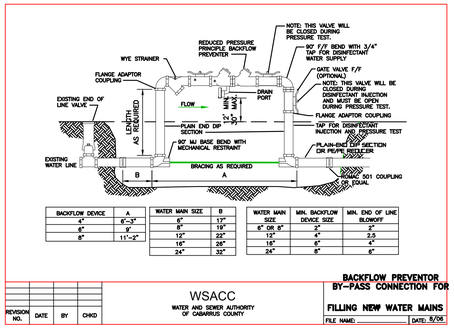
SIZE	1/4 BENDS		1/8 BENDS		1/16 BENDS		TEES		PLUGS	
	A	B	A	B	A	B	A	B	C	D
2 1/2"-4"	16"	12"	9"	10"	6"	8"	10"	12"	10"	21"
8"	22"	13"	12"	13"	8"	10"	13"	16"	12"	29"
10"	26"	12"	14"	17"	10"	13"	16"	20"	14"	36"
12"	29"	21"	16"	21"	11"	16"	18"	24"	16"	41"
14"	35"	24"	19"	24"	12"	20"	22"	27"	18"	48"
16"	38"	27"	21"	27"	12"	24"	24"	30"	20"	54"

NOTE:
BASED ON 100 PSI STATIC PRESSURE PLUS AWWA WATER HAMMER
ALL BEARING SURFACES TO BE CARRIED TO UNDISTURBED GROUND

7 Concrete Thrust Block
N.T.S.



8 Blow Off Detail
N.T.S.

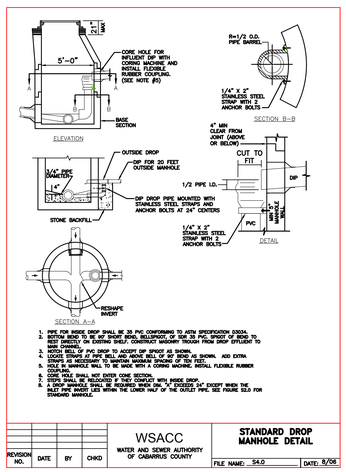


BACKFLOW DEVICE	A
4"	8'-3"
6"	9'
8"	11'-2"

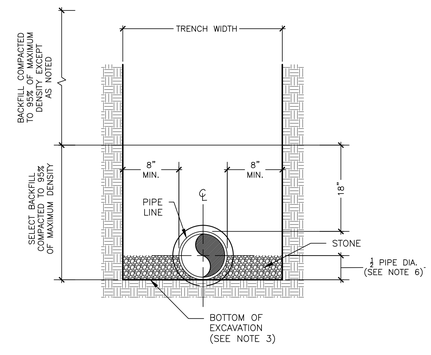
WATER MAIN SIZE	B
4"	13"
6"	19"
12"	22"
16"	26"
24"	32"

WATER MAIN SIZE	MIN. BACKFLOW DEVICE SIZE	MIN. END OF LINE BLOWOFF
6" OR 8"	2"	3"
12"	4"	2.5
16"	6"	4"
24"	8"	6"

9 Backflow Preventor By-Pass Connection for Filling New Water Mains
N.T.S.

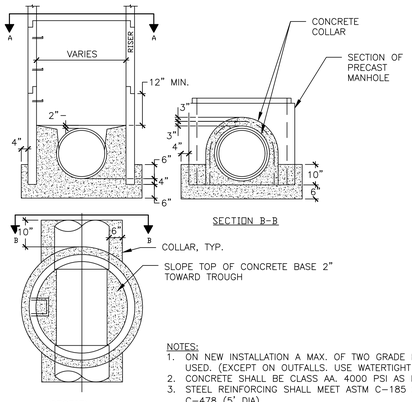


10 Standard Drop Manhole
N.T.S.



NOTES:
1. BACKFILL TO 95% OF MAXIMUM DENSITY WHERE EXCAVATIONS CUT THROUGH PAVEMENTS, CURBS, DRIVEWAYS AND SIDEWALKS, AND UNDER OR ADJACENT TO STRUCTURES.
2. STONE TO BE SIZE 3/4" TO 1-1/2", WELL TAMPED.
3. STONE IS REQUIRED TO 6" BELOW PIPE WHERE WET CONDITIONS OR ROCK IS ENCOUNTERED, ONLY AS DIRECTED.
4. HAND SHAPE TRENCH BOTTOM FOR LOWER QUADRANT OF PIPE AND BELLS.
5. PROVIDE MINIMUM 3'-0" COVER OVER PIPE.
6. STONE TO 1/2 PIPE DIA. NOT REQUIRED FOR C-900 PVC OR DUCTILE IRON PIPE.

11 Utility Trench
N.T.S.



NOTES:
1. ON NEW INSTALLATION A MAX. OF TWO GRADE RINGS SHALL BE USED. (EXCEPT ON OUTFALLS. USE WATERTIGHT RING & COVER)
2. CONCRETE SHALL BE CLASS AA. 4000 PSI AS PER ASTM C-478.
3. STEEL REINFORCING SHALL MEET ASTM C-185 (4" DIA) OR ASTM C-478 (5" DIA).
4. MANHOLES OVER 3'-6" IN DEPTH SHALL BE PROVIDED WITH STEPS 16" ON CENTER.
5. 8" CLASS "AA" CONCRETE UNDER MH PORTIONS OF THE INVERT CAN BE POURED AT THE SAME TIME. BOTTOM SHOULD EXTEND A MIN. OF 6" BEYOND MH BASE.
6. VACUUM TEST REQUIRED ON ALL INSTALLATIONS PRIOR TO PUTTING MANHOLE INTO SERVICE.

12 SSMH Doghouse
N.T.S.

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Project No: 17.000255
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Sheet Title:
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Sheet No:
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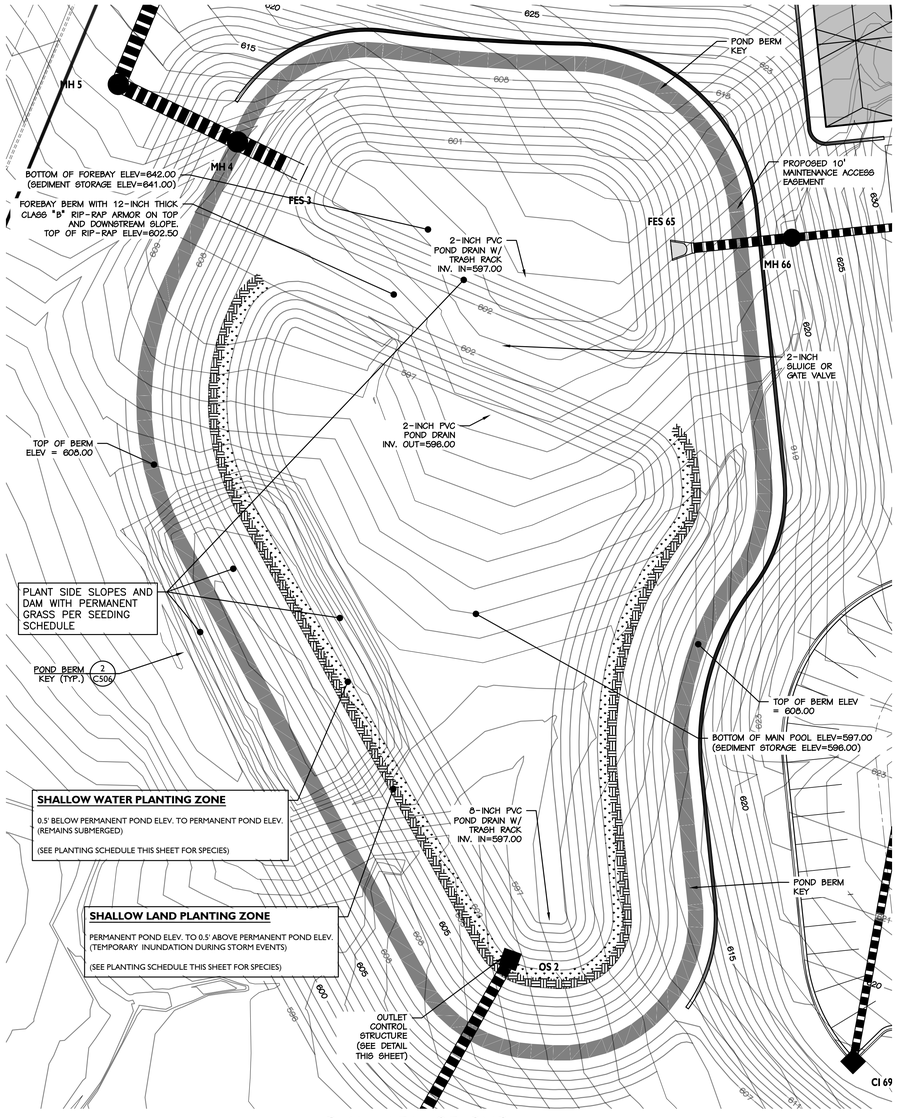
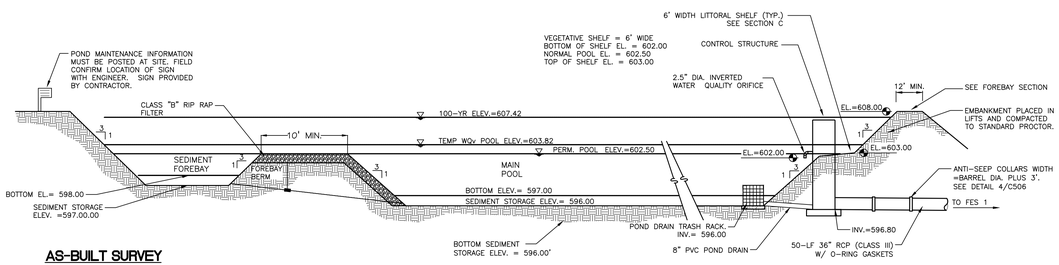
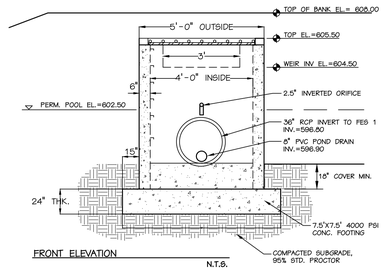


PLAN VIEW OF BMP
SCALE 1" = 20'

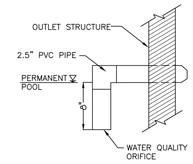


AS-BUILT SURVEY

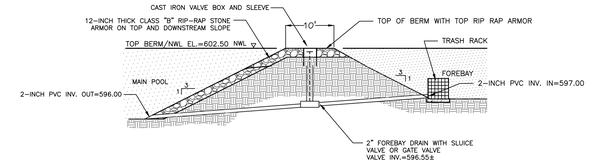
AFTER COMPLETION OF CONSTRUCTION OF THE PROJECT, AN ASBUILT SURVEY OF THE STORM DRAINAGE SYSTEM (INCLUDING THE BMP PONDS WITH OUTLET STRUCTURE INFORMATION) SHALL BE COMPLETED AND SUBMITTED TO THE DESIGNER FOR REVIEW. CONTRACTOR SHALL INCLUDE THIS COST IN THEIR BID. DESIGN MODIFICATIONS TO PONDS AS A RESULT OF IMPROPER CONSTRUCTION AND CITY REVIEW WILL BE AT THE EXPENSE OF THE CONTRACTOR.



FRONT ELEVATION
N.T.S.



WATER QUALITY ORIFICE DETAIL
N.T.S.



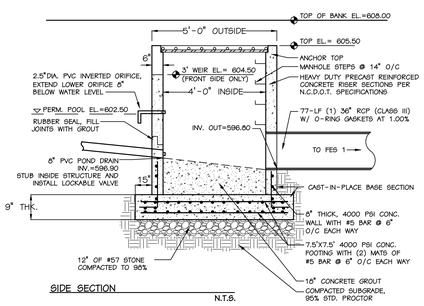
FOREBAY BERM SECTION A
N.T.S.

POND CONSTRUCTION:

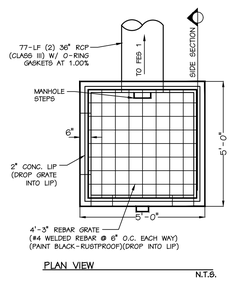
1. UPPER SIX (6") INCHES OF FINE GRAINED SOILS (ML, MH, CL, CH, SC). IF GRANULAR SOILS ARE ENCOUNTERED IN THE PROPOSED POND BOTTOM AND SIDES UP TO 2' ABOVE WATER LEVEL. THEY ARE TO BE UNDERCUT SIX (6") INCHES AND REPLACED WITH THE AFOREMENTIONED FINE SOILS.

2. EXISTING MATERIALS IN THE POND BOTTOM AND SIDES SHALL BE CONDITIONED TO ACHIEVE A PERMEABILITY (K) RATE OF 1X10^-5CM/S IN ORDER TO MAINTAIN THE REQUIRED NORMAL POOL ELEVATION OF (5.0 ELEV.)

3. THE UPPER SIX (6") INCHES OF SOIL IS TO BE SCARIFIED AND COMPACTED TO A MINIMUM OF NINETY-EIGHT (98%) OF IT'S STANDARD PROCTOR MAXIMUM DRY DENSITY. MOISTURE CONTENT OF SOILS SHALL BE ADJUSTED TO WITHIN TWO (2) TO SIX (6) PERCENT WET OF OPTIMUM MOISTURE



SIDE SECTION
N.T.S.



PLAN VIEW
N.T.S.

1 Wet Detention Pond Details for BMP
N.T.S.

BMP CONSTRUCTION SEQUENCE:

INSTALL STORM SEWER (INCLUDING OUTLET STRUCTURE AND PIPES) PRIOR TO EXCAVATING DETENTION BASIN.

EXCAVATE DETENTION BASIN. PROVIDE WHATEVER DE-WATERING MEASURES ARE NEEDED FOR CONSTRUCTION.

PROVIDE WHATEVER TEMPORARY SEEDING IS NEEDED TO STABILIZE BOTTOM AND SLOPES.

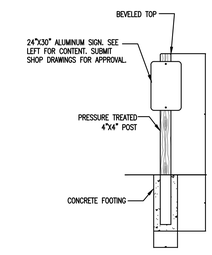
USE AS A TEMPORARY SEDIMENT BASIN UNTIL ENTIRE PROJECT DENUDED AREA HAS BEEN STABILIZED WITH VEGETATION.

AFTER SITE STABILIZATION, REMOVE ALL SEDIMENT, RE-CONTOUR POND IF NECESSARY.

LANDSCAPE STORM WATER WETLAND PER PLANT SCHEDULE LISTED ON THIS SHEET.

PROVIDE AS-BUILTS OF BASIN. AS-BUILTS SHALL BE DONE PRIOR TO THE RELEASE OF THE CERTIFICATE OF OCCUPANCY. SEE EARTHWORK SPECIFICATIONS FOR ADDITIONAL AS-BUILT INFORMATION.

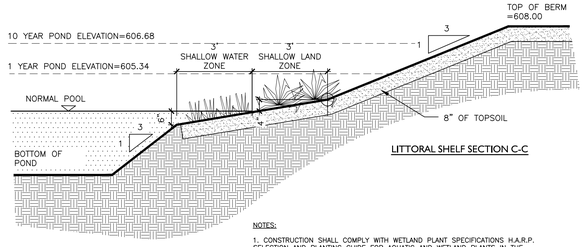
BASIN CONVERSION:
DETENTION BASIN SHALL BE USED AS EROSION CONTROL BASIN DURING CONSTRUCTION. DO NOT CONVERT EROSION CONTROL BASIN UNTIL THE MAJORITY OF THE CONTRIBUTING BASIN IS STABILIZED. PRIOR TO CONVERSION, EXCAVATE ACCUMULATED SEDIMENT AND SPREAD ON-SITE. ENSURE POND IS EXCAVATED TO DESIGN ELEVATIONS AS SHOWN ON PLAN PRIOR TO PLANTING AND FINISHING THE BASINS.



BMP PLANTING REQUIREMENTS		
ZONE	AREA	MIN. REQUIRED PLANTS (50 PLANTS PER 200 SQ. FT.)
----	--	-
----	--	-

PLANT SLOPES AND DAM WITH PERMANENT GRASS PER SEEDING SCHEDULE.

INSTALL EROSION CONTROL FABRIC ON ALL POND SLOPES. SEE EROSION CONTROL PLAN FOR FABRIC AND LOCATION



LITTORAL SHELF SECTION C-C

NOTES:

1. CONSTRUCTION SHALL COMPLY WITH WETLAND PLANT SPECIFICATIONS H.A.R.P. SELECTION AND PLANTING GUIDE FOR AQUATIC AND WETLAND PLANTS IN THE PIEDMONT REGION OF NORTH CAROLINA.

2. WHEREVER POSSIBLE, HARVEST PLANTS FROM LOCAL AREAS WITH PERMISSION.

3. PLANTS MAY BE BARE ROOT OR CONTAINERIZED.

2 Wet Pond Planting Plan
N.T.S.

SEE NOTES THIS SHEET FOR BMP MAINTENANCE AND RESPONSIBILITIES OF THE CONTRACTOR

BMP PLANTING NOTES:

1. IF BARE ROOT SPECIMENS ARE NOT TO BE USED WITHIN 4 DAYS, THEY SHOULD BE PLANTED IN SUITABLE BEDS WITH THE ABSUMPTION THAT IT WILL BE A WHILE BEFORE THEY CAN BE USED, AND THEY SHOULD BE PROVIDED WITH CONDITIONS MAKING IT POSSIBLE FOR THEM TO SURVIVE AND GROW AS OPTIMALLY AS POSSIBLE.
2. CONTAINER PLANTS WILL NEED TO BE WATERED REGULARLY (SEVERAL TIMES DAILY WHEN WEATHER IS HOT)
3. PIN ALL SUBMERGED/FLOATING PLANT MATERIAL SECURELY TO THE BOTTOM OF POND WITH 12" BENT WIRE PINS.
4. CUT BACK TALL AND EASILY BROKEN LEAVES AND STEMS AT THE TIME OF TRANSPLANTING.
5. NEWLY RECEIVED NURSERY STOCK AND DISTURBED TRANSPLANTS SHOULD NOT BE EXPOSED TO DIRECT SUN ANY MORE THAN NECESSARY UNTIL THEY ARE PLACED IN THEIR PERMANENT POSITIONS.
6. INSERT DRY FERTILIZER TABLETS OR SPIKES NEAR THE PLANTS AT THE TIME OF TRANSPLANTING.
7. FENCE ENTIRE PLANTING AREA WITH 36" TALL PLASTIC FENCING WITH 1.5"X2" OPENINGS. PLASTIC SHALL BE UV STABLE. COLOR SHALL BE BLACK. INSTALL WITH STEEL POSTS SPACED AT 10' O.C. MAX. PIN THE BOTTOM LAYER OF THE FABRIC TO THE GROUND WITH 10-12" PINS. FENCING TO REMAIN IN PLACE FOR A PERIOD OF ONE YEAR POST INSTALLATION OF PLANT MATERIAL.
8. STAKE PLANTING ZONES PRIOR TO INSTALLATION AND VERIFY AREAS ON PLAN.
9. PLANTS ARE TO BE INSTALLED IN A RANDOM ARRANGEMENT WITHIN THEIR RESPECTIVE ZONES. INDIVIDUAL SPECIES MAY BE PLANTED TOGETHER IN GROUPS OF 3 TO 5. PLANTS MAY ALSO BE PLANTED INDIVIDUALLY.
10. PLANT QUANTITIES ARE TO BE VERIFIED BY CONTRACTOR PRIOR TO INSTALLATION. PLANTS SHALL NOT BE COMPLETELY SUBMERGED WHEN PLANTED.
11. PLANT HERBACEOUS PLANTS BETWEEN MARCH 15TH AND SEPTEMBER 30TH. AMEND SOILS AND ADD ORGANICS TO UP TO 6 INCHES ON LITTORAL SHELF AREA.
12. CONTRACTOR SHALL PROVIDE MAINTENANCE OF ALL BMP PLANTING FOR 12 MONTHS AFTER INITIAL ACCEPTANCE OF INSTALLATION, INCLUDING RE-SEEDING OR BARE AREAS AS REQUIRED TO ESTABLISH PERMANENT GROUND COVER, AND SUPPLEMENTAL WATERING AS REQUIRED TO ESTABLISH PLANTINGS.
13. MONITORING AND REMOVAL OF INVASIVE PLANT SPECIES (INCLUDING CATTAILS) SHALL BE INCLUDED IN REQUIRED MAINTENANCE.
14. SUBSTITUTIONS OF PLANT SPECIES MUST BE APPROVED BY BENESCH, PRIOR TO INSTALLATION.

WET POND #3 PLANTING SCHEDULE

LEGEND	KEY	QTY	BOTANICAL NAME	COMMON NAME	SIZE COND	REMARKS
SHALLOW WATER ZONE	PC	180	Pontederia cordata	Pickerelweed	n/a / 2"x5" Plug	20" o.c.
	JE	180	Juncus effusus	Soft Rush	n/a / 2"x5" Plug	20" o.c.
	SL	180	Sagittaria latifolia	Duck Potato	n/a / 2"x5" Plug	20" o.c.
SHALLOW LAND ZONE	AI	130	Asclepias incarnata	Swamp Milkweed	n/a / 4" Pot	24" o.c.
	LS	130	Lobelia siphilitica	Great Blue Lobelia	n/a / 4" Pot	24" o.c.
	EF	130	Eupatorium fistulosum	Joe Pye Weed	n/a / 4" Pot	24" o.c.

VEGETATED SHELF MAINTENANCE SCHEDULE:			
SOIL			
DESCRIPTION	METHOD	FREQUENCY	TIME OF YEAR
INSPECT AND REPAIR EROSION	VISUAL	MONTHLY	MONTHLY
ORGANIC LAYER			
REMULCH ANY VOID AREA	BY HAND	WHENEVER NEEDED	WHENEVER NEEDED
REMOVE PREVIOUS MULCH LAYER BEFORE APPLYING NEW LAYER (OPTIONAL)	BY HAND	ONCE EVERY TWO OR THREE YEARS	SPRING
ANY ADDITIONAL MULCH ADDED	BY HAND	ONCE A YEAR	SPRING
PLANTS			
REMOVE AND REPLACEMENT OF ALL DEAD AND DISEASED VEGETATION CONSIDERED BEYOND TREATMENT	SEE PLANTING SPECIFICATIONS	TWICE A YEAR	3/15 TO 4/30 AND 10/1 TO 11/30
TREAT ALL DISEASED TREES AND SHRUBS	MECHANICAL OR BY HAND	N/A	VARIES, BUT WILL DEPEND ON INSECT OR DISEASE INFESTATION
WATERING PLANT MATERIAL SHALL TAKE PLACE AT THE END OF EACH DAY FOR FOURTEEN CONSECUTIVE DAYS AND AFTER PLANTING HAS BEEN COMPLETED	BY HAND	IMMEDIATELY AFTER COMPLETION OF PROJECT	N/A
REPLACEMENT OF SUPPORT STAKES	BY HAND	ONCE A YEAR	ONLY REMOVE STAKES IN THE SPRING
REPLACE ANY DEFICIENT STAKES AND WIRES	BY HAND	WHENEVER NEEDED	WHENEVER NEEDED

STORM WATER WET POND INSPECTION AND MAINTENANCE PLAN

THE FOLLOWING ITEMS SHALL BE INSPECTED/MAINTAINED BY THE OWNER.

A. VEGETATION
   1. GOOD GRASS COVER SHALL BE MAINTAINED AROUND THE POND PERIMETER TO PREVENT EXCESSIVE SEDIMENT FROM ENTERING THE POND. THE POND PERIMETER SHALL BE MOWED ON A QUARTERLY BASIS. (DO NOT MOW WETLAND PLANTS)
   2. TO PRESERVE THE HYDRAULIC CAPACITY OF THE POND SYSTEM AND TO PREVENT RUNOFF FROM BACKING UP, INLET AND OUTLET AREAS SHALL BE KEPT CLEAR OF HEAVY VEGETATION.
   3. INSPECT ANNUALLY FOR DEAD OR DISEASED PLANT MATERIAL. REPLACE DEAD OR DISEASED PLANT MATERIAL.

B. EROSION PROBLEMS
   THE ENTIRE POND AREA SHALL BE INSPECTED QUARTERLY FOR SIGNS OF EROSION, PAYING SPECIAL ATTENTION TO THE FOLLOWING AREAS:
   1. RILL EROSION OF THE POND EMBANKMENT SHALL BE REPAIRED BY FILLING THE SMALL CHANNELS WITH SUITABLE SOIL, COMPACTING, AND SEEDING. INSPECT FOR, AND IMMEDIATELY REPAIR, ANY EROSION ON THE DAM EMBANKMENTS.
   2. ERODED AREAS AT PIPE INLET OR OUTLET AREAS SHALL BE FILLED WITH GOOD COMPACTABLE SOIL AND COVERED WITH GEOTEXTILE AND RIP-RAP.
   3. OPEN CHANNELS WITH ERODED AREAS SHALL BE SEEDED/SODDED AND PROTECTED WITH TEMPORARY VELOCITY DISSIPATION (SUCH AS EXCELSIOR MATTING, STRAW BALES, ETC.).

C. BLOCKAGE OF OUTLETS
   THE WET DETENTION POND'S ORIFICE(S), PRINCIPAL SPILLWAY, AND THE EMERGENCY SPILLWAY SHALL BE INSPECTED FOR BLOCKAGE THAT WOULD IMPAIR THE POND'S WATER QUALITY AND HYDRAULIC FUNCTIONALITY.
   1. THE LOW FLOW ORIFICE SHALL BE INSPECTED FOR BLOCKAGE TWICE A MONTH AND AFTER LARGE STORMS.
   2. TO ENSURE THE HYDRAULIC CAPACITY OF THE SPILLWAYS, SPILLWAY SHALL BE INSPECTED FOR BLOCKAGE ONCE A MONTH AND AFTER LARGE STORMS. THE TRASH RACK SHALL BE MAINTAINED ON THE RISER. VEGETATIVE GROWTH IN THE RISER SHALL BE REMOVED PROMPTLY SO THAT THE DESIGN CAPACITY OF THE SPILLWAY IS MAINTAINED. THE OUTLET PIPE SHALL BE CLEAR OF TREE LIMBS, SEDIMENT ACCUMULATION, ETC.

D. SEDIMENT ACCUMULATION
   THE FOREBAY MUST BE DREDGED WHEN SEDIMENT DEPOSITION IN THE FOREBAY EXCEEDS THE DESIGNED SEDIMENT STORAGE CAPACITY FOR THE FOREBAY. AN INDICATION OF WHEN THE FOREBAY SEDIMENT CAPACITY IS EXCEEDED IS WHEN SEDIMENT BARS ARE VISIBLE NEAR THE INLET DISCHARGE OR WHEN THE SEDIMENT LEVEL AT THE INLET TO THE POND IS LESS THAN ONE FOOT BELOW THE NORMAL POOL SURFACE. DEPTH MEASUREMENTS RELATIVE TO THE NORMAL SURFACE ELEVATION (BOTTOM OF WATER QUALITY ORIFICE) SHALL BE TAKEN AT SEVERAL LOCATIONS AROUND THE POND (TYPICALLY FOREBAYS WILL NEED TO BE DREDGED EVERY 5 TO 10 YEARS).

   DREDGING OF THE FOREBAY (AND PERMANENT POOL AREA, IF NECESSARY) WILL BE ACCOMPLISHED BY USING A DREDGE LINE, "GRADE ALL" OR SIMILAR PIECE OF MACHINERY.

   THE GATE VALVE LOCATED AT THE OUTLET STRUCTURE SHALL BE USED TO DRAIN THE MARSH AREAS. DRAINING THE FOREBAY AND MICRO POOL AREAS SHALL BE DONE UTILIZING A PUMP.

3 Wet Pond Maintenance Plan
N.T.S.

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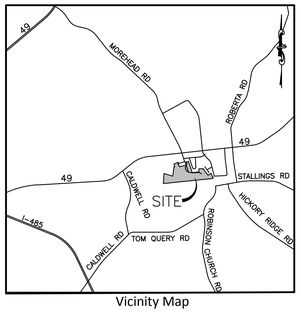
Harrisburg Park
191 Sims Parkway
Harrisburg, North Carolina

Project No: 17.000255
Date: 06.18.19
Revisions:

Sheet Title:
SITE CONSTRUCTION DETAILS

Sheet No:
C504



Vicinity Map

LANDSCAPE NOTES

PLANT MATERIAL

1. MINIMUM TREE SIZE AT PLANTING IS 2" CALIPER AND 6' TALL FOR SINGLE-STEM TREES. ALL MULTI-STEM PLANTS MUST BE TREE FORM, MAXIMUM 3 TO 5 TRUNKS, AND MINIMUM 10' TALL.
2. ALL NEW TREES MUST HAVE STRAIGHT TRUNKS WITH STRONG CENTRAL LEADERS INTACT TO THE TOP OF THE CROWN UNLESS MULTI-STEM TREES ARE SPECIFIED. ALL TREES SHALL BE TYPICAL OF THEIR SPECIES AND VARIETY, HAVE NORMAL GROWTH HABITS, HAVE WELL-DEVELOPED BRANCHES, BE VIGOROUS AND HAVE FIBROUS ROOT SYSTEMS. TREES WITH CO-DOMINANT BRANCHING WILL NOT BE ACCEPTED. TREES THAT HAVE BEEN SHEARED, TOPPED OR CUT BACK TO MULTIPLY THE BRANCHING STRUCTURE WILL NOT BE ACCEPTED. TREES SHALL BE FREE OF ABRASIONS, DAMAGE, DISEASE, PESTS AND CRACKS. ALL PRUNING CUTS GREATER THAN ¾" DIAMETER SHALL HAVE CALLUS TISSUE FORMED PRIOR TO PLANTING. NO PRUNING CUT ON THE TRUNK SHALL BE MORE THAN ONE-HALF THE DIAMETER OF THE CENTRAL LEADER AT THE HEIGHT WHERE THE CUT WAS MADE. ROOT FLARES SHALL BE LOCATED AT GRADE. TREES WITH MORE THAN 2" OF SOIL COVERING THE ROOT BALL/FLARE FROM WILL NOT BE ACCEPTED.
3. SIZE OF PLANTS, SPREAD OF ROOTS AND SIZE OF BALLS SHALL BE IN ACCORDANCE WITH ANSI Z60.1 (LATEST EDITION) AS PUBLISHED BY THE AMERICAN NURSERY & LANDSCAPE ASSOCIATION.
4. ALL TREES OF A PARTICULAR SPECIES AND VARIETY SHALL BE UNIFORM IN SIZE AND CONFIGURATION.

PLANTING REQUIREMENTS

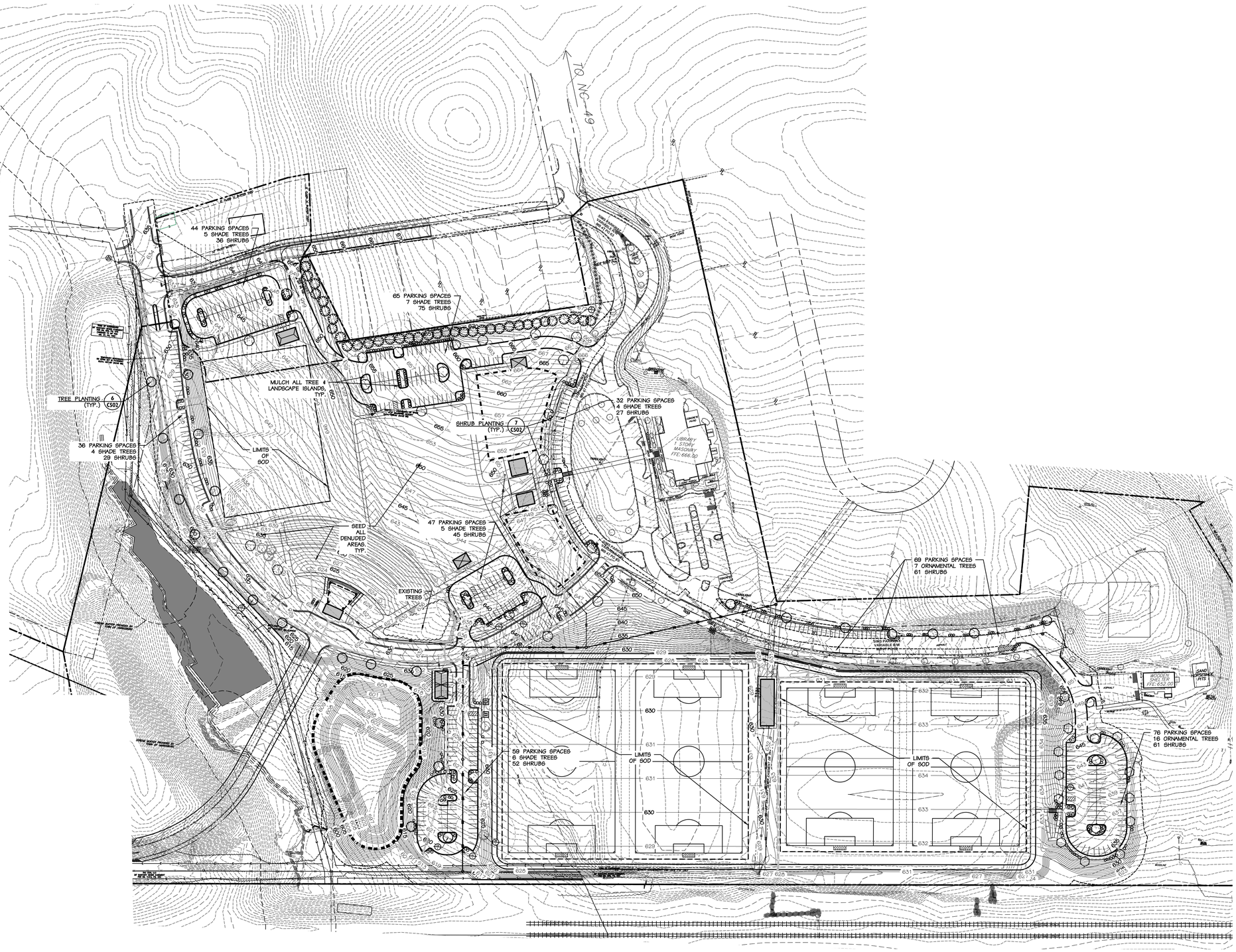
1. PLASTIC HOSE PARTS WILL NOT BE ACCEPTED FOR TREE STAKING. SEE DETAILS AND SPECIFICATIONS FOR APPROVED STAKING METHOD/MATERIALS.
2. ALL STRAPPING, AND TOP ⅔ OF WIRE BASKET AND BURLAP MUST BE CUT AWAY AND REMOVED FROM ROOT BALL WHEN PLANTING.
3. FOR NEW PLANTING AREAS, REMOVE ALL PAVEMENT, GRAVEL SUB-BASE AND CONSTRUCTION DEBRIS; REMOVE COMPACTED SOIL AND ADD 24" NEW TOPSOIL, OR TILL AND AMEND THE TOP 24" OF EXISTING SOIL TO MEET TOPSOIL/ PLANTING MIX STANDARDS FOR TREES.
4. ALL SAUCERS SHALL BE SOAKED WITH WATER AND MULCHED IMMEDIATELY FOLLOWING PLANTING.
5. THE TOP OF ALL ROOT BALLS FOR SHRUBS & GROUNDCOVERS SHALL BEAR THE SAME RELATIONSHIP TO FINISHED GRADE, AS BORN TO PREVIOUS GROWING CONDITIONS.
6. ALL ROOT BALLS REMOVED FROM CONTAINERS SHALL BE SCARIFIED PRIOR TO BACKFILLING.
7. MULCH A MINIMUM 4 FOOT AREA AROUND EACH TREE AND – MULCH A CONTINUOUS AREA AROUND ALL SHRUB BEDS, AS INDICATED ON THE PLAN. MULCH SHALL BE 3-4" THICK. MULCH AROUND TREES SHALL BE TAPERED TOWARD TRUNK SO THAT NO MORE THAN 2" IS PLACED AT TREE TRUNK AS SHOWN ON DETAIL. SEE SPECIFICATIONS FOR TYPE.

UTILITY ISSUES

1. LARGE MATURING TREES MAY NOT BE PLANTED WITHIN 25' OF OVERHEAD POWER DISTRIBUTION OR TRANSMISSION LINES. IF TREES CONFLICT WITH POWER LINES OR SIGNS, CALL LANDSCAPE ARCHITECT TO RESOLVE BEFORE PLANTING.
2. CONTRACTOR IS RESPONSIBLE FOR HAVING ALL UNDERGROUND UTILITIES LOCATED AND CLEARLY PAINTED WITHIN 10 DAYS OF ANY GROUND DISTURBING ACTIVITY. OWNER WILL NOT PAY FOR UTILITY REPAIRS DUE TO FAILURE TO MARK AND OBSERVE UTILITY LOCATIONS.
3. ADJUST TREE PLANTING LOCATIONS TO AVOID UNDERGROUND UTILITIES– PLANT 15' FROM ALL UNDERGROUND UTILITIES (SEWER AND STORM DRAINAGE, GAS WATER, PHONE AND ELECTRICAL LINES).

GENERAL

1. THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR THE QUANTITY OF PLANTS SHOWN ON THE PLAN. ANY DISCREPANCIES BETWEEN QUANTITIES ON PLAN AND PLANT LIST SHALL BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT AND ANY FIELD ADJUSTMENTS OR QUANTITY ADJUSTMENTS MUST BE AUTHORIZED PRIOR TO PLANTING.
2. ALL PLANTS SHALL BE GUARANTEED TO BE IN HEALTHY CONDITION FOR ONE (1) YEAR AFTER ACCEPTANCE BY OWNER OF ALL PLANT MATERIAL.
3. ALL DISTURBED AREAS SHALL BE SEEDED AS SPECIFIED.
4. SEE EROSION CONTROL/GRADING PLAN FOR ADDITIONAL TREE PRESERVATION NOTES.



PLANT SCHEDULE

TREES	QTY	BOTANICAL / COMMON NAME	ROOT	CAL.	REMARKS	SIZE
AS2	27	Acer saccharum / Sugar Maple	B & B	2" Cal. min.	Full, Straight Specimen	10' ht. min.
BR	6	Betula nigra / River Birch	B & B	2" Cal. min.	MATCHED, STRAIGHT	10' ht. min.
CO	25	Celtis occidentalis / Common Hackberry	B & B	2" Cal. min.		10' ht. min.
CC2	16	Cercis canadensis / Eastern Redbud	B & B	1.5" Cal. min.		6-8' HT.
JE	36	Juniperus virginiana / Eastern Red Cedar	15 gal	2" Cal. min.		10' ht. min.

SHRUBS	QTY	BOTANICAL / COMMON NAME	CONT	REMARKS	HEIGHT	SPREAD
Ic2	163	Ilex cornuta 'Burfordii Nana' / Dwarf Burford Holly	7 gal	4.5' O.C.	18-24" HT.	18-24"
Lc	241	Loropetalum chinense 'Ever Red Sunset' / Ever Red Sunset Loropetalum	5 gal			

LEGEND

- SIGN
- EXISTING LIGHT POLE
- EXISTING UTILITY POLE
- HC ACCESSIBLE SPACE
- EXISTING FIRE HYDRANT
- EXISTING TREE TO REMAIN
- PROPOSED GROUNDCOVER
- PLANT LABEL
- PLANT QUANTITY
- EXISTING CURB AND GUTTER
- PROPOSED CURB AND GUTTER
- PROPERTY LINE
- EXISTING FENCE
- PROPOSED FENCE
- UGE EXISTING UNDERGROUND ELECTRIC LINE
- OH/U EXISTING OVERHEAD UTILITY LINE

811 Know what's below. Call before you dig.

NORTH

80 0 40 80 160
SCALE: 1" = 80'

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Harrisburg Park

191 Sims Parkway
Harrisburg, North Carolina

Project No: 17.000255
Date: 06.18.19
Revisions:

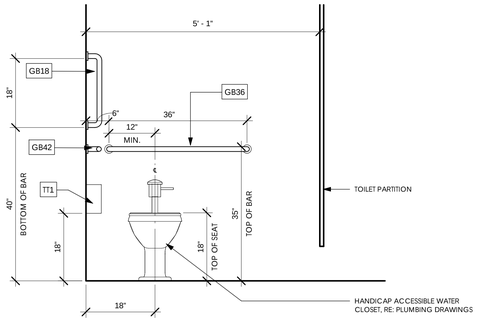
Sheet Title:
OVERALL LANDSCAPE

Sheet No:
C600

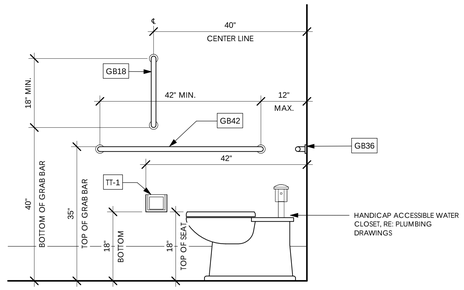
TOILET ACCESSORY SCHEDULE

TA #	DESCRIPTION	HEIGHT	REMARKS
CT1	CHANGING TABLE	PER MFGR. RECOMMENDATIONS	SEE SECTION 10 28 00
EHD1	SURFACE MOUNTED ELECTRIC HAND DRYER	44" TO BOTTOM OF HAND DRYER	SEE SECTION 10 28 00
GB42	HORIZONTAL GRAB BAR, 42" LONG	36" TO TOP OF BAR	SEE SECTION 10 28 00
GB36	HORIZONTAL GRAB BAR, 36" LONG	36" TO TOP OF BAR	SEE SECTION 10 28 00
GB18	VERTICAL GRAB BAR, 18" HIGH	40" TO BOTTOM OF BAR	SEE SECTION 10 28 00
M1	18" x 36" MIRROR	40" TO BOTTOM OF REFLECTIVE SURFACE	SEE SECTION 10 28 00
PT1	SURFACE MOUNTED PAPER TOWEL DISPENSER	47" TO DISPENSER	OWNER PROVIDED, CONTRACTOR INSTALLED
SD1	SURFACE MOUNTED SOAP DISPENSER	40" TO DISPENSER	OWNER PROVIDED, CONTRACTOR INSTALLED
TT1	SURFACE MOUNTED TOILET TISSUE DISPENSER	18" TO DISPENSER	OWNER PROVIDED, CONTRACTOR INSTALLED

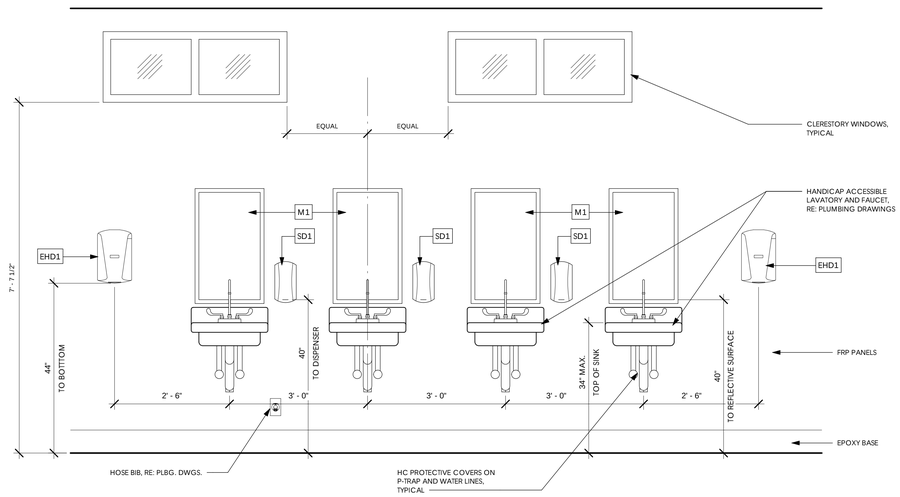
NOTE: REFER TO SECTION 10 28 00 FOR TA MANUFACTURERS AND MODEL NUMBERS.



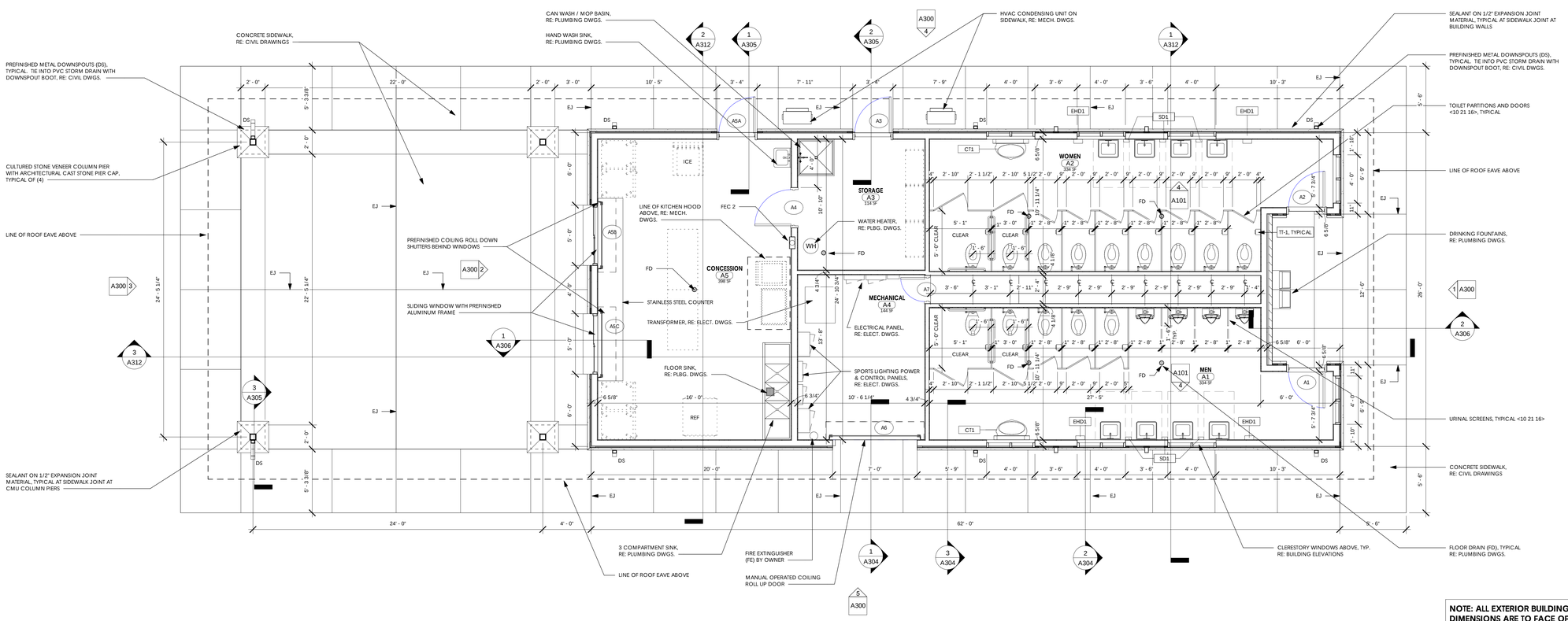
2 A101 HC STALL - WET WALL (BUILDING A & B)
3/4" = 1'-0"



3 A101 HC STALL ELEVATION - SIDE (BUILDING A & B)
3/4" = 1'-0"



4 A101 SINK WALL ELEVATION - BUILDING A
3/4" = 1'-0"



1 A101 FLOOR PLAN - CONCESSIONS / TOILET BUILDING A
1/4" = 1'-0"

NOTE: ALL EXTERIOR BUILDING DIMENSIONS ARE TO FACE OF SHEATHING

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Harrisburg Park Expansion

Harrisburg, North Carolina

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Date: 06-17-19

Revisions:

FLOOR PLAN - TOILET / CONCESSIONS BUILDING A

Architectural

A101

YCH Commission Number

18030.00

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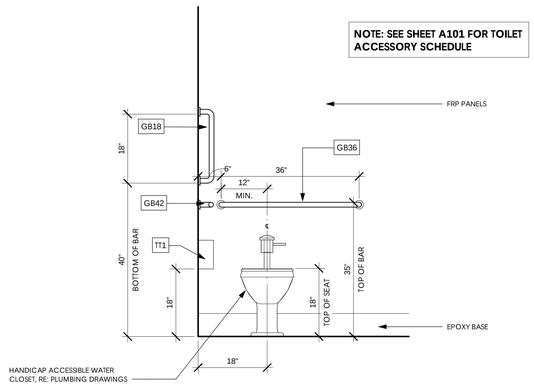
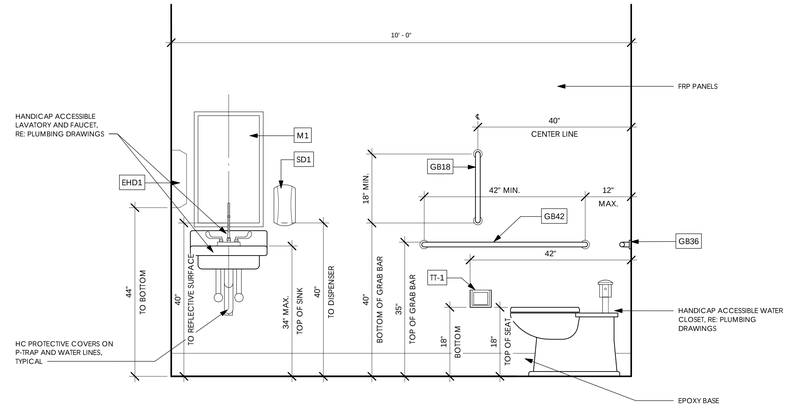
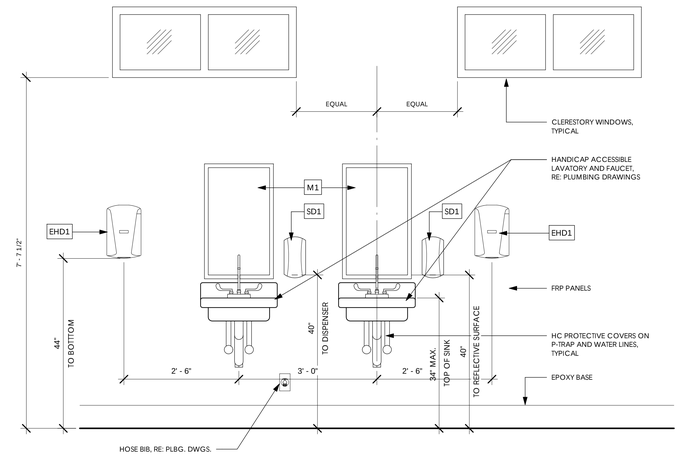


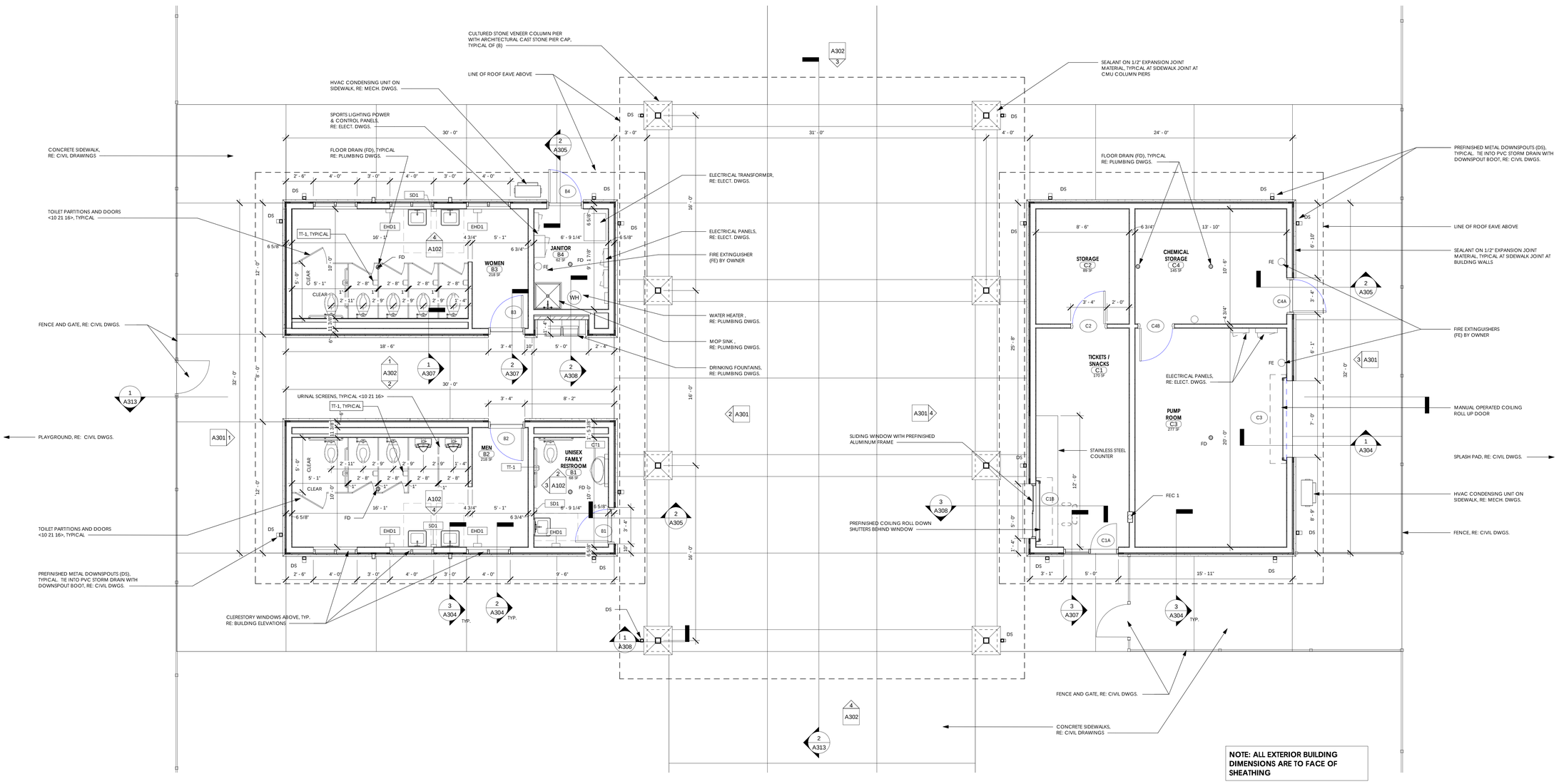
2 A102 UNISEX RESTROOM ELEVATION - WET WALL
3/4" = 1'-0"



3 A102 UNISEX RESTROOM ELEVATION - SIDE
3/4" = 1'-0"



4 A102 SINK WALL ELEVATION - BUILDING B
3/4" = 1'-0"



1 A102 FLOOR PLAN - TOILET AND TICKET / PUMP BUILDINGS B AND C
1/4" = 1'-0"

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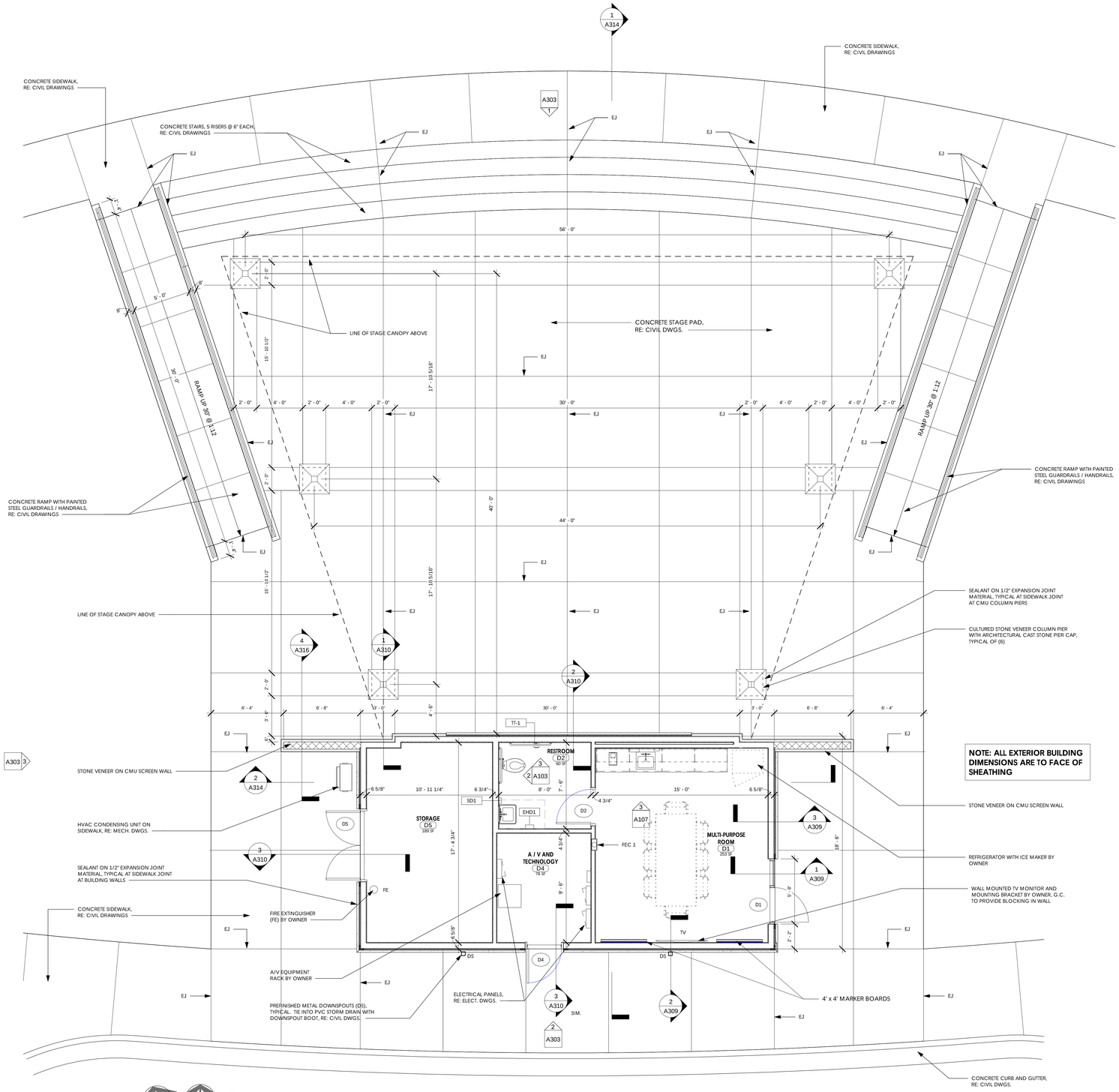
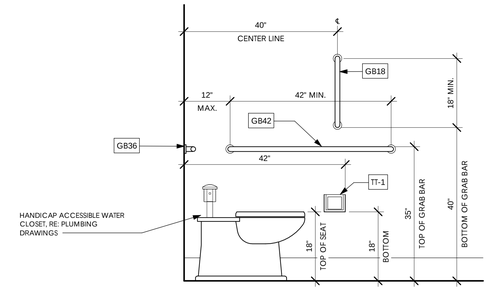
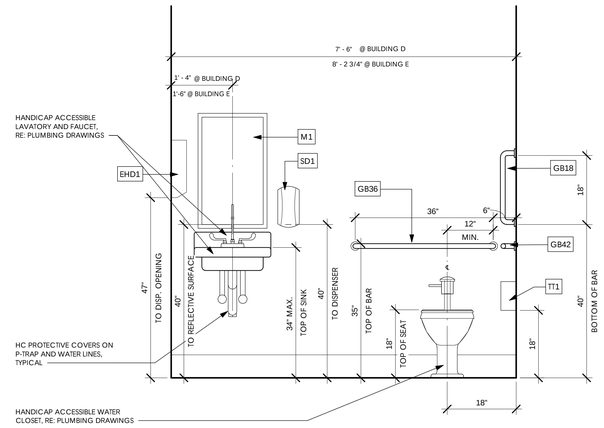


1 A103 FLOOR PLAN - AMPHITEATER BUILDING D
1/4" = 1'-0"



3 A103 RESTROOM ELEVATION - SIDE (BUILDING D & E)
3/4" = 1'-0"



2 A103 RESTROOM ELEVATION - WET WALL (BUILDING D & E)
3/4" = 1'-0"

TOILET ACCESSORY SCHEDULE

TA #	DESCRIPTION	HEIGHT	REMARKS
CT1	CHANGING TABLE	PER MFGR. RECOMMENDATIONS	SEE SECTION 10 28 00
EHD1	SURFACE MOUNTED ELECTRIC HAND DRYER	44" TO BOTTOM OF HAND DRYER	SEE SECTION 10 28 00
GB42	HORIZONTAL GRAB BAR, 42" LONG	36" TO TOP OF BAR	SEE SECTION 10 28 00
GB36	HORIZONTAL GRAB BAR, 36" LONG	36" TO TOP OF BAR	SEE SECTION 10 28 00
GB18	VERTICAL GRAB BAR, 18" HIGH	40" TO BOTTOM OF BAR	SEE SECTION 10 28 00
M1	18" x 36" MIRROR	40" TO BOTTOM OF REFLECTIVE SURFACE	SEE SECTION 10 28 00
PT1	SURFACE MOUNTED PAPER TOWEL DISPENSER	47" TO DISPENSER	OWNER PROVIDED, CONTRACTOR INSTALLED
SD1	SURFACE MOUNTED SOAP DISPENSER	40" TO DISPENSER	OWNER PROVIDED, CONTRACTOR INSTALLED
TT1	SURFACE MOUNTED TOILET TISSUE DISPENSER	18" TO DISPENSER	OWNER PROVIDED, CONTRACTOR INSTALLED

NOTE: REFER TO SECTION 10 28 00 FOR TA MANUFACTURERS AND MODEL NUMBERS.

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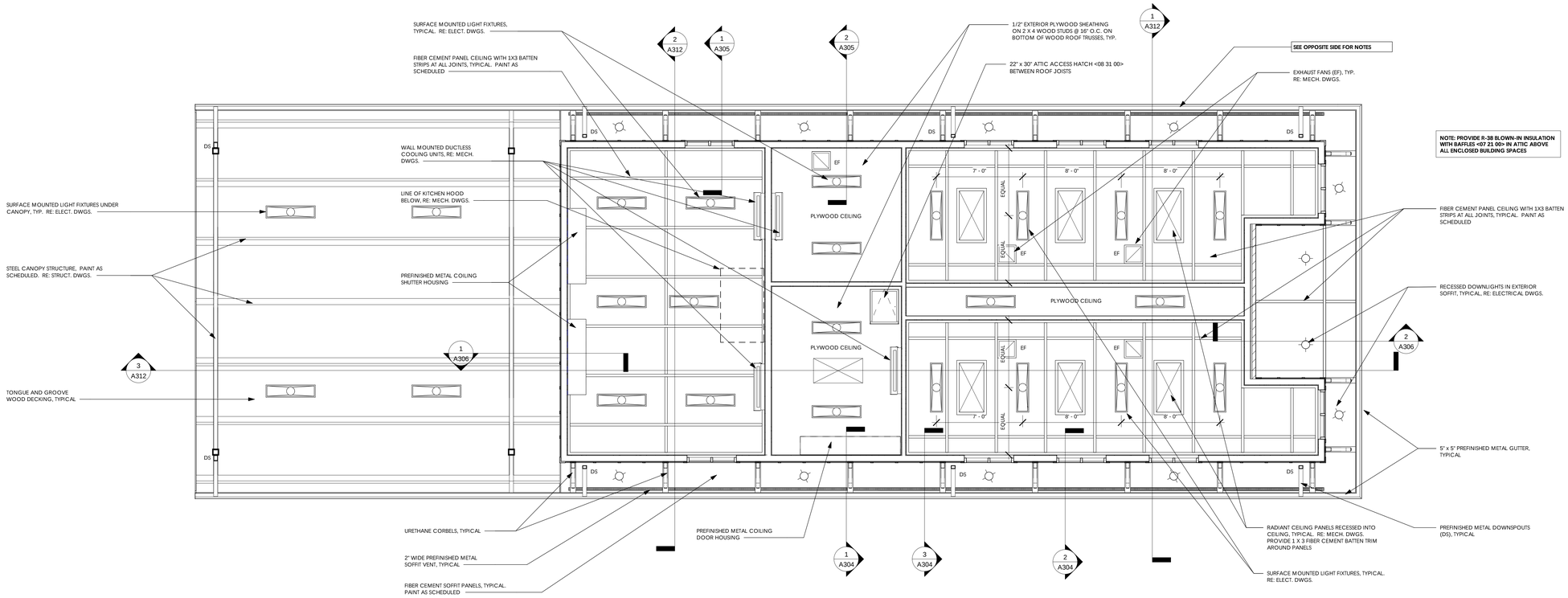
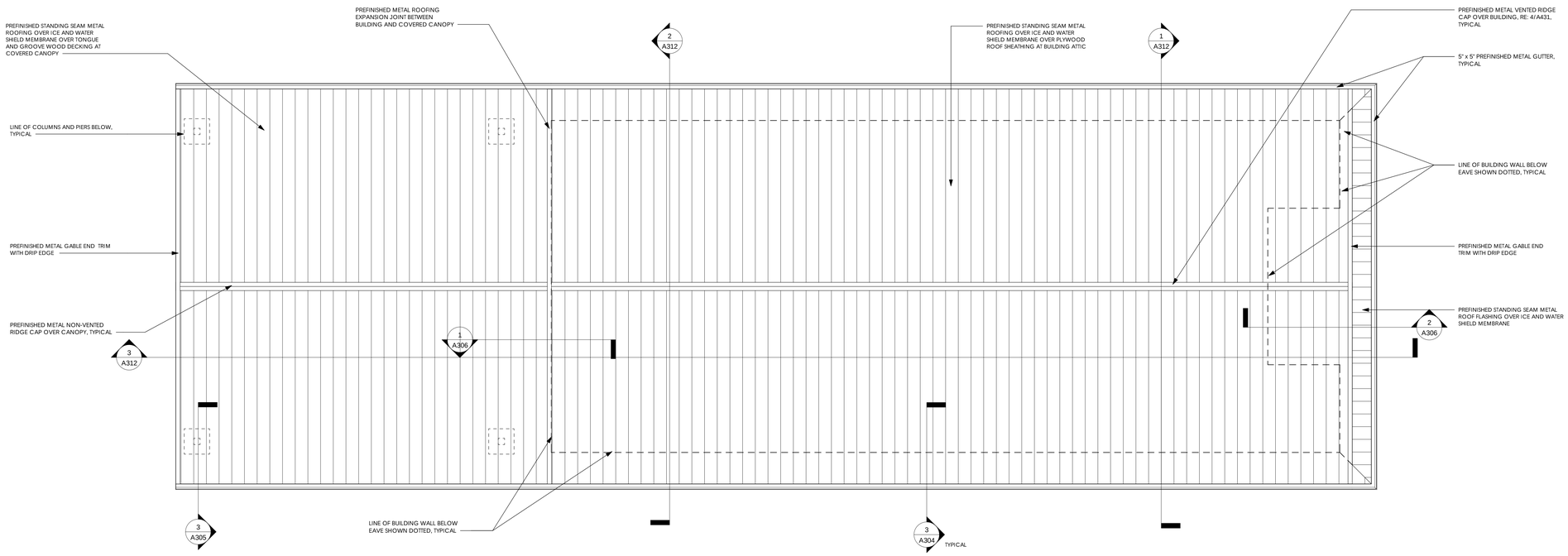


1 A104 REFLECTED CEILING PLAN - CONCESSIONS / TOILET BUILDING A

1/4" = 1'-0"



2 A104 ROOF PLAN - CONCESSIONS / TOILET BUILDING A

1/4" = 1'-0"

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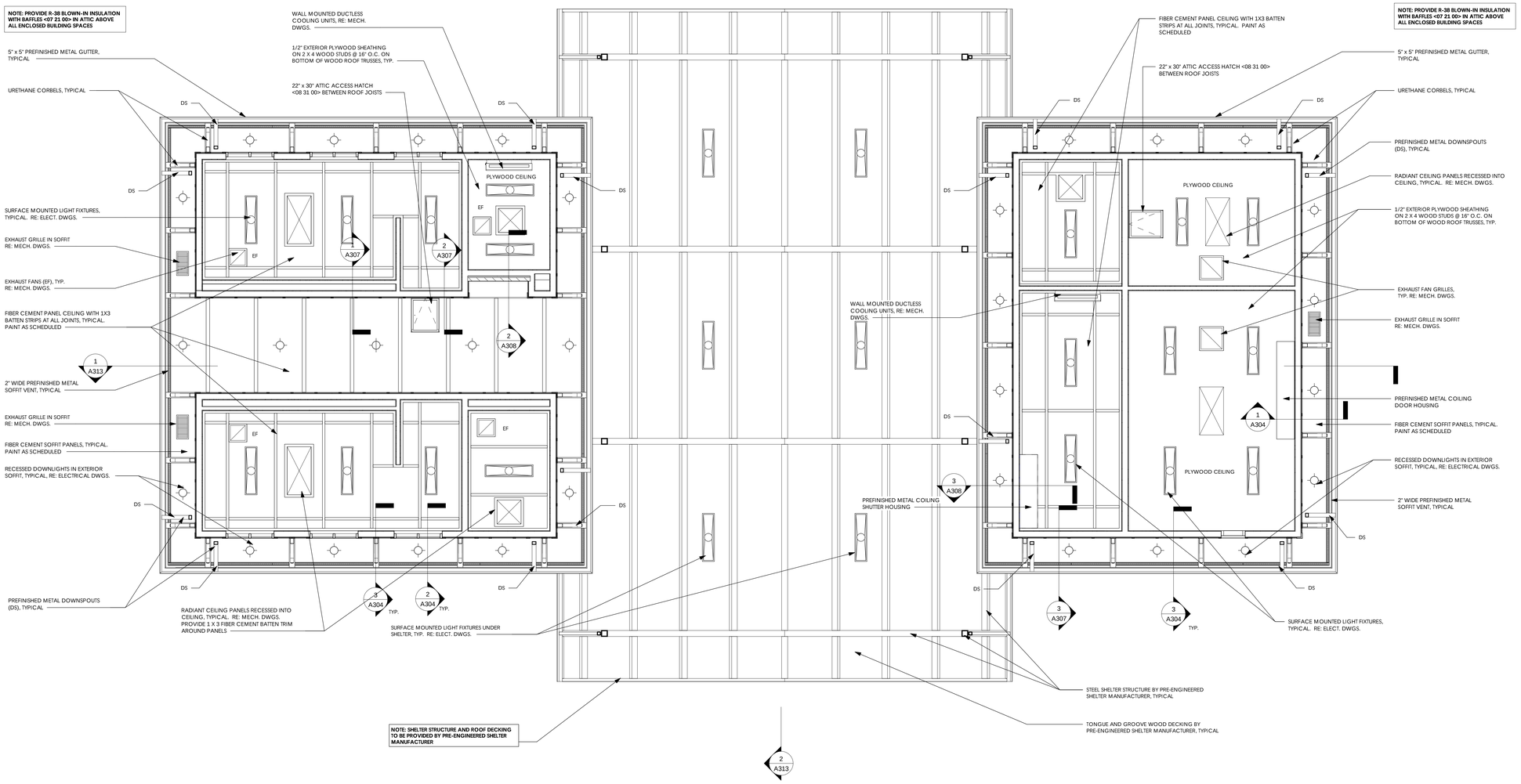

TRUE NORTH / PLAN NORTH

1 A105

REFLECTED CEILING PLAN - TOILET AND TICKET / PUMP BUILDINGS B AND C

1/4" = 1'-0"

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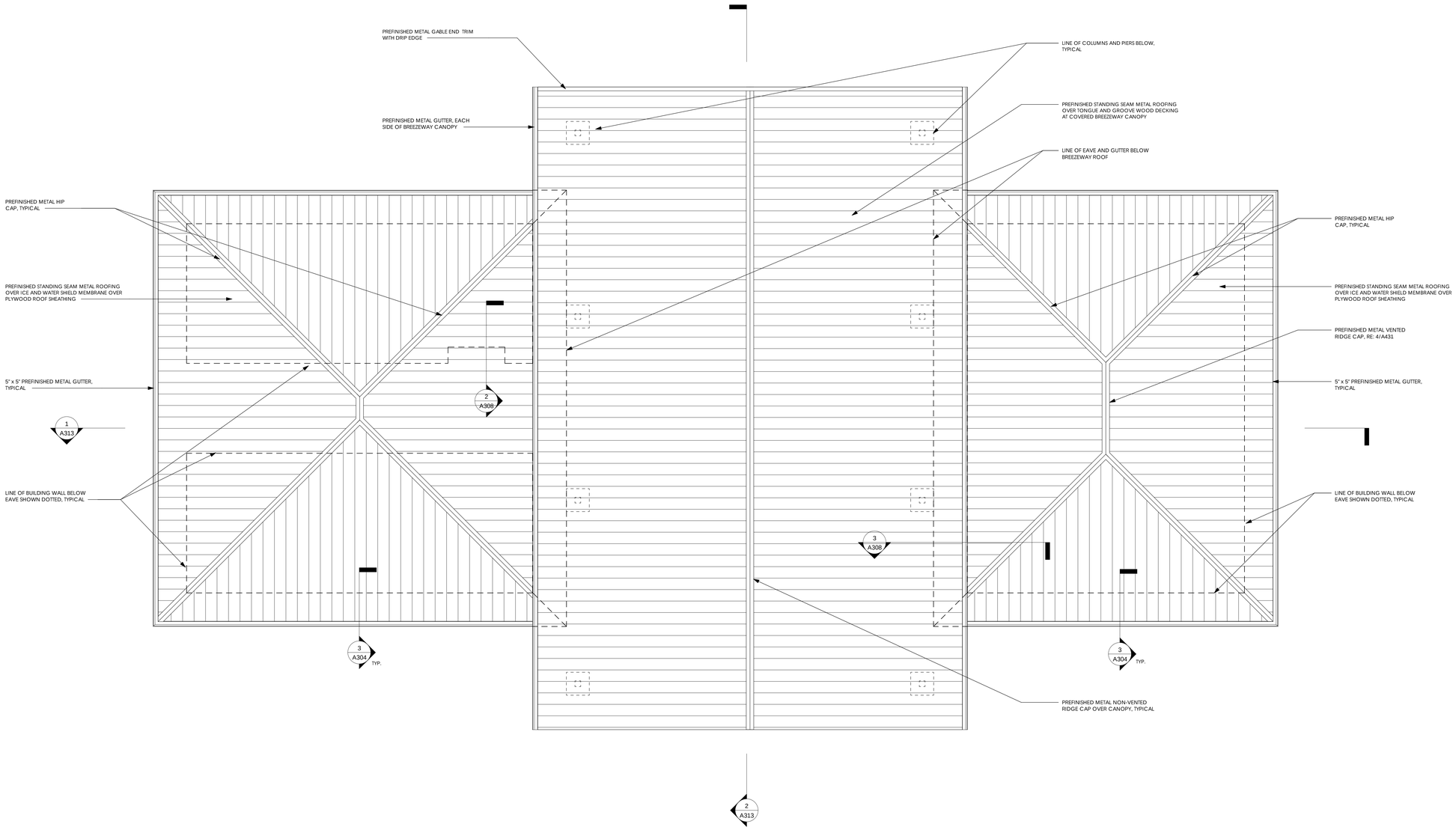

TRUE NORTH
PLAN NORTH

1 A106

ROOF PLAN - TOILET AND TICKET / PUMP BUILDINGS B AND C

1/4" = 1'-0"

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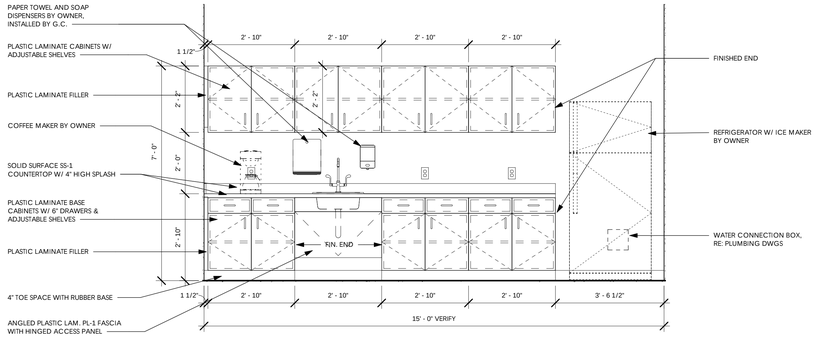
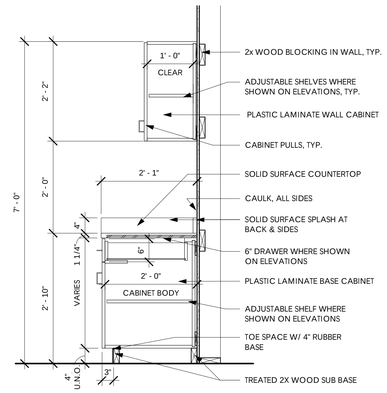
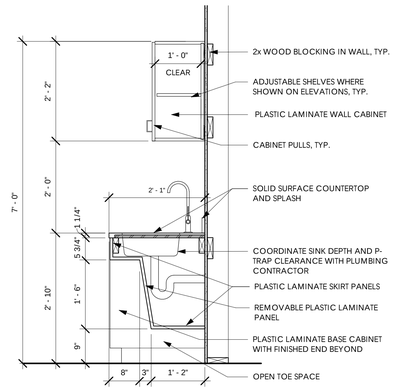


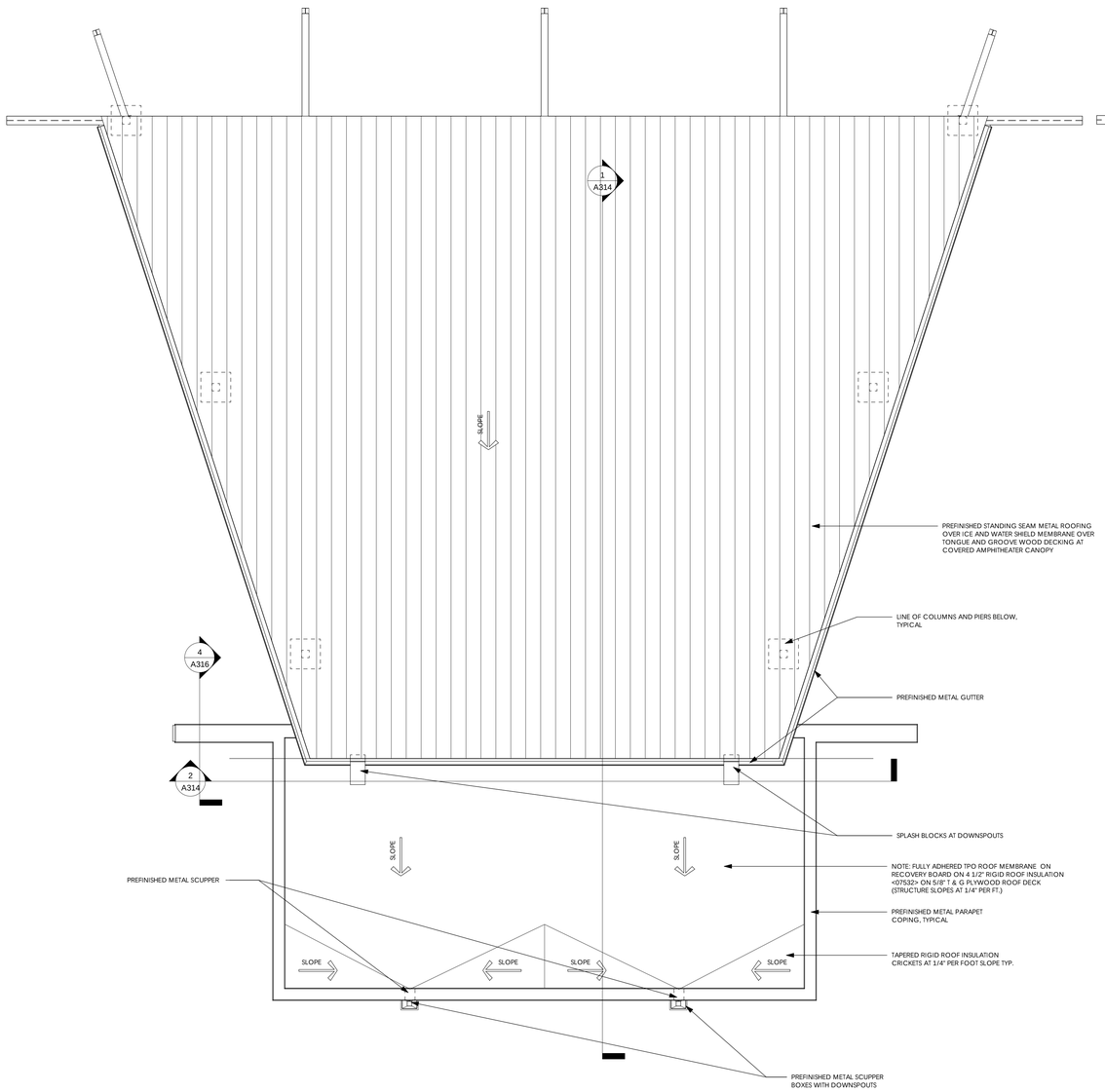
3 A107 MULTI-PURPOSE ROOM CASEWORK ELEVATION
1/2" = 1'-0"



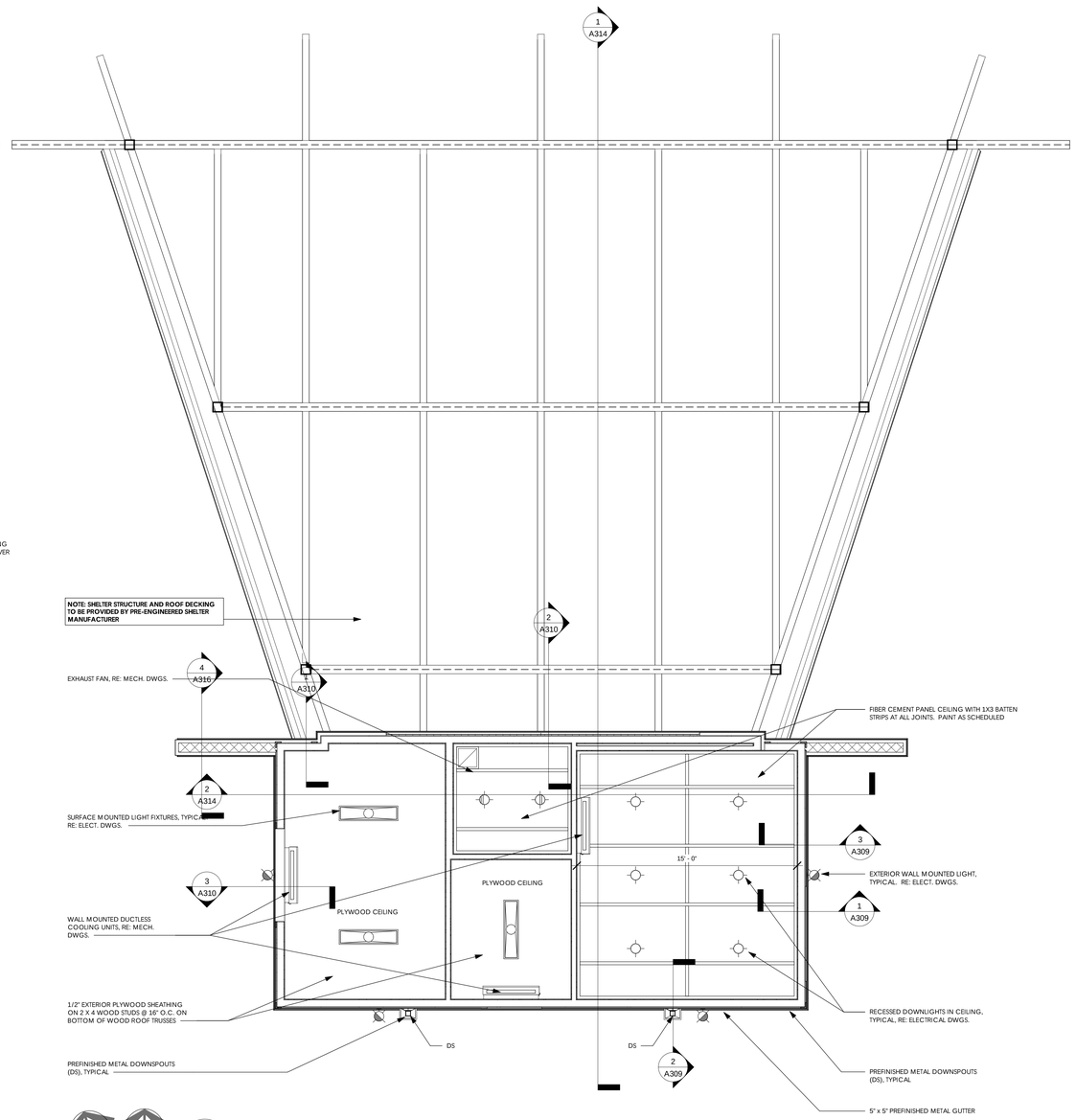
4 A107 SECTION AT TYPICAL CABINETS
3/4" = 1'-0"



5 A107 SECTION AT SINK CABINET
3/4" = 1'-0"



TRUE NORTH PLAN NORTH 1 A107 ROOF PLAN - AMPHITEATER BUILDING D
1/4" = 1'-0"



TRUE NORTH PLAN NORTH 2 A107 REFLECTED CEILING PLAN - AMPHITEATER BUILDING D
1/4" = 1'-0"

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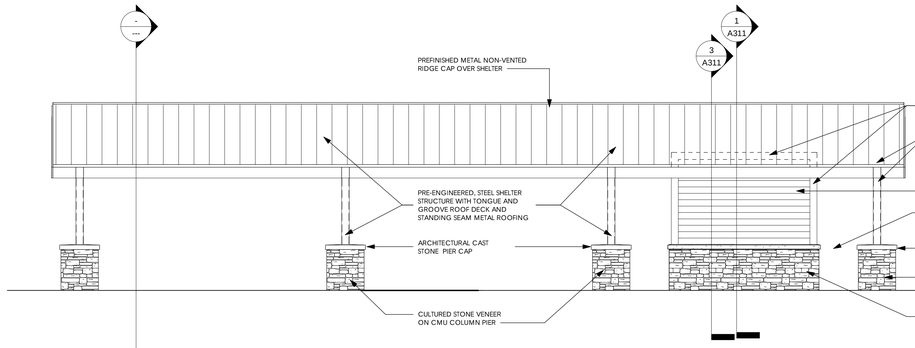
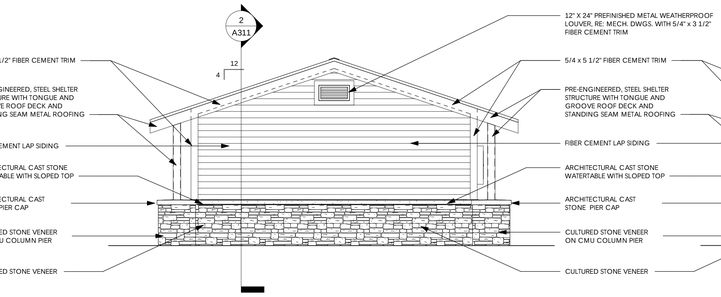
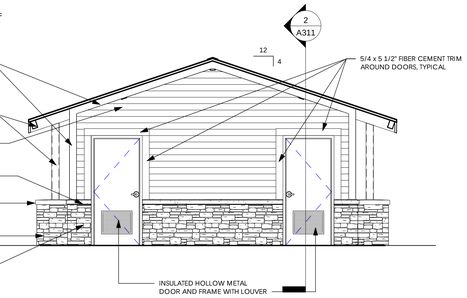


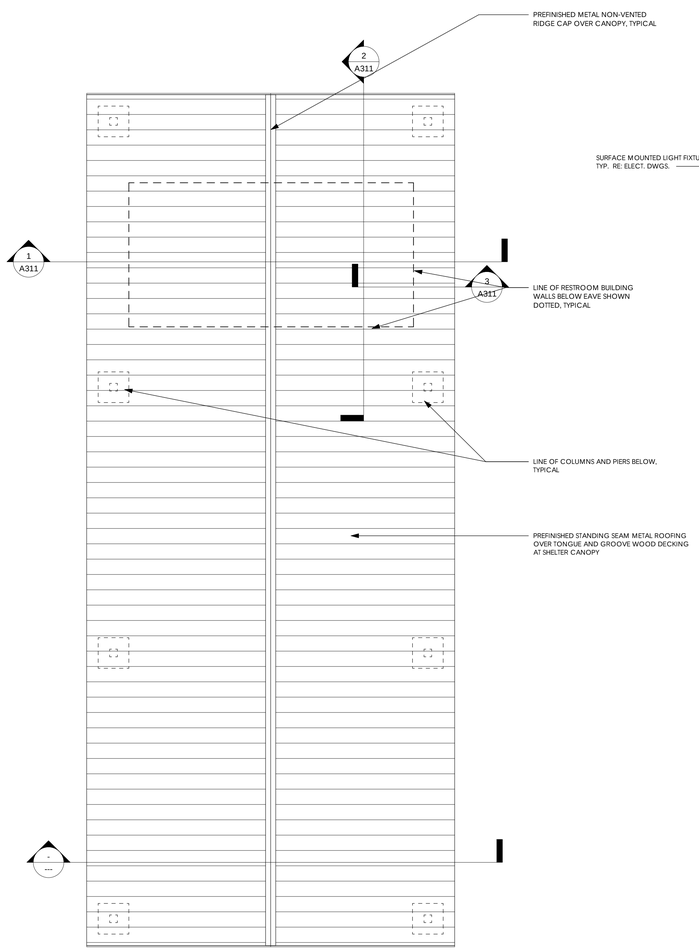
4 A108 BUILDING E - EAST ELEVATION (WEST ELEVATION OPPOSITE HAND)
1/4" = 1'-0"



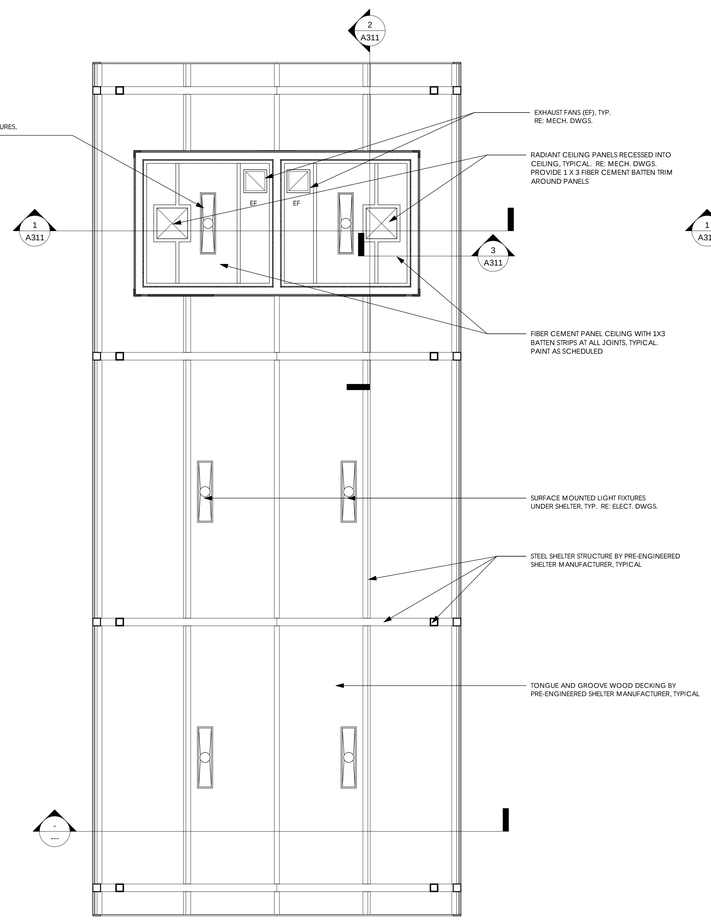
5 A108 BUILDING E - NORTH ELEVATION
1/4" = 1'-0"



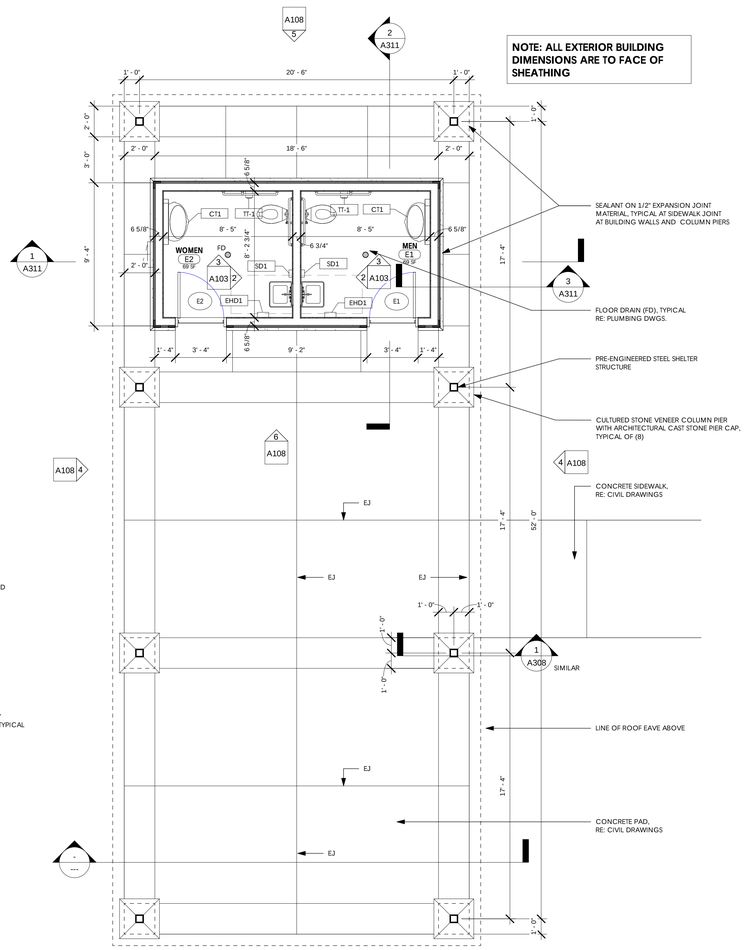
6 A108 BUILDING E - SOUTH ELEVATION
1/4" = 1'-0"



1 A108 ROOF PLAN - BUILDING E
1/4" = 1'-0"



2 A108 REFLECTED CEILING PLAN - BUILDING E
1/4" = 1'-0"



3 A108 FLOOR PLAN - POND SHELTER RESTROOMS, BUILDING E
1/4" = 1'-0"

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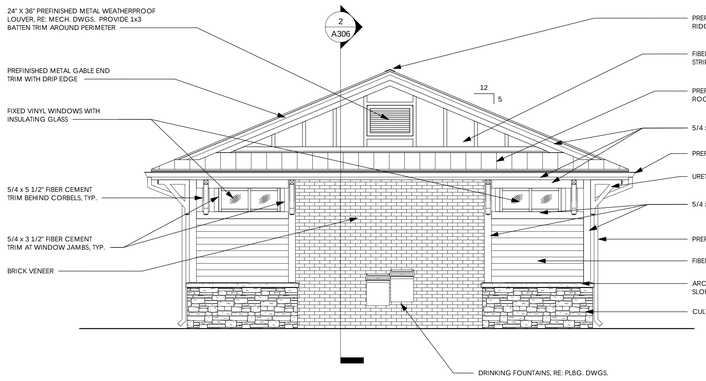
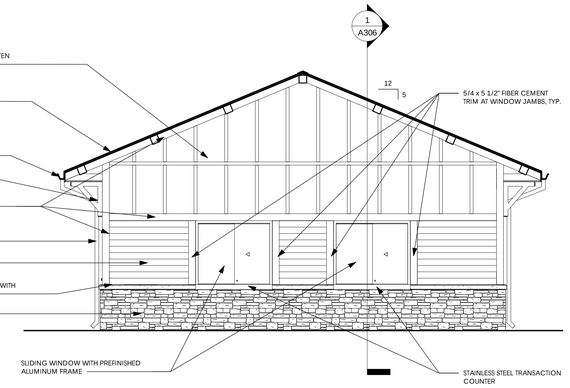
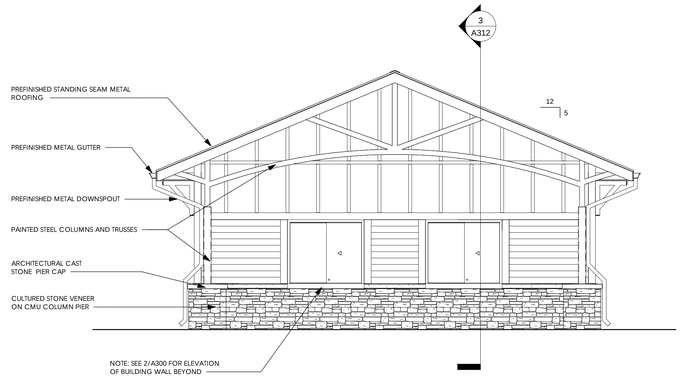


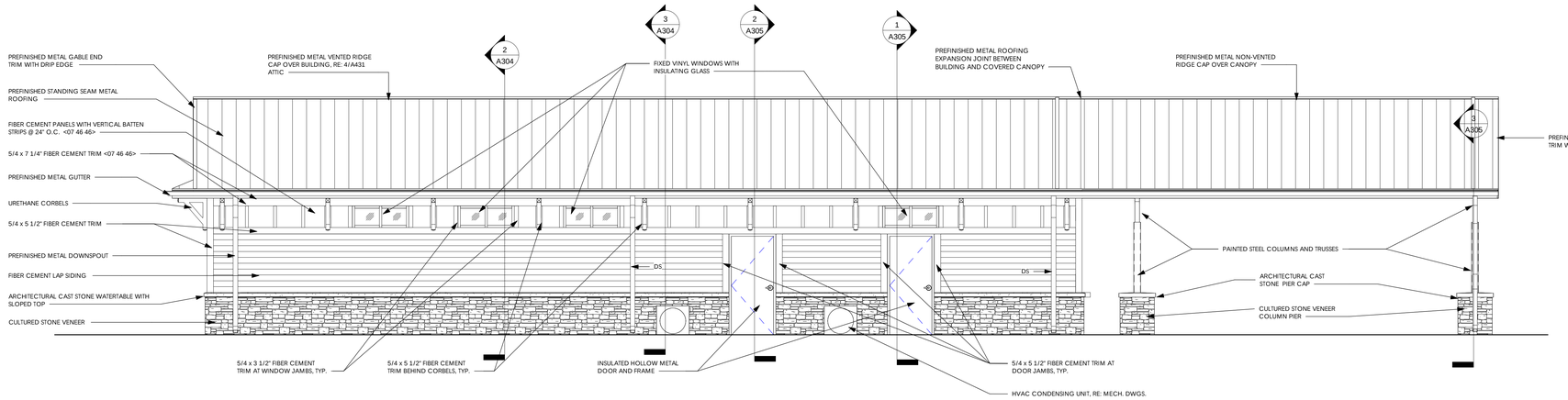
1 A300 BUILDING A - NORTH ELEVATION
1/4" = 1'-0"



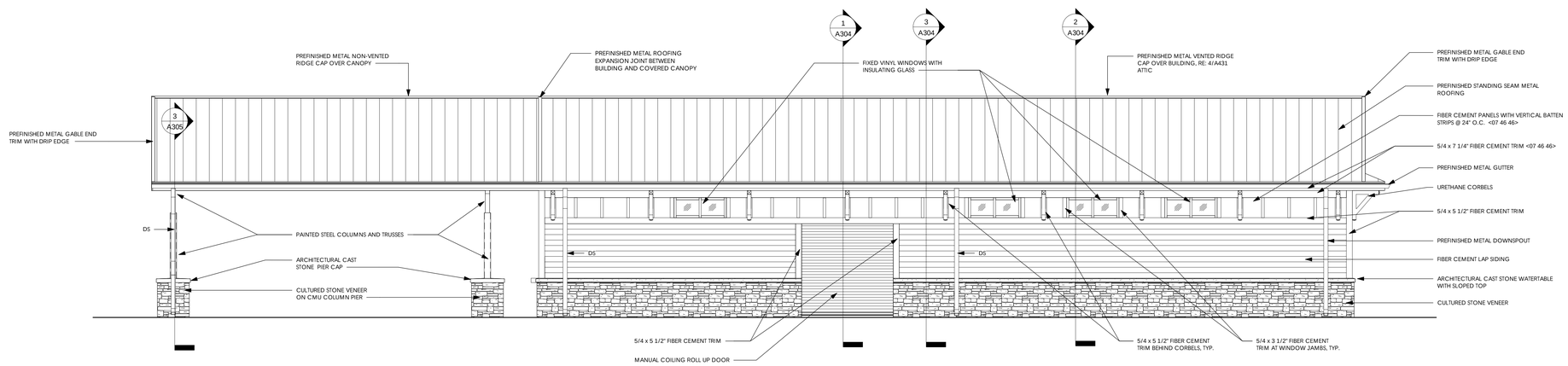
2 A300 BUILDING A - SOUTH ELEVATION UNDER CANOPY
1/4" = 1'-0"



3 A300 BUILDING A - SOUTH ELEVATION
1/4" = 1'-0"



4 A300 BUILDING A - WEST ELEVATION
1/4" = 1'-0"



5 A300 BUILDING A - EAST ELEVATION
1/4" = 1'-0"

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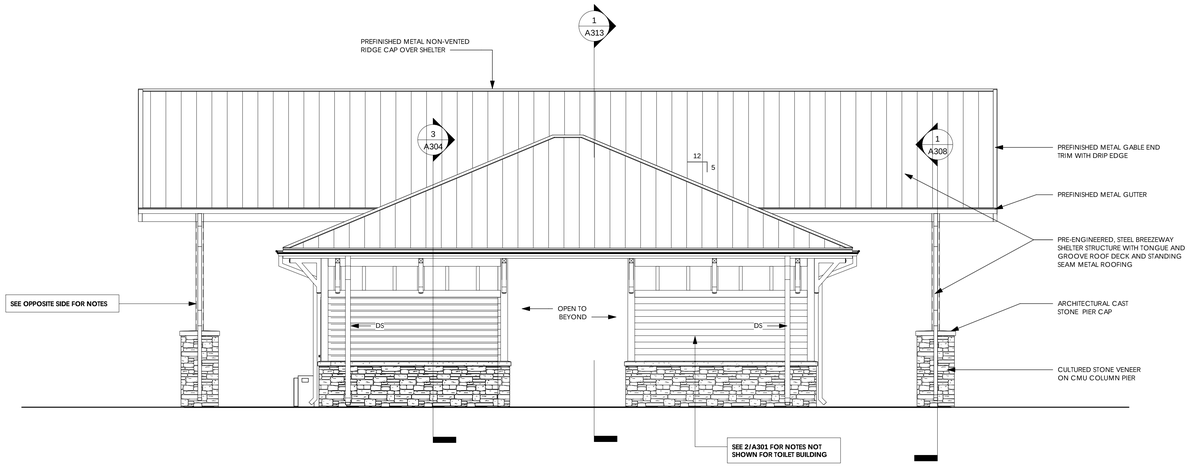
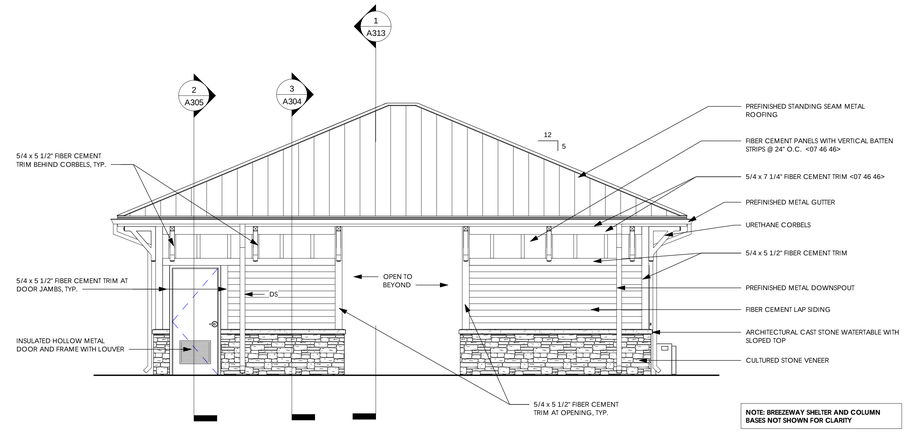


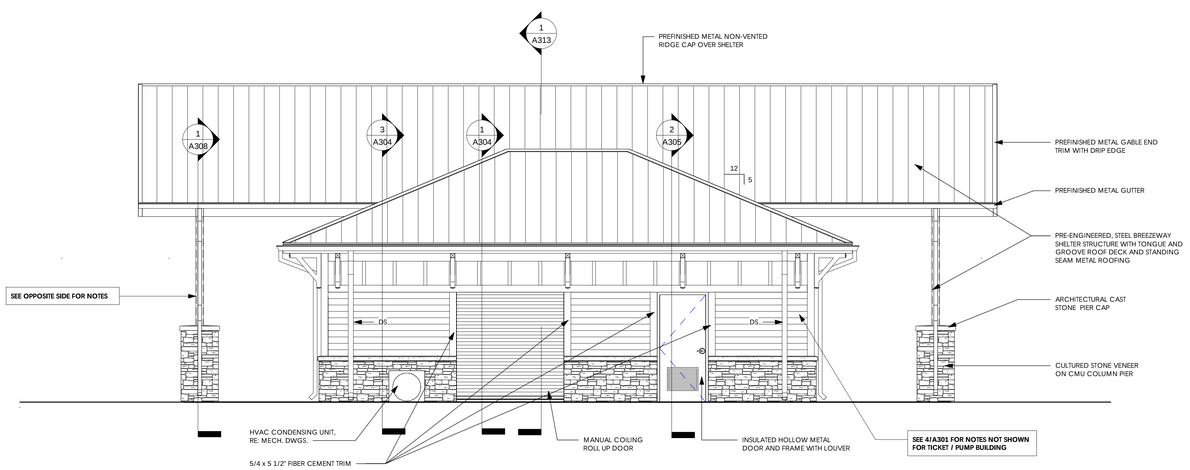
1 A301 BUILDING B NORTH ELEVATION

1/4" = 1'-0"



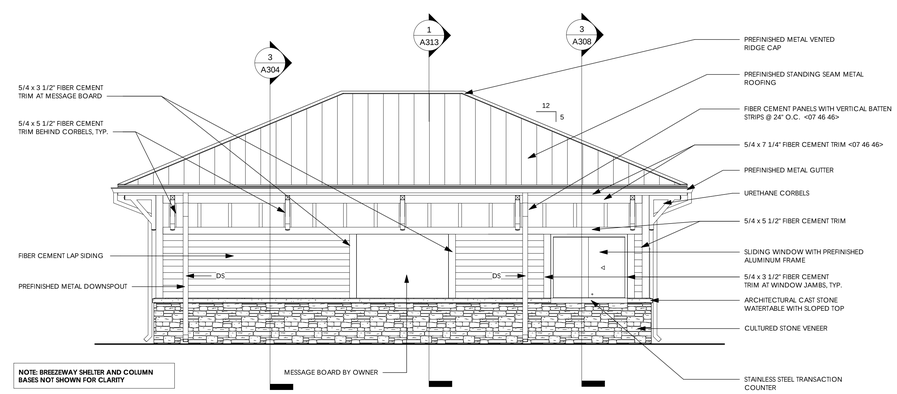
2 A301 BUILDING B - SOUTH ELEVATION

1/4" = 1'-0"



3 A301 BUILDING C SOUTH ELEVATION

1/4" = 1'-0"



4 A301 BUILDING C - NORTH ELEVATION

1/4" = 1'-0"

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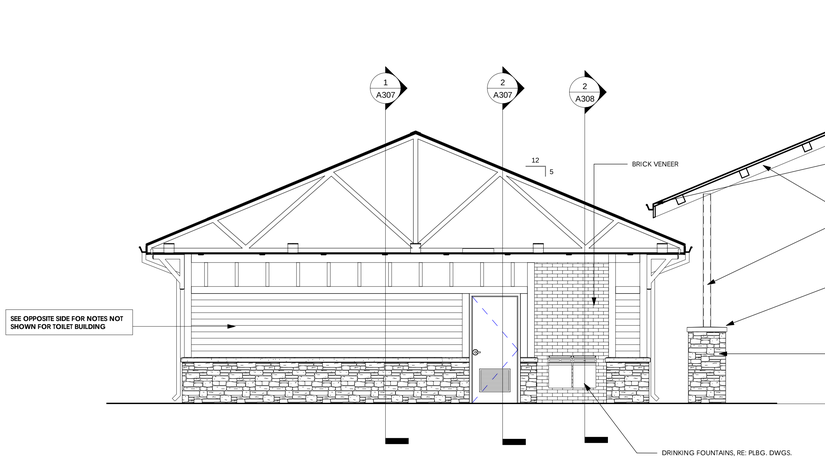
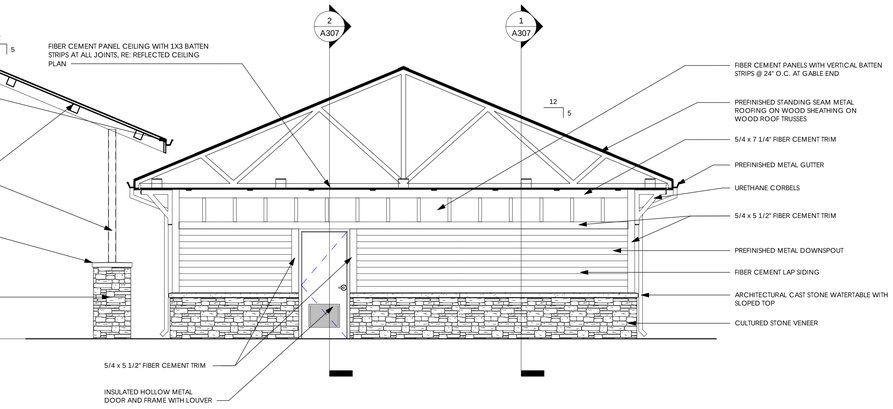
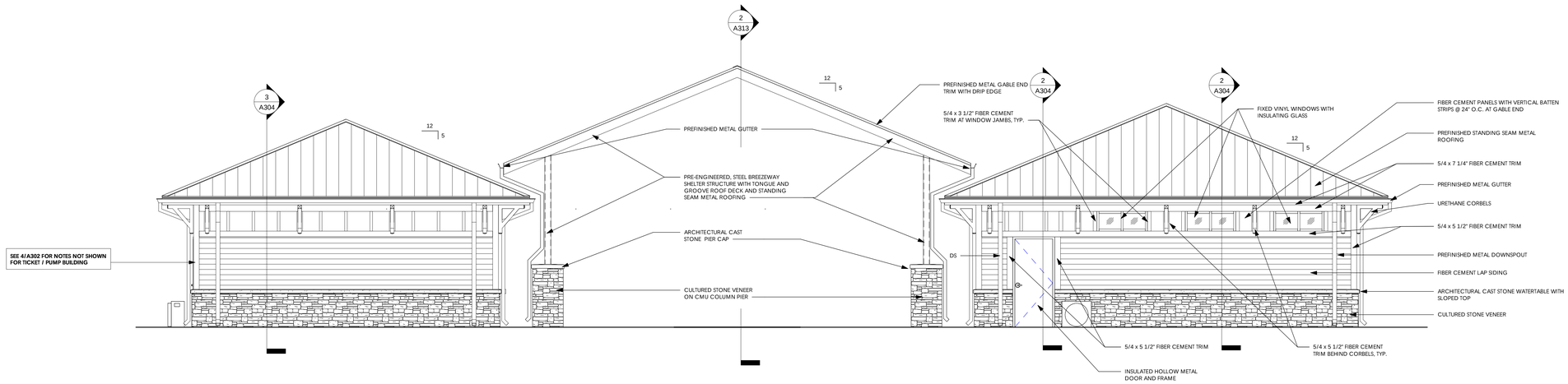


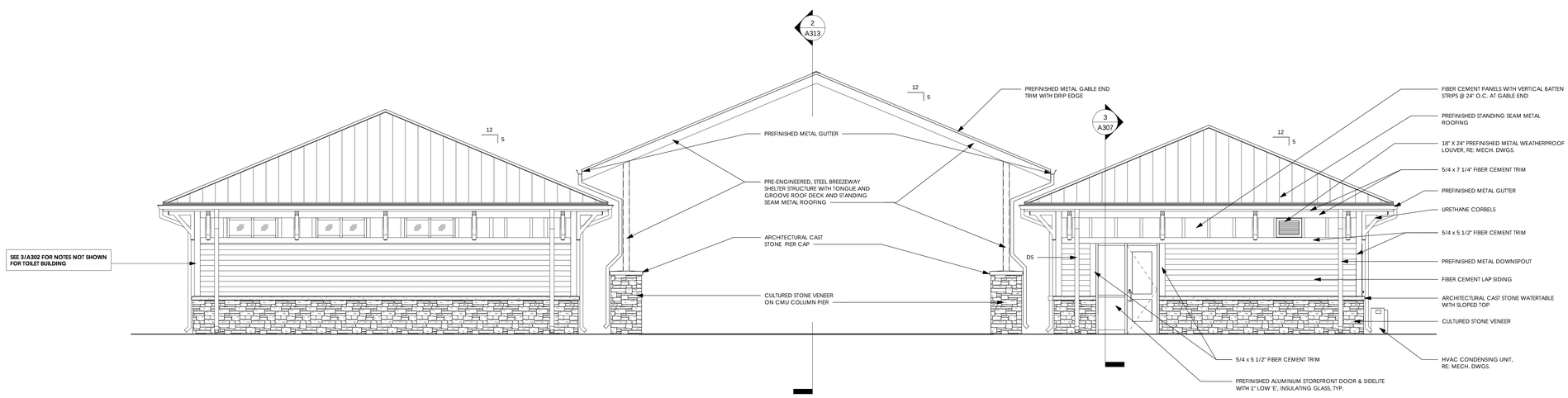
1 A302 EAST ELEVATION - BUILDING B BREEZEWAY
1/4" = 1'-0"



2 A302 WEST ELEVATION - BUILIDNG B BREEZEWAY
1/4" = 1'-0"



3 A302 BUILDING B & C - EAST ELEVATION
1/4" = 1'-0"



4 A302 BUILDING B & C - WEST ELEVATION
1/4" = 1'-0"

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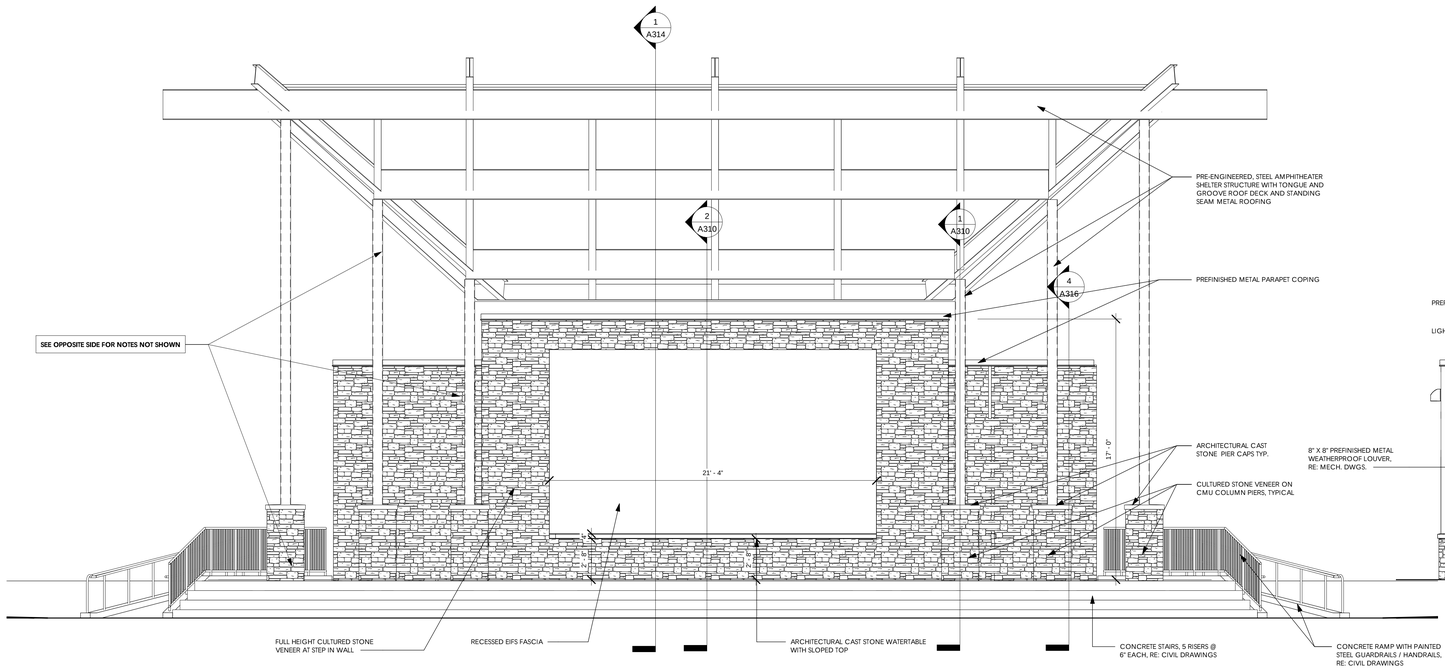
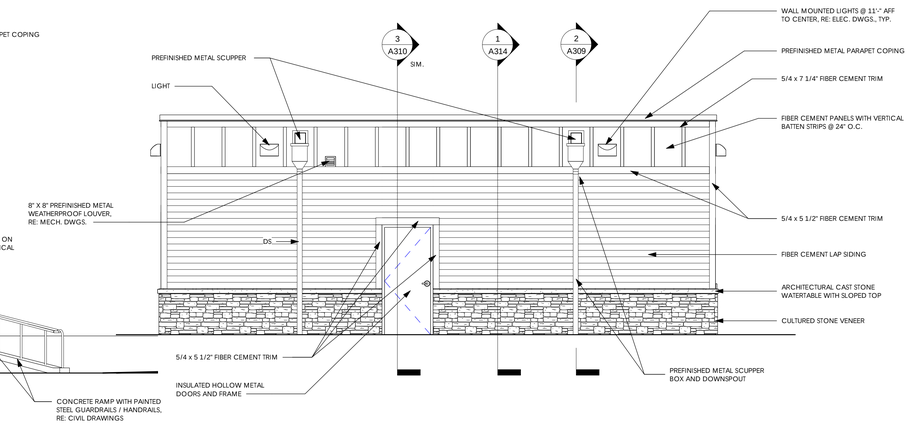
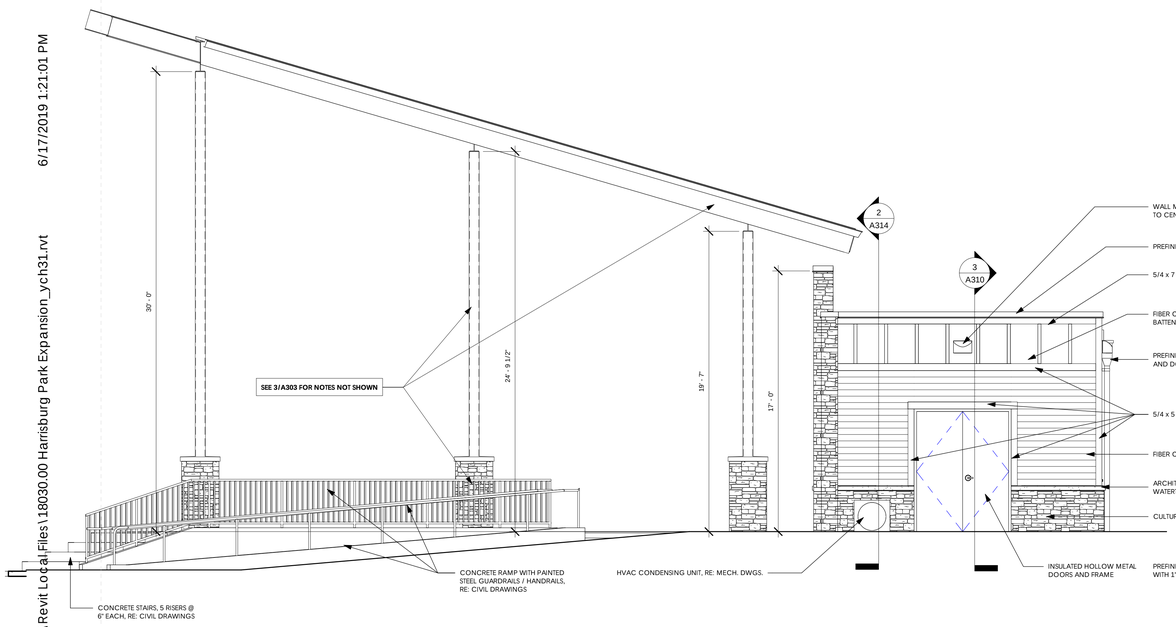


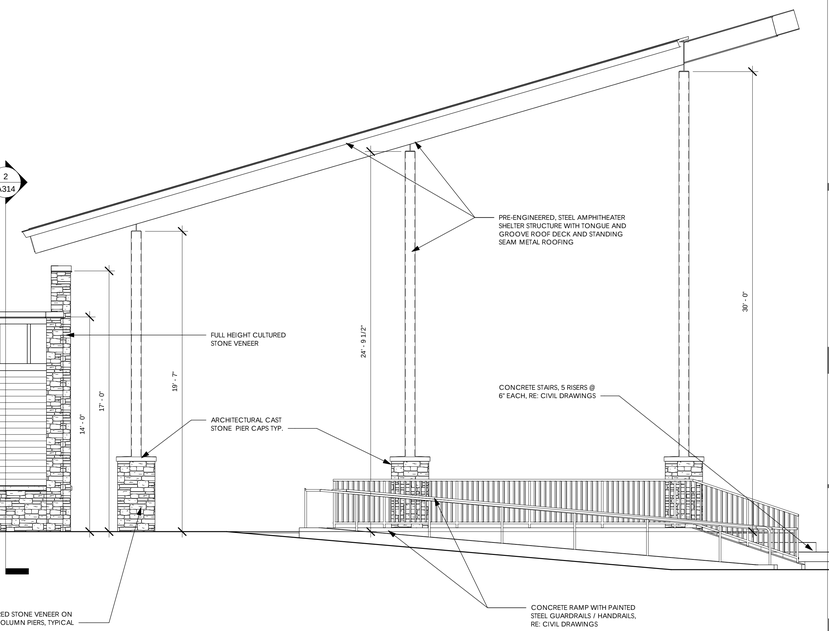
1 A303 BUILDING D - NORTH ELEVATION
1/4" = 1'-0"



2 A303 BUILDING D - SOUTH ELEVATION
1/4" = 1'-0"



3 A303 BUILDING D - WEST ELEVATION
1/4" = 1'-0"



4 A303 BUILDING D - EAST ELEVATION
1/4" = 1'-0"

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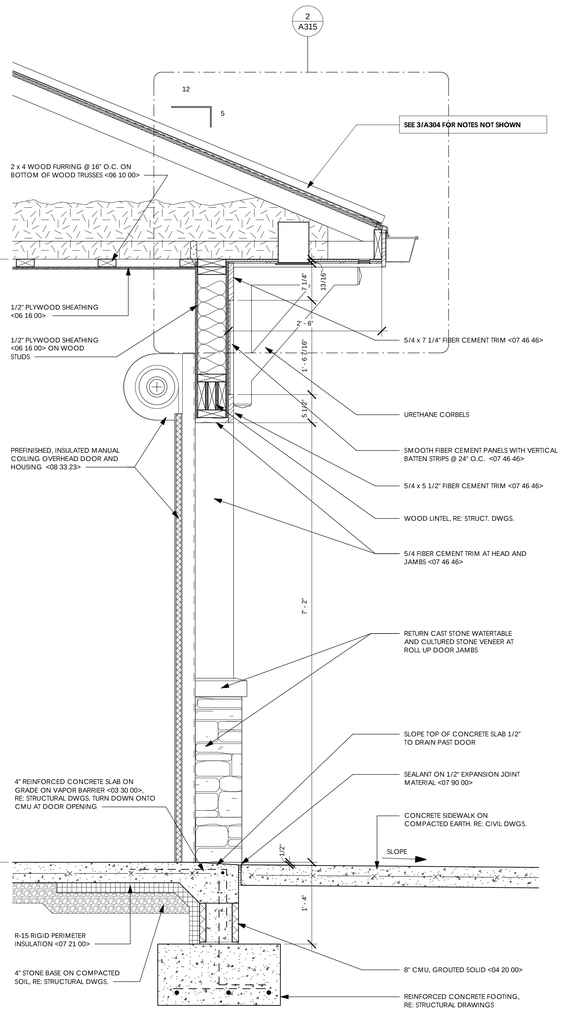
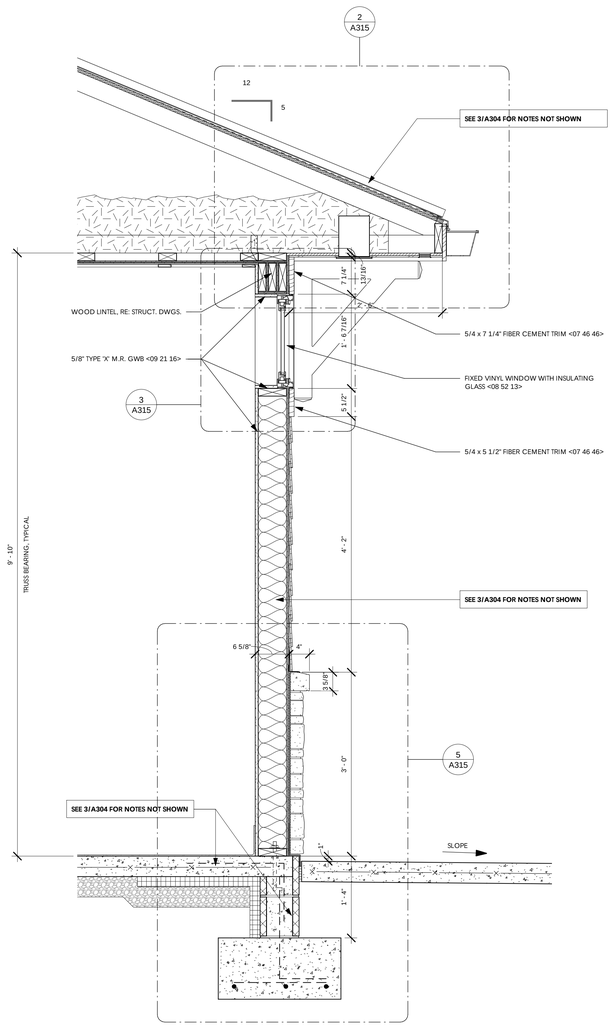
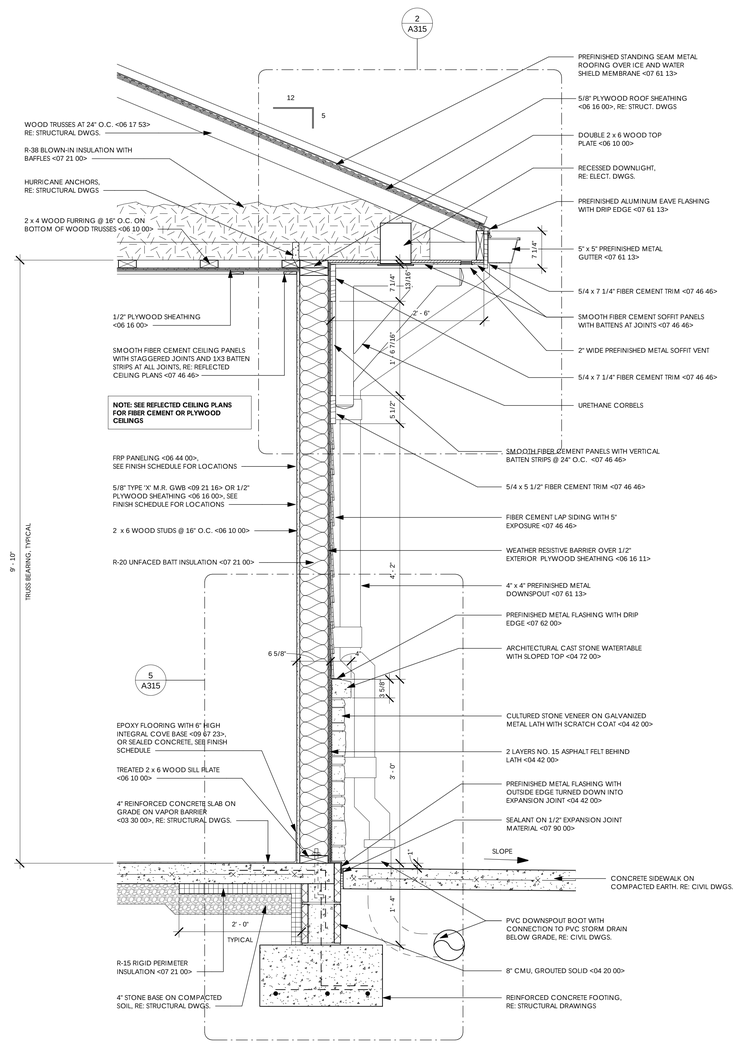


1 A304 SECTION THRU ROLL UP DOOR (BUILDINGS A & C)
1" = 1'-0"



2 A304 SECTION THRU CLERESTORY WINDOW (BUILDINGS A, B & C)
1" = 1'-0"



3 A304 TYPICAL WALL SECTION (BUILDINGS A, B & C)
1" = 1'-0"

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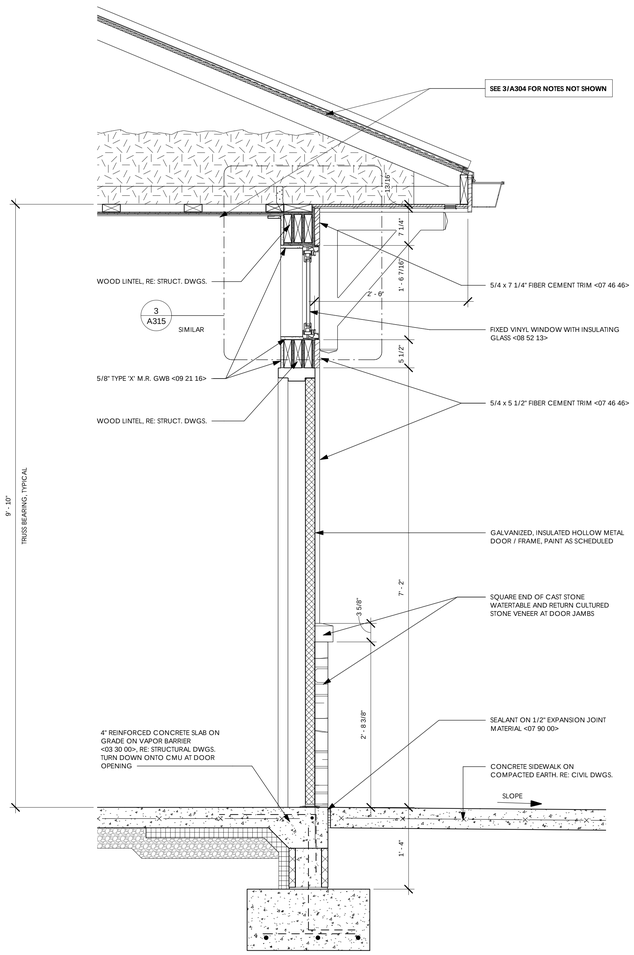
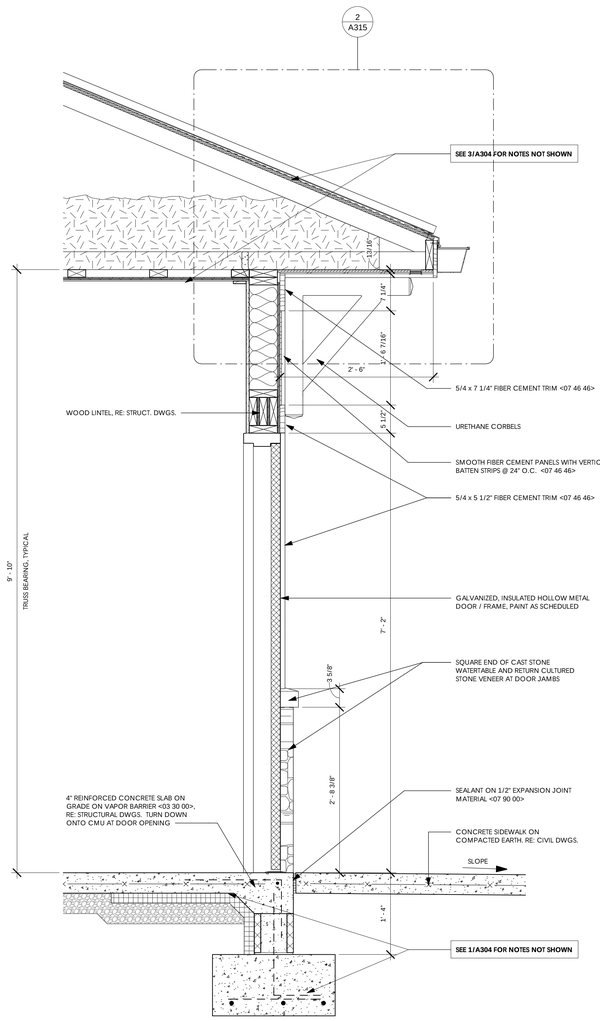
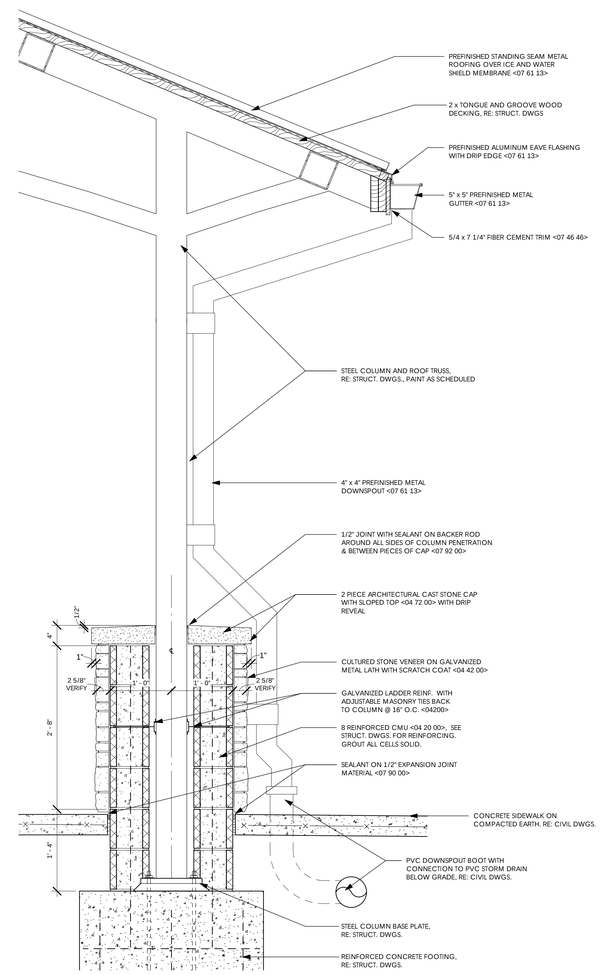


1 A305 SECTION THRU DOOR WITH TRANSOM (BUILDING A)
1" = 1'-0"



2 A305 SECTION THRU TYPICAL DOOR (BUILDINGS A, B & C)
1" = 1'-0"



3 A305 SECTION AT CANOPY COLUMN (BUILDING A)
1" = 1'-0"

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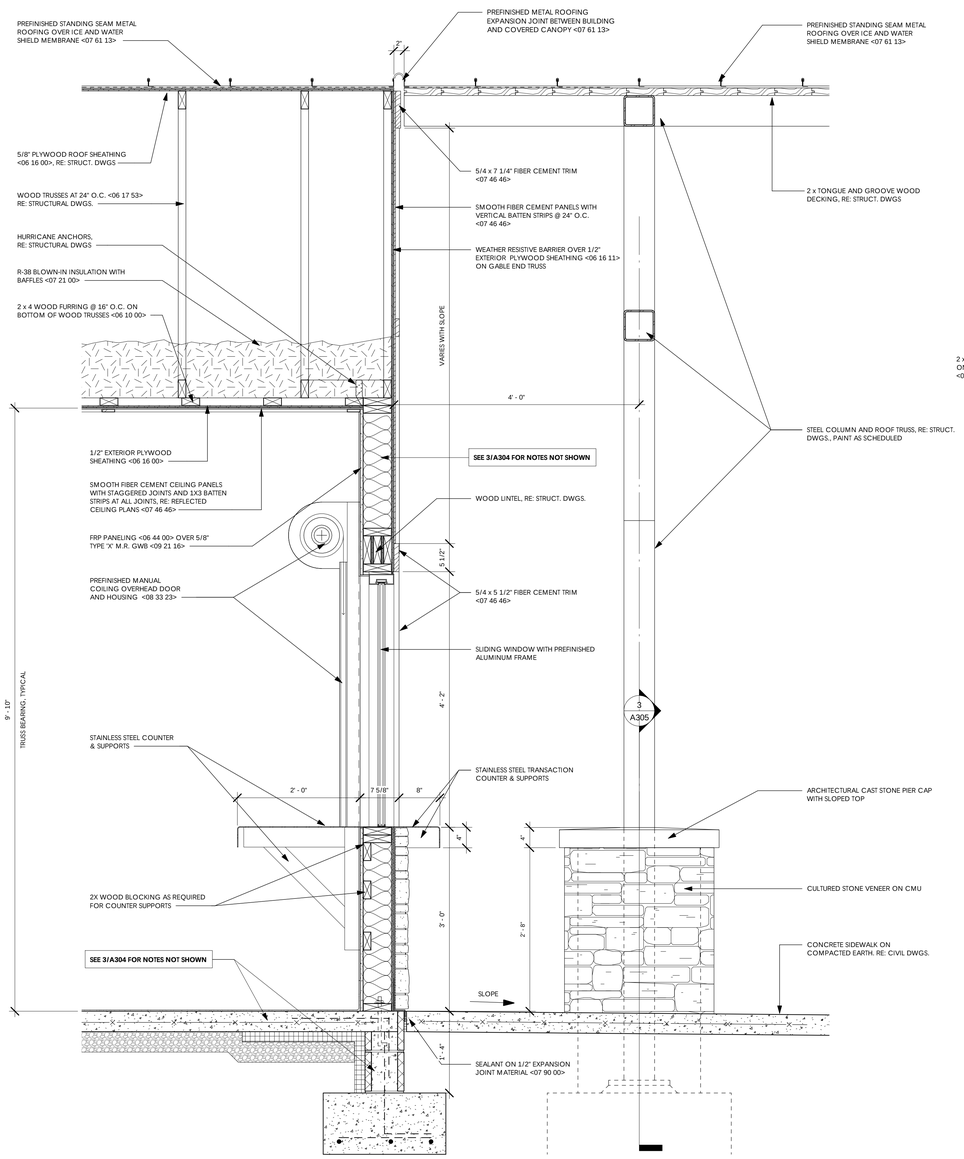
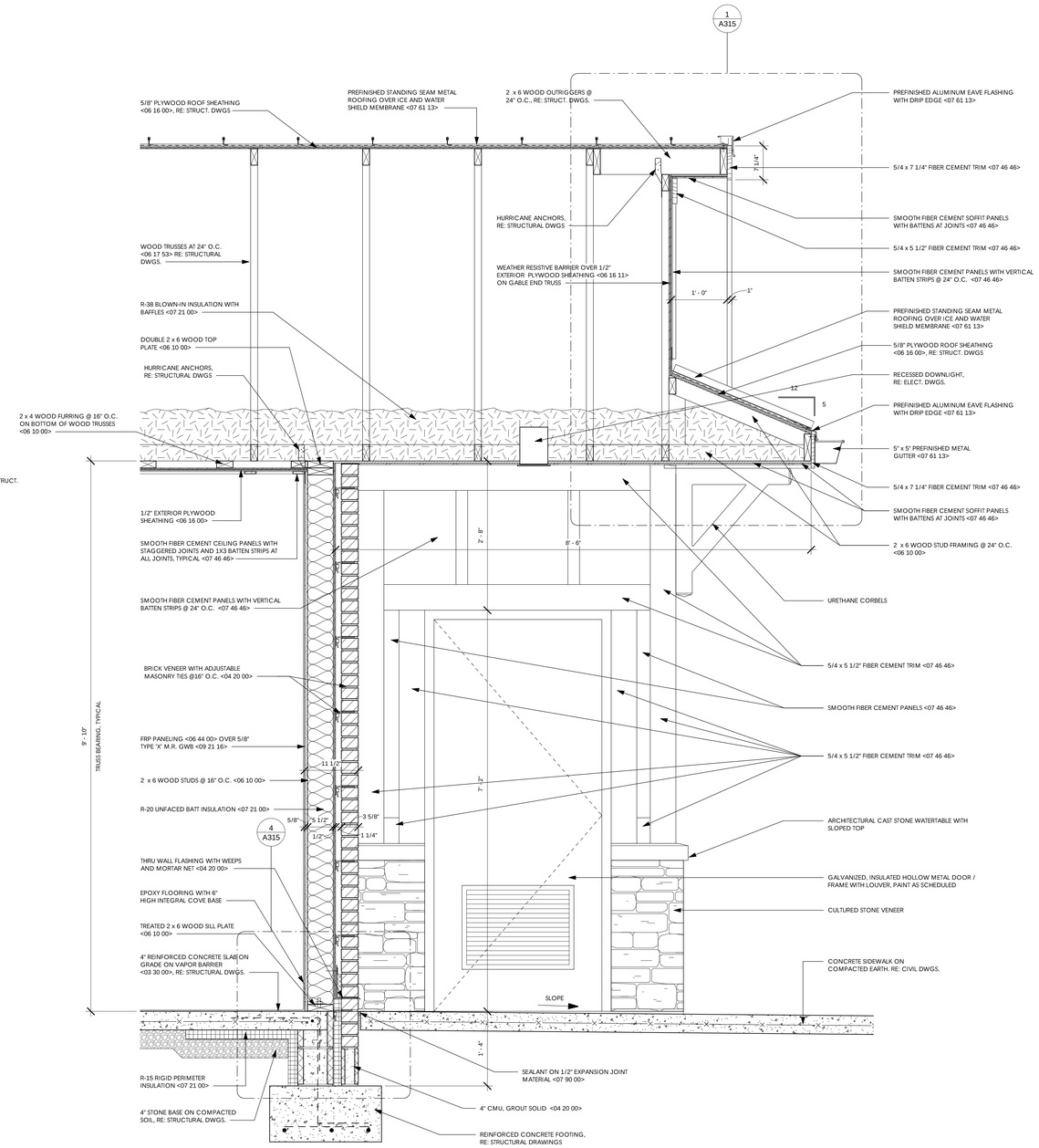


1 A306 SECTION THRU CONCESSIONS WINDOW (BUILDING A)

1" = 1'-0"



2 A306 SECTION THRU GABLE END AT RESTROOM ENTRY (BUILDING A)

1" = 1'-0"

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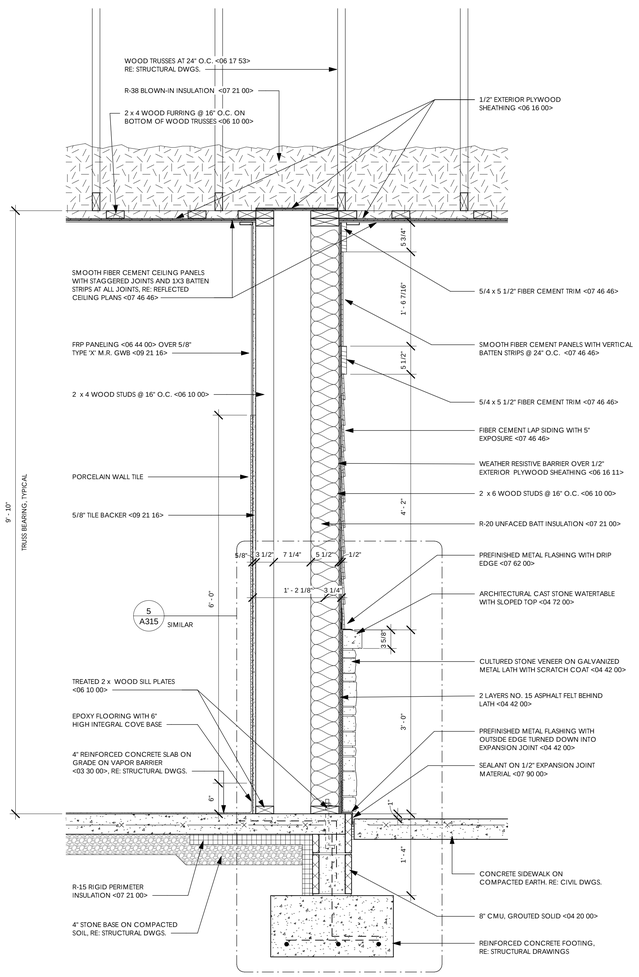
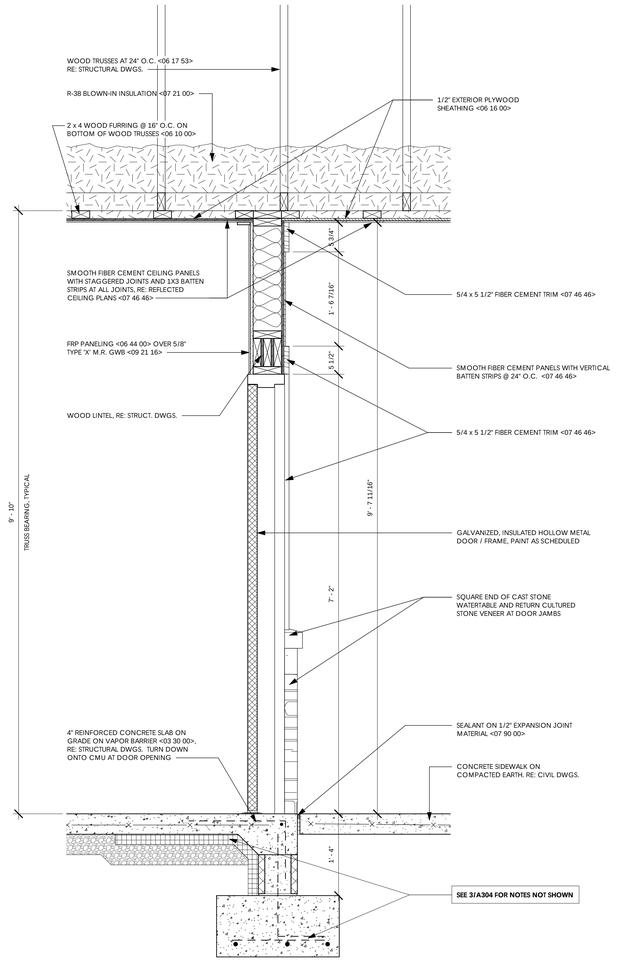
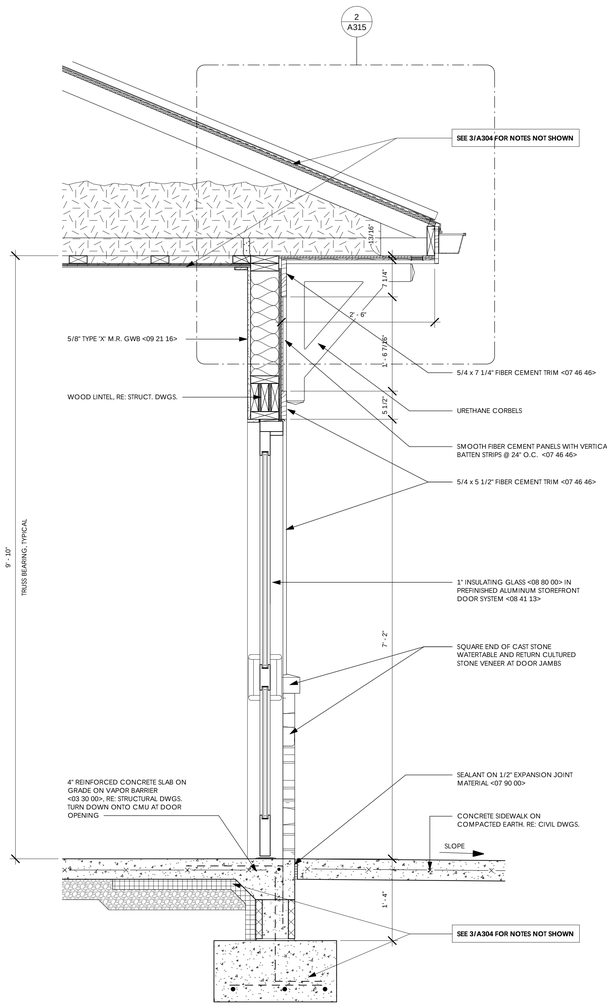


1 A307 SECTION THRU CHASE WALL (BUILDING B)
1" = 1'-0"



2 A307 SECTION THRU DOOR AT BREEZEWAY (BUILDING B)
1" = 1'-0"



3 A307 SECTION THRU STOREFRONT SYSTEM (BUILDING C)
1" = 1'-0"

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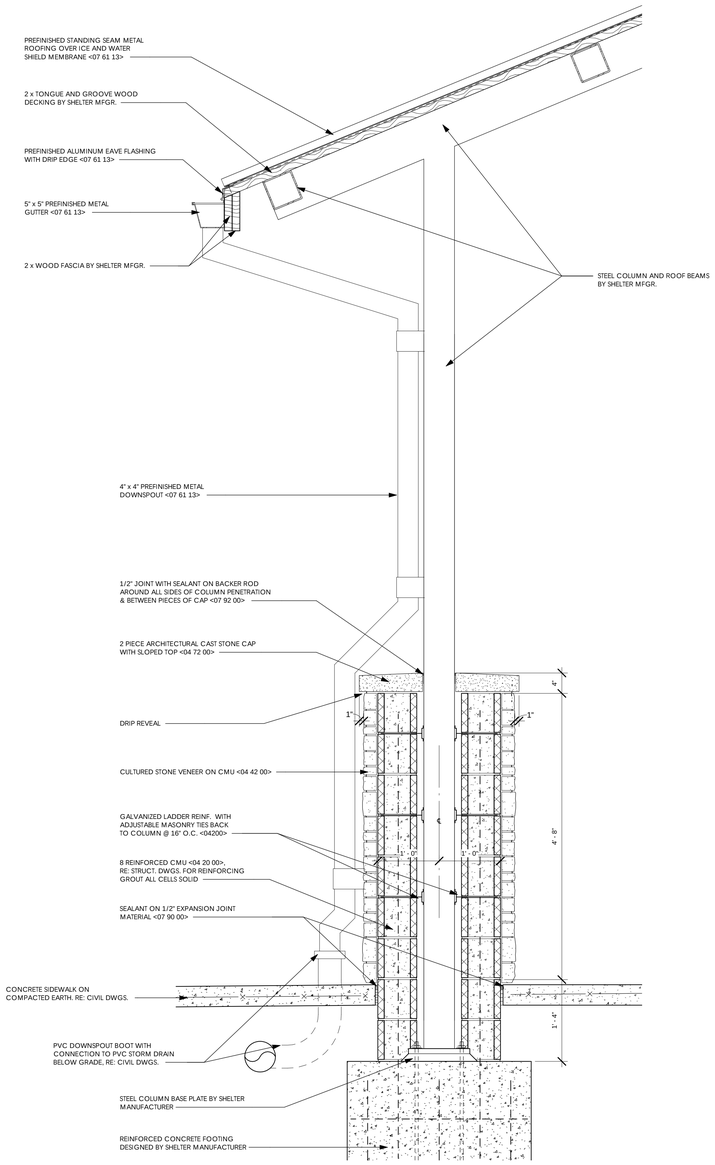
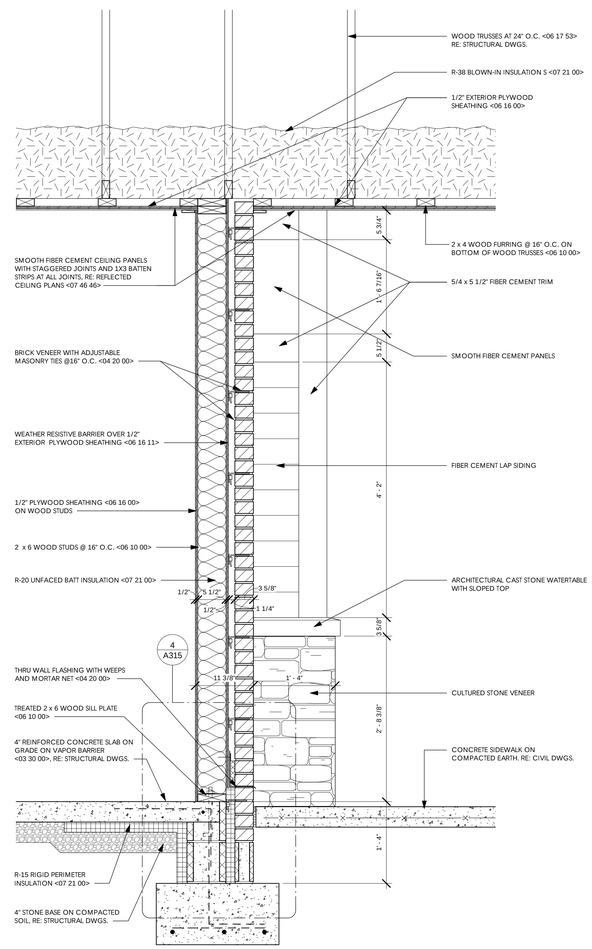


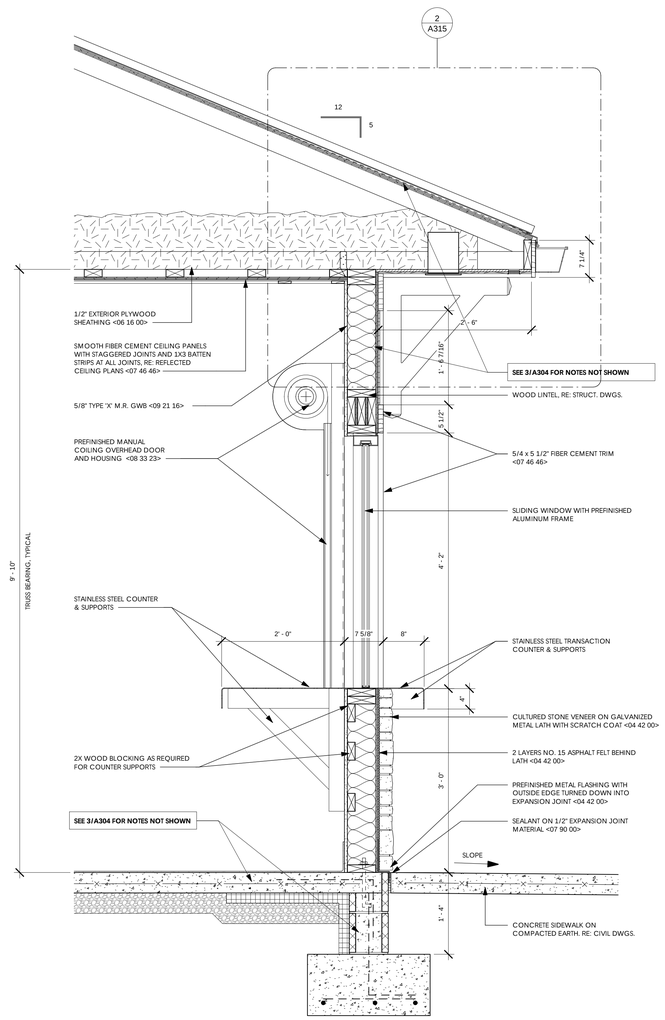
1 A308 SECTION THRU CANOPY COLUMN AT BUILDINGS B & C

1" = 1'-0"



2 A308 SECTION THRU DRINKING FOUNTAIN ALCOVE (BUILDING B)

1" = 1'-0"



3 A308 SECTION THRU TICKET WINDOW (BUILDING C)

1" = 1'-0"

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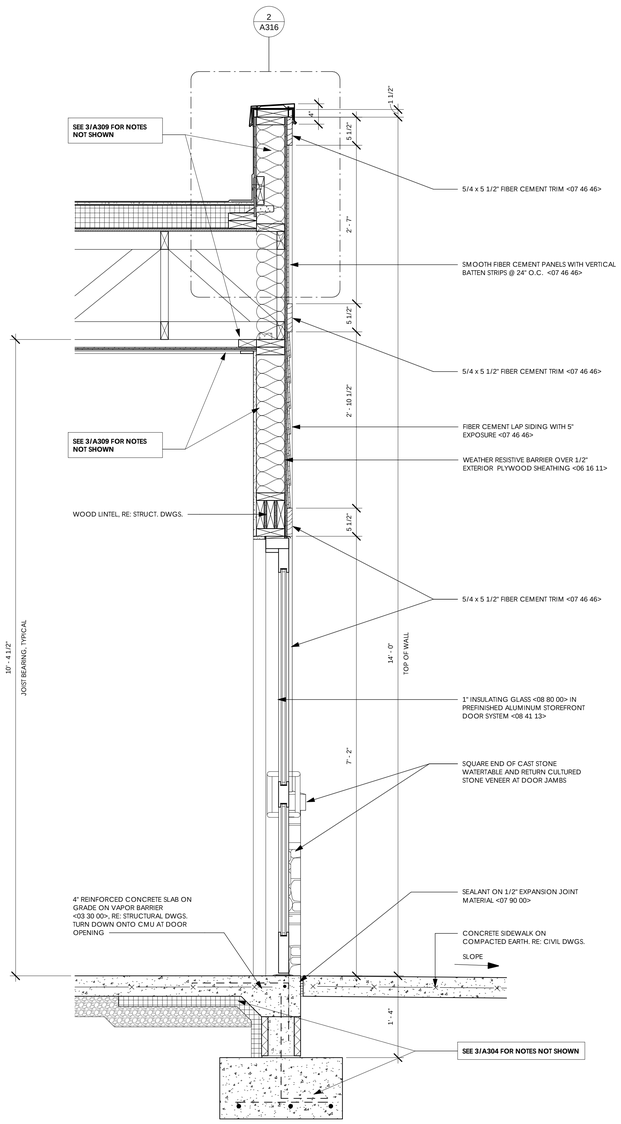
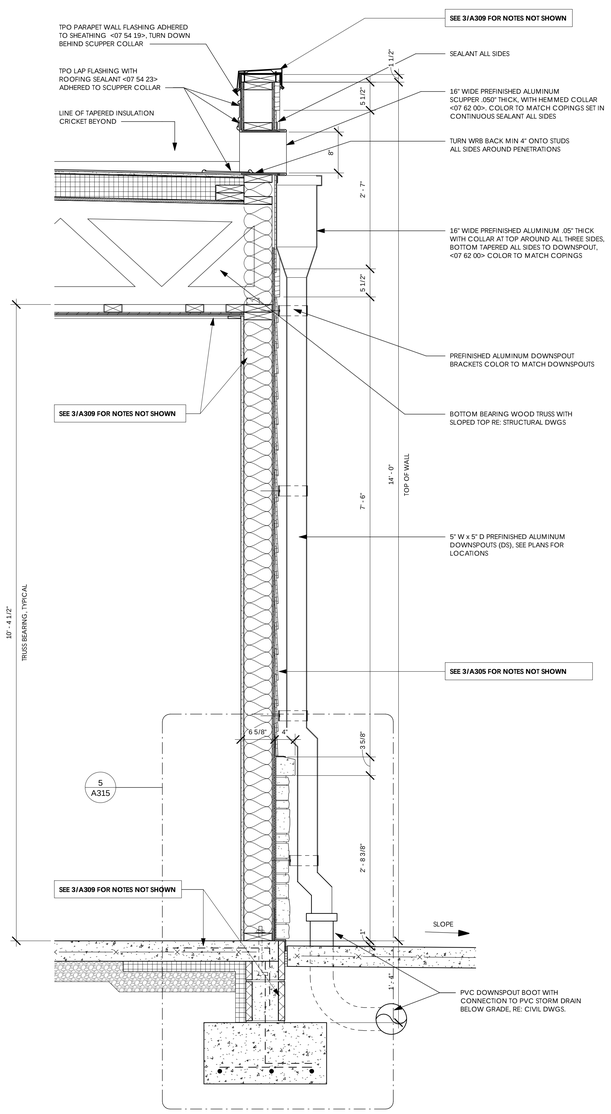


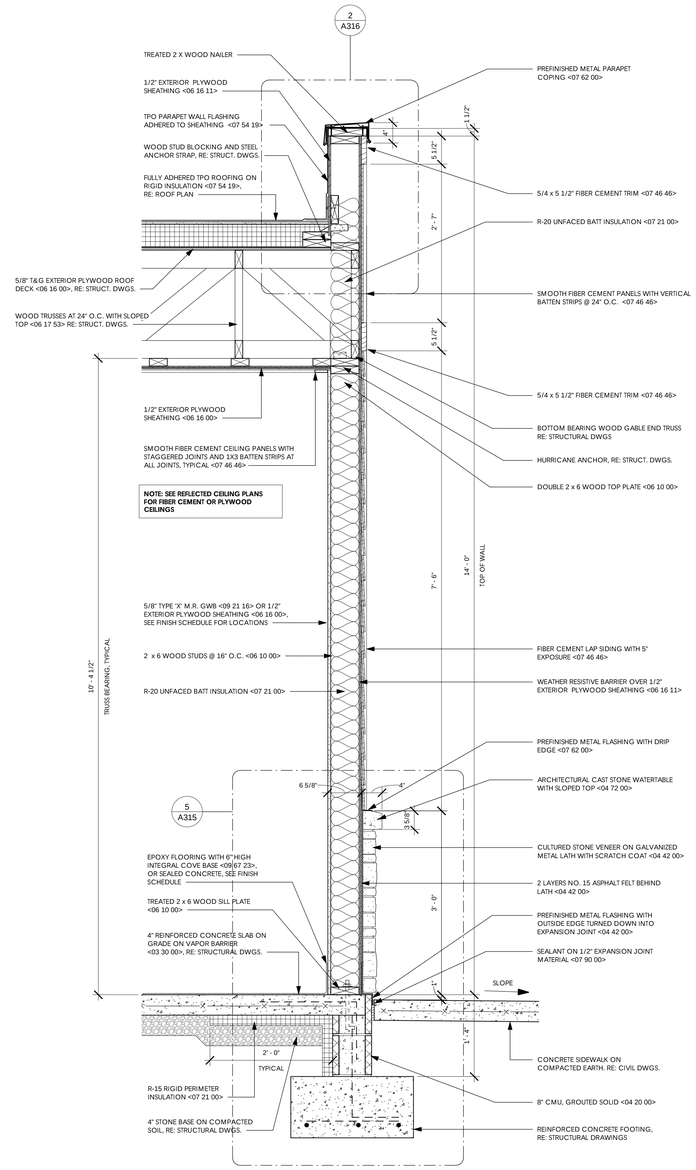
1 A309 SECTION THRU STOREFRONT AT BUILDING D

1" = 1'-0"



2 A309 SECTION THRU BACK WALL OF BUILDING D

1" = 1'-0"



3 A309 SECTION THRU TYP. SIDE WALL AT BUILDING D

1" = 1'-0"

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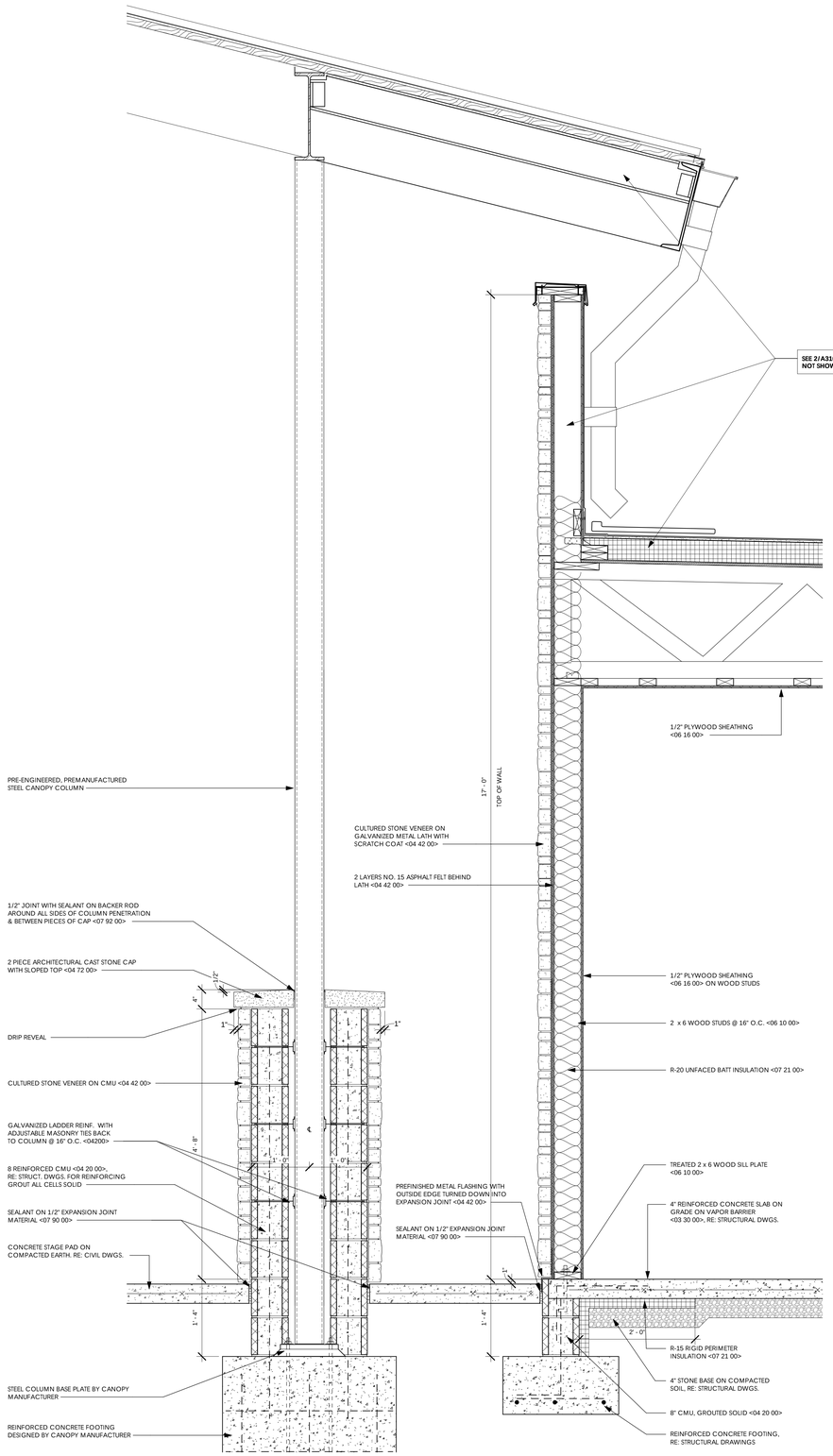
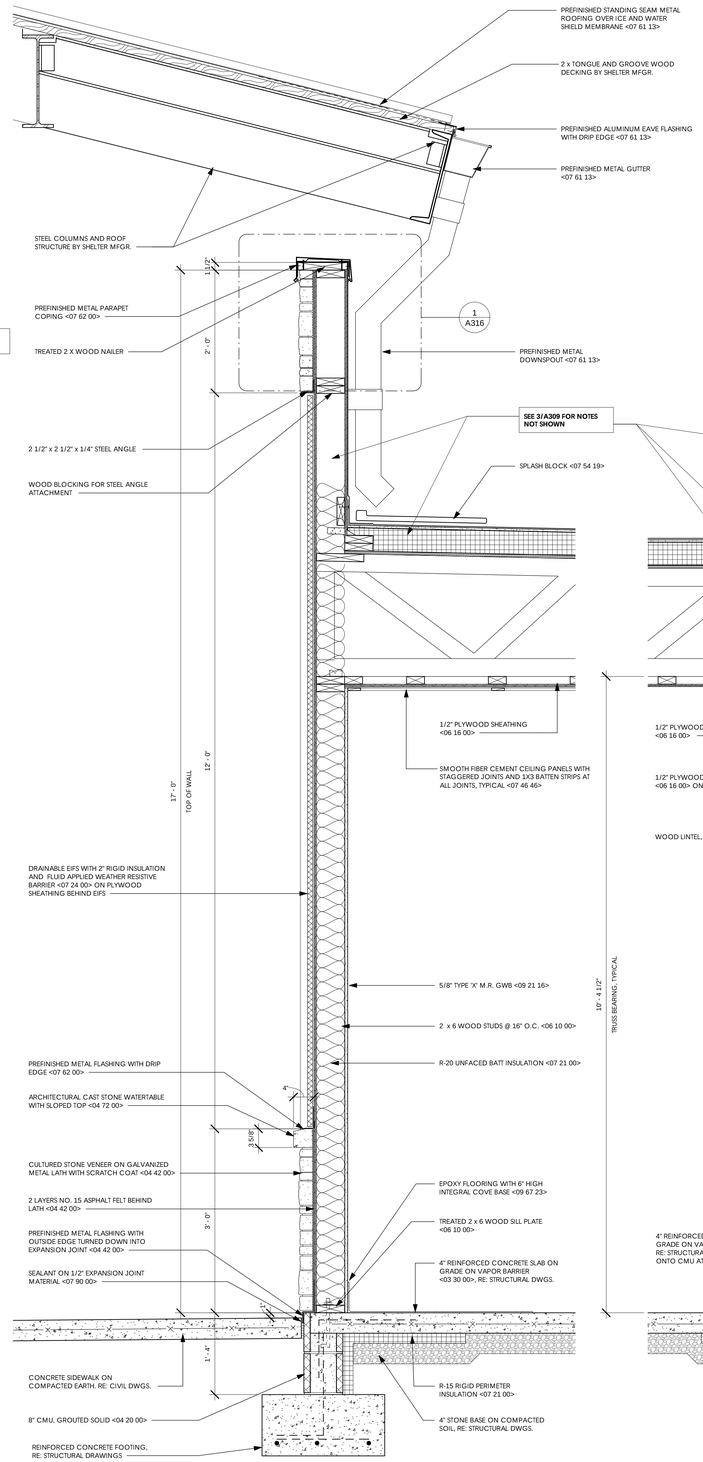


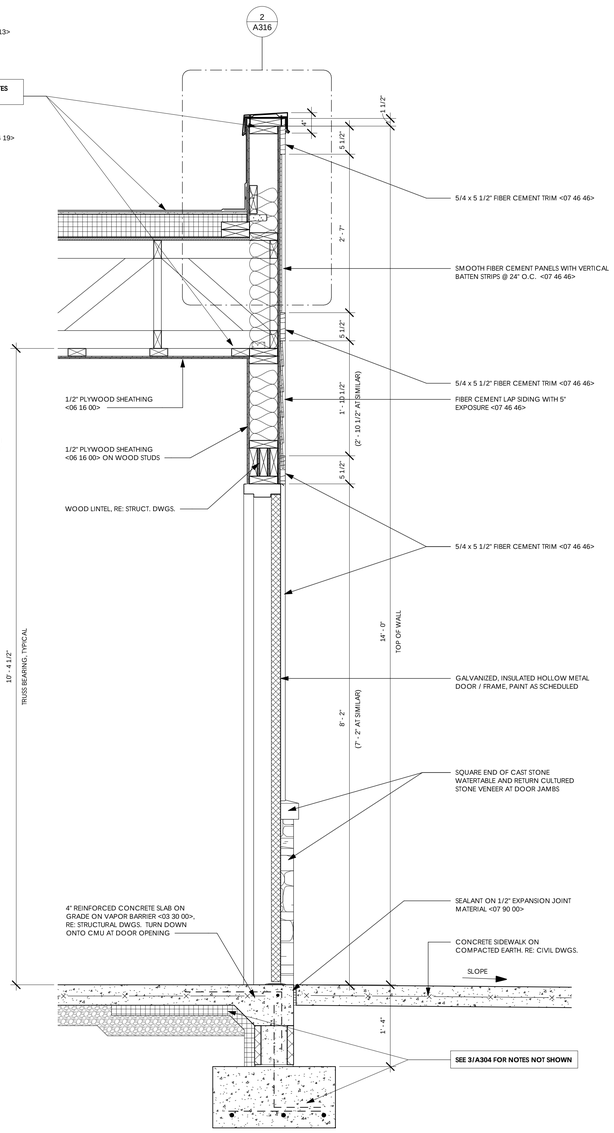
1 A310 SECTION THRU STONE COLUMN ENCLOSURE AT BUILDING D

1" = 1'-0"



2 A310 SECTION THRU FRONT WALL AT BUILDING D

1" = 1'-0"



3 A310 SECTION THRU HM DOOR AT BUILDING D

1" = 1'-0"

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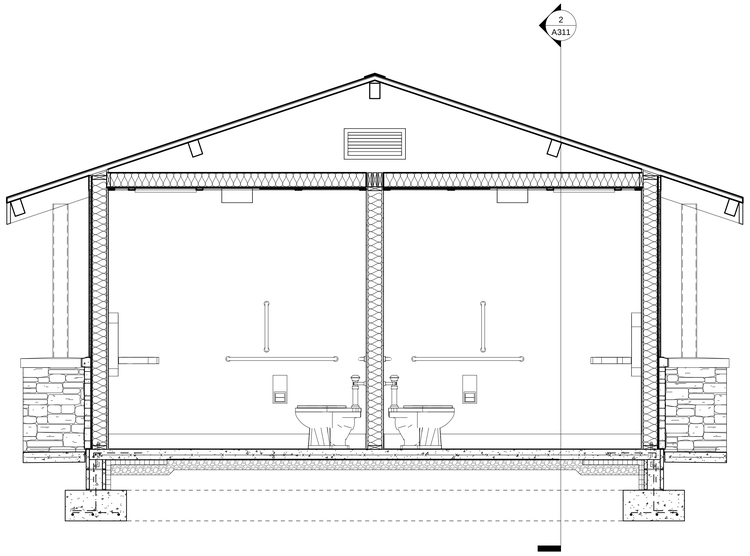
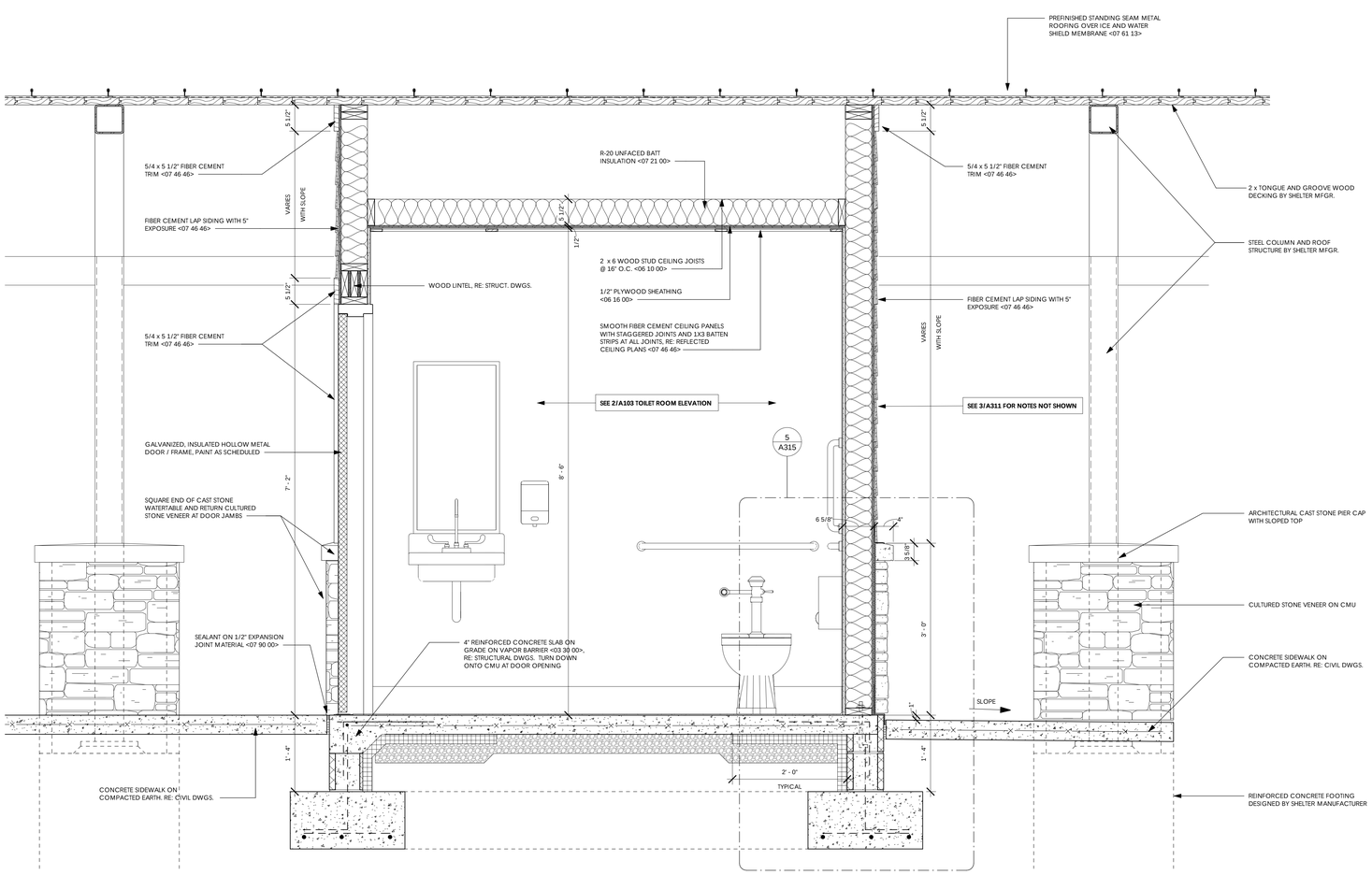
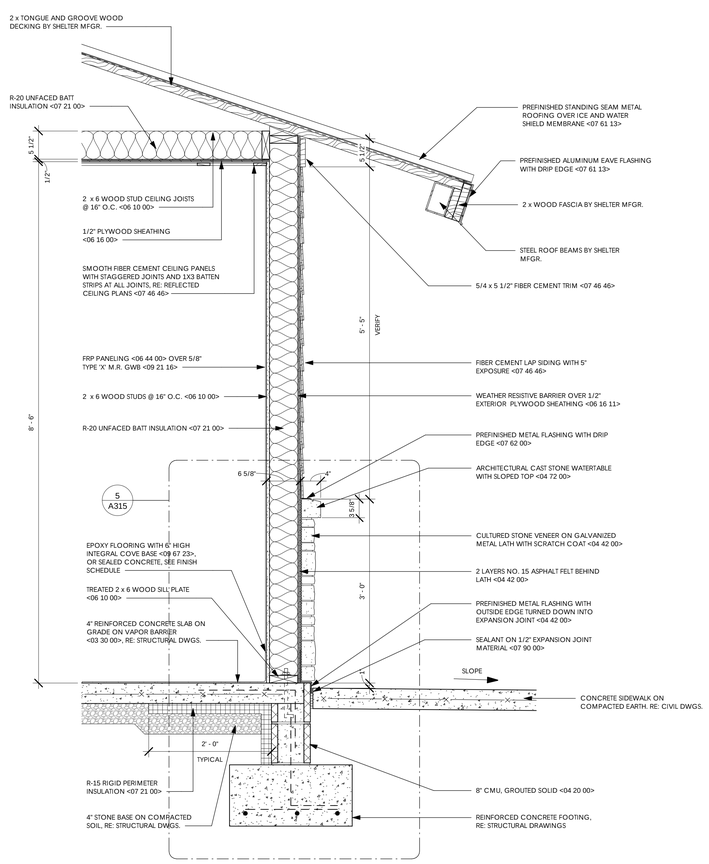


1 A311 BUILDING SECTION - BUILDING E
1/2" = 1'-0"



2 A311 SECTION THRU BUILDING E GABLE WALLS
1" = 1'-0"



3 A311 SECTION THRU BUILDING E HIP WALL
1" = 1'-0"

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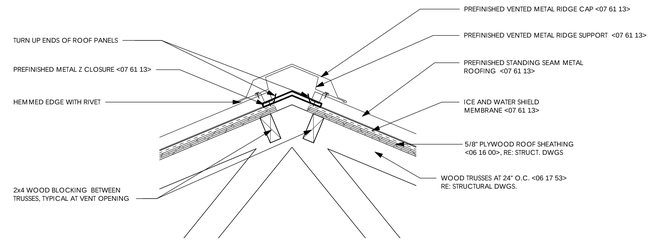
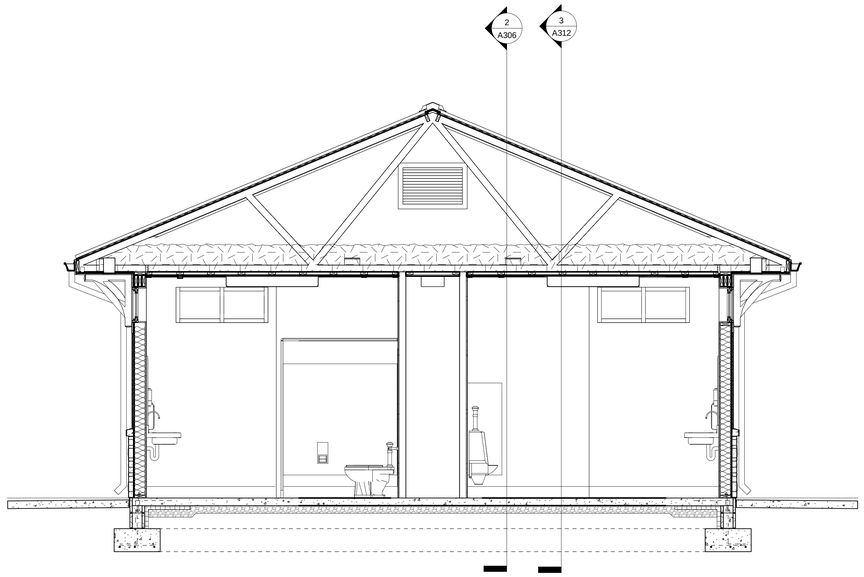
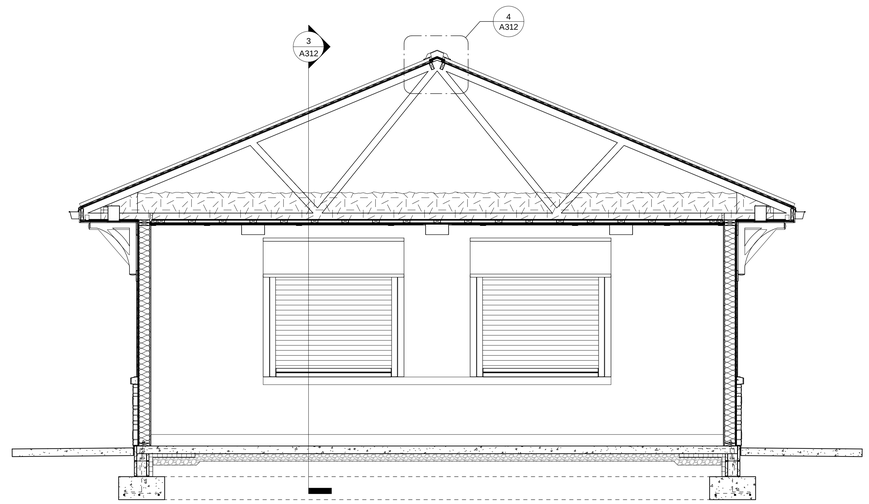


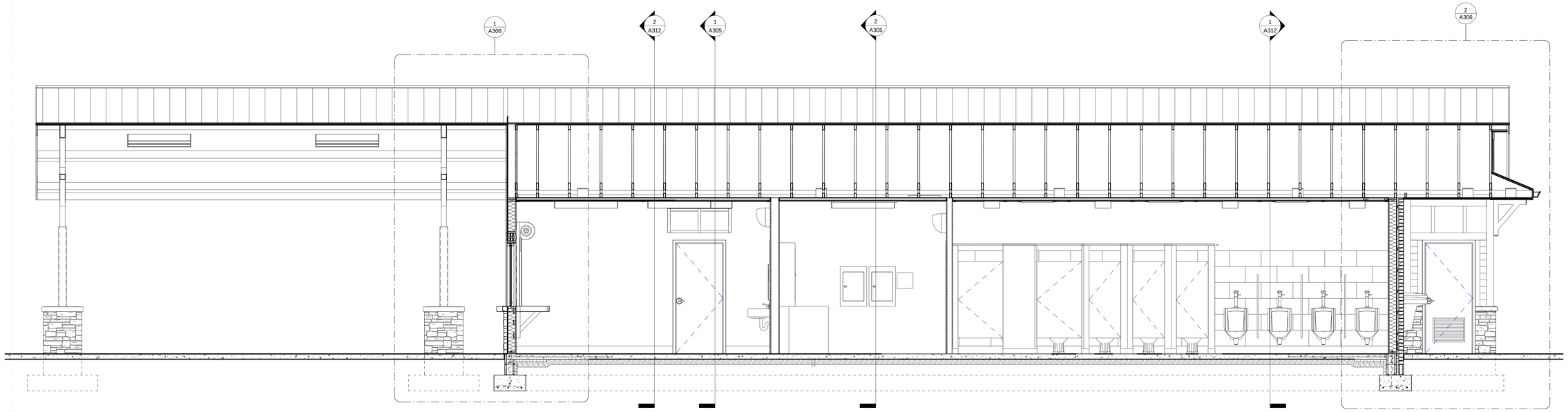
4 A312 DETAIL AT RIDGE VENT
1 1/2" = 1'-0"



1 A312 BUILDING SECTION 1 - BUILDING A
3/8" = 1'-0"



2 A312 BUILDING SECTION 2 - BUILDING A
3/8" = 1'-0"



3 A312 BUILDING SECTION 3 - BUILDING A
3/8" = 1'-0"

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BUILDING SECTIONS - BUILDING A

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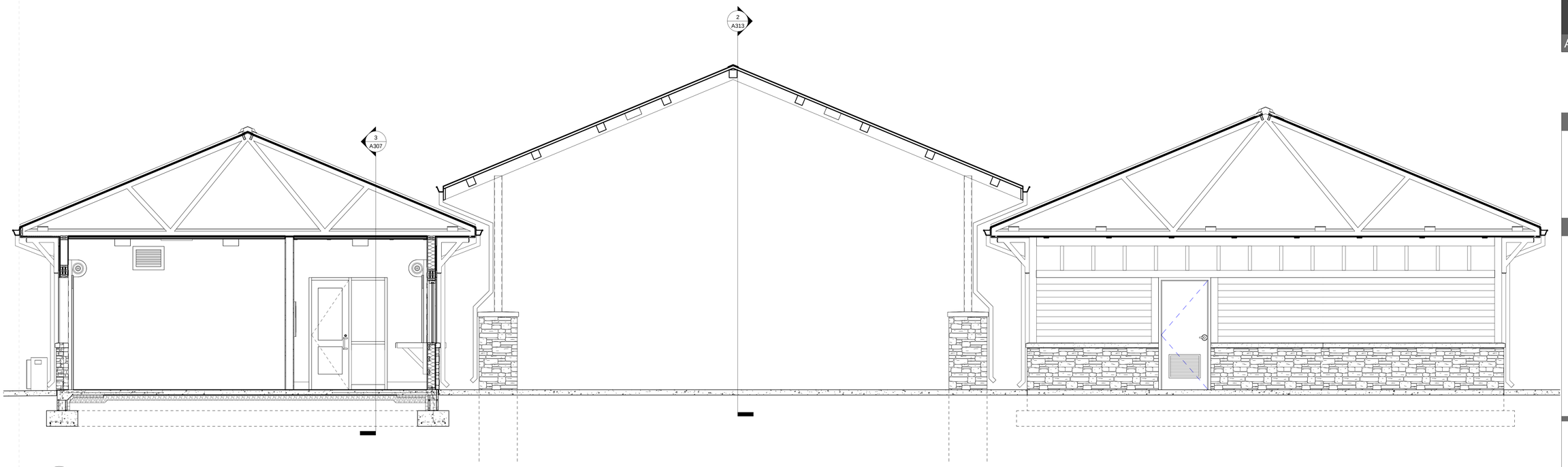
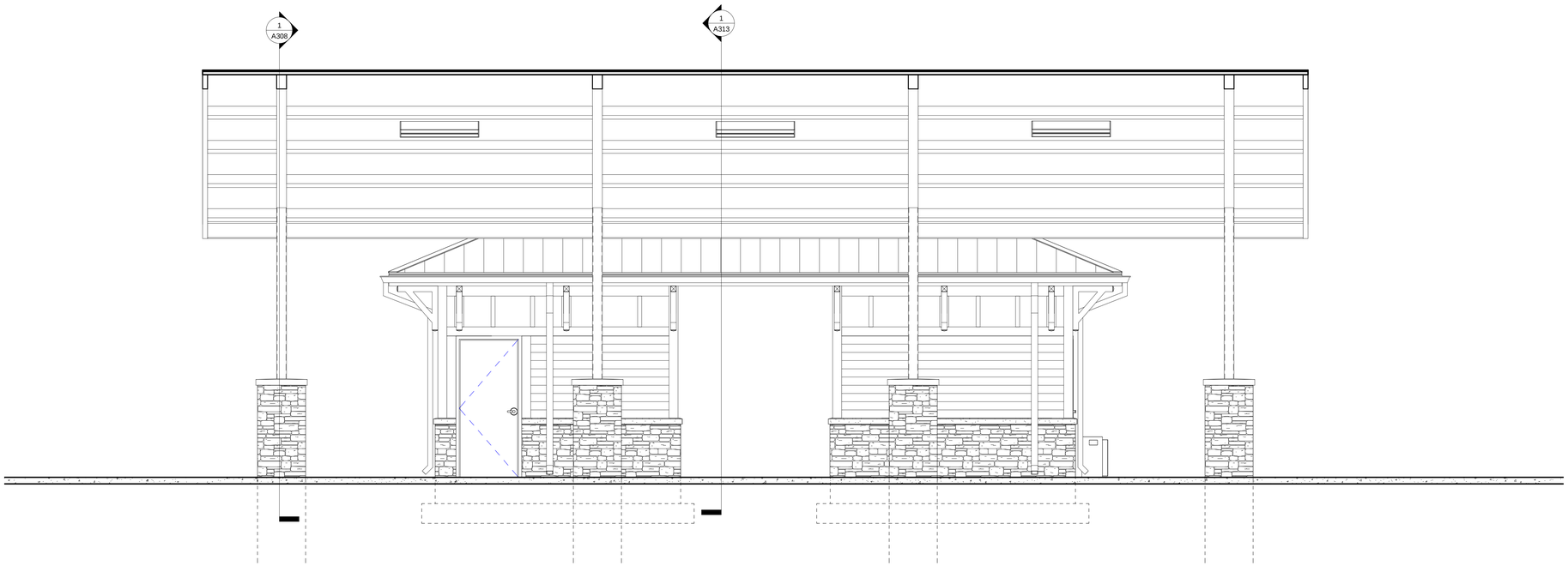


1
A313
BUILDING SECTION 1 - BUILDINGS B & C
3/8" = 1'-0"



2
A313
BUILDING SECTION 2 - BUILDINGS B & C
3/8" = 1'-0"

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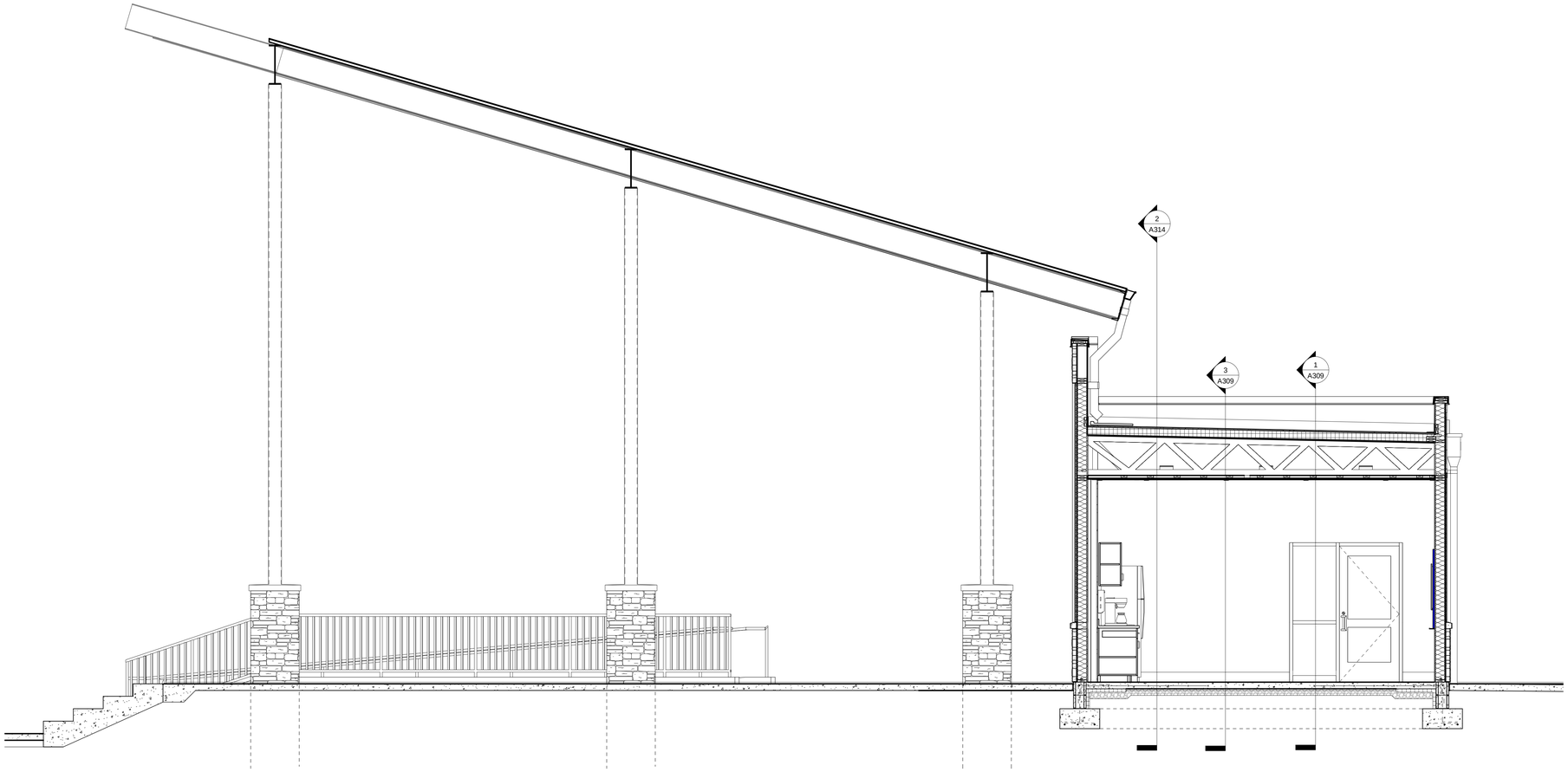
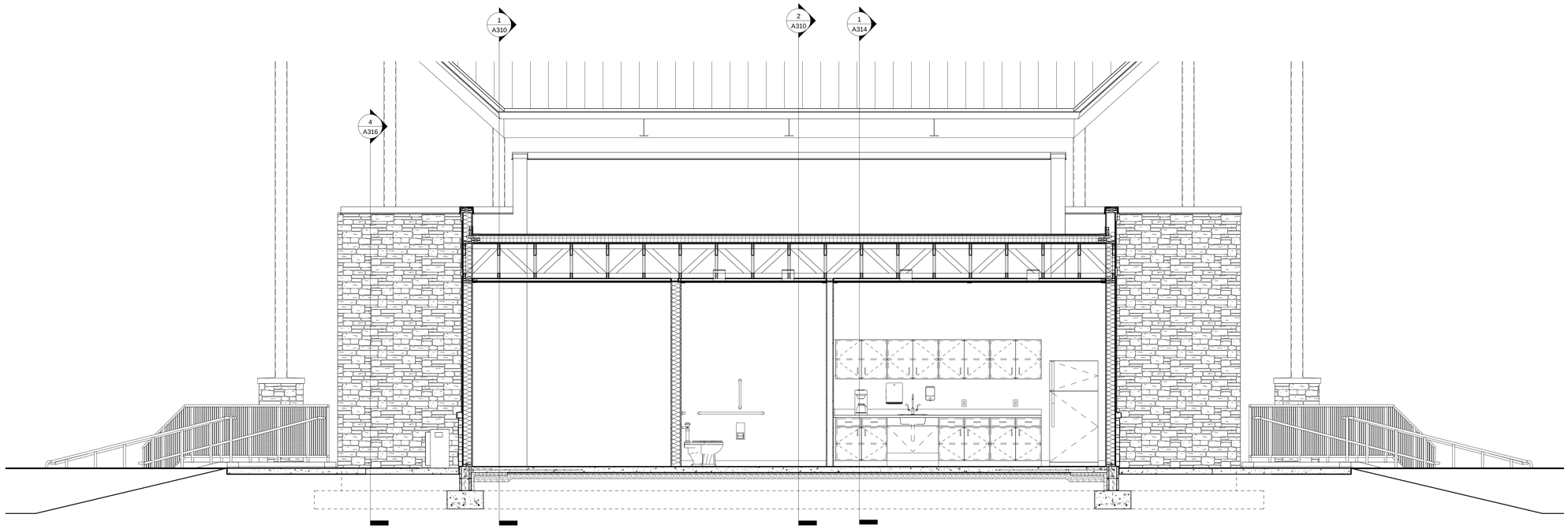


1 A314 BUILDING SECTION 1 - BUILDING D
3/8" = 1'-0"



2 A314 BUILDING SECTION 2 - BUILDING D
3/8" = 1'-0"

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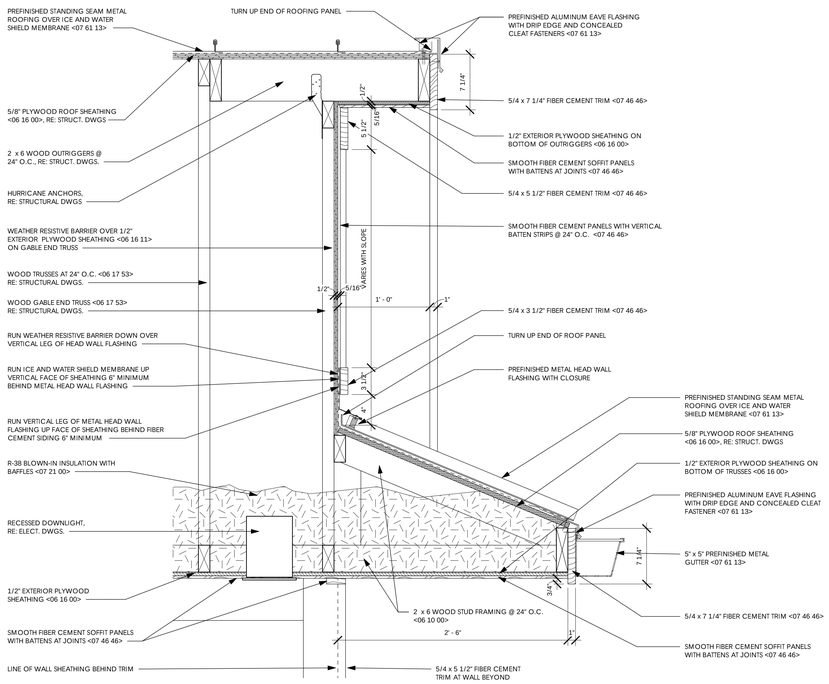
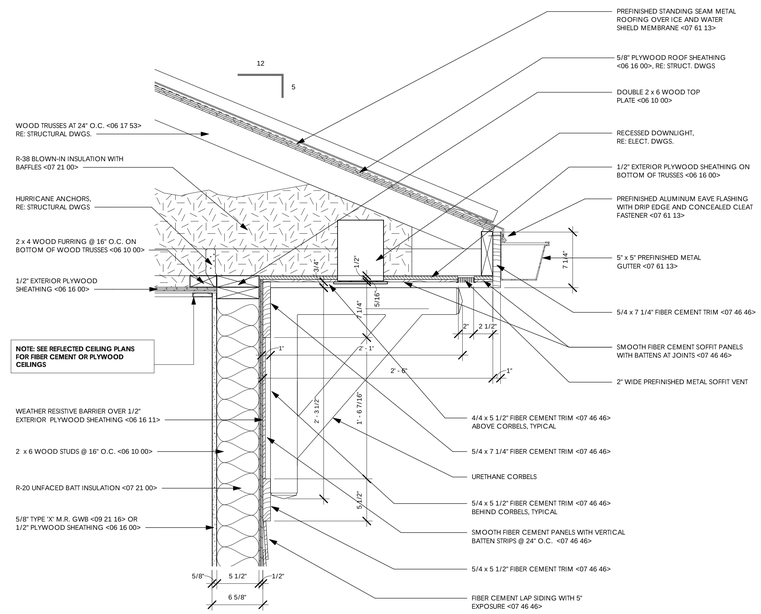


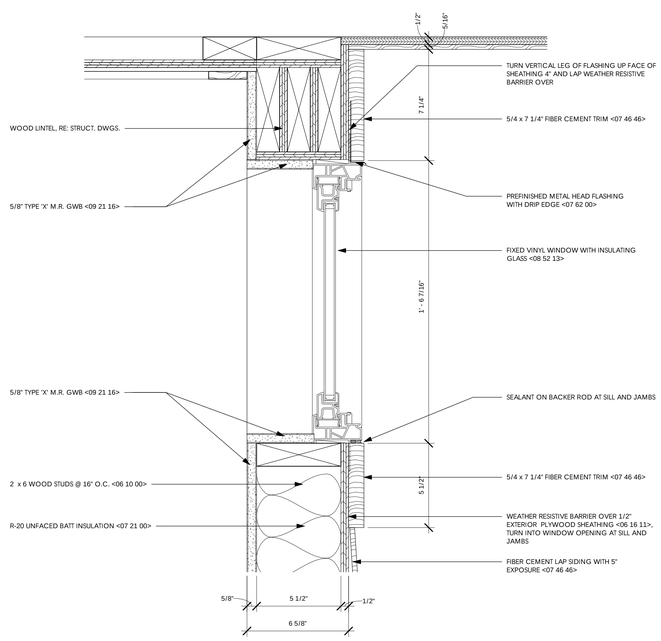
1 A315 DETAIL AT GABLE END

1 1/2" = 1'-0"



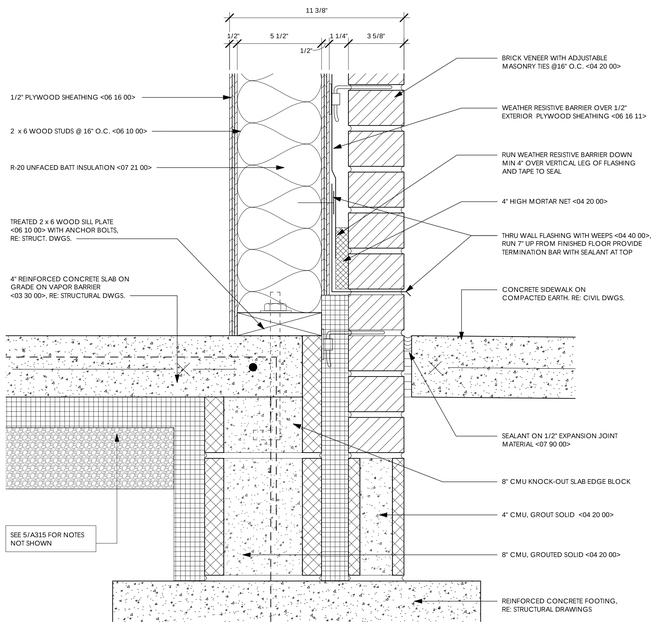
2 A315 DETAIL AT EAVE

1 1/2" = 1'-0"



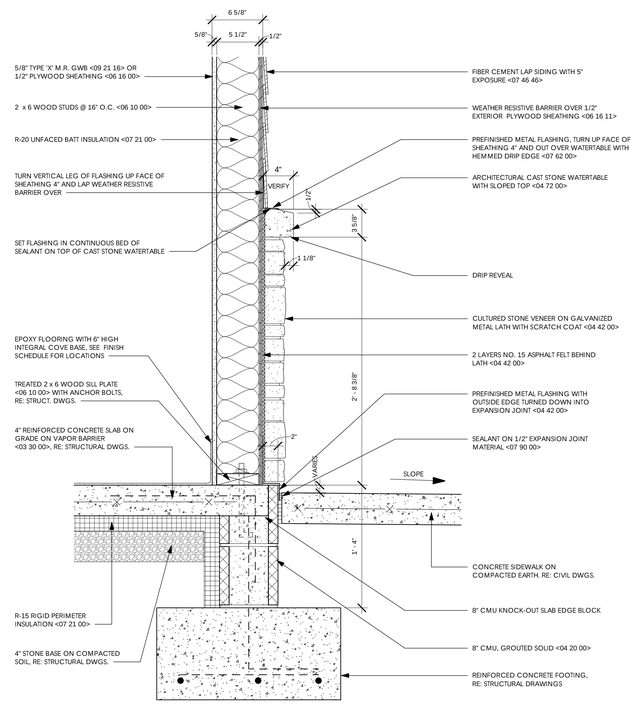
3 A315 DETAIL AT CLERESTORY WINDOW

3" = 1'-0"



4 A315 DETAIL AT BRICK FLASHING

3" = 1'-0"



5 A315 DETAIL AT CULTURED STONE BASE

1 1/2" = 1'-0"

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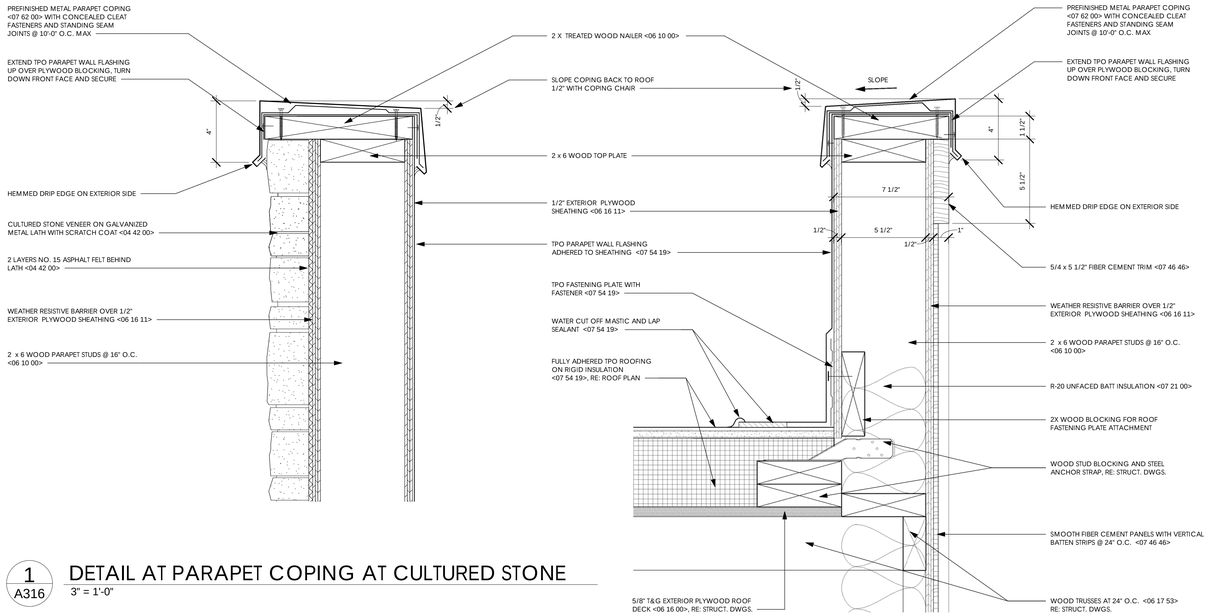
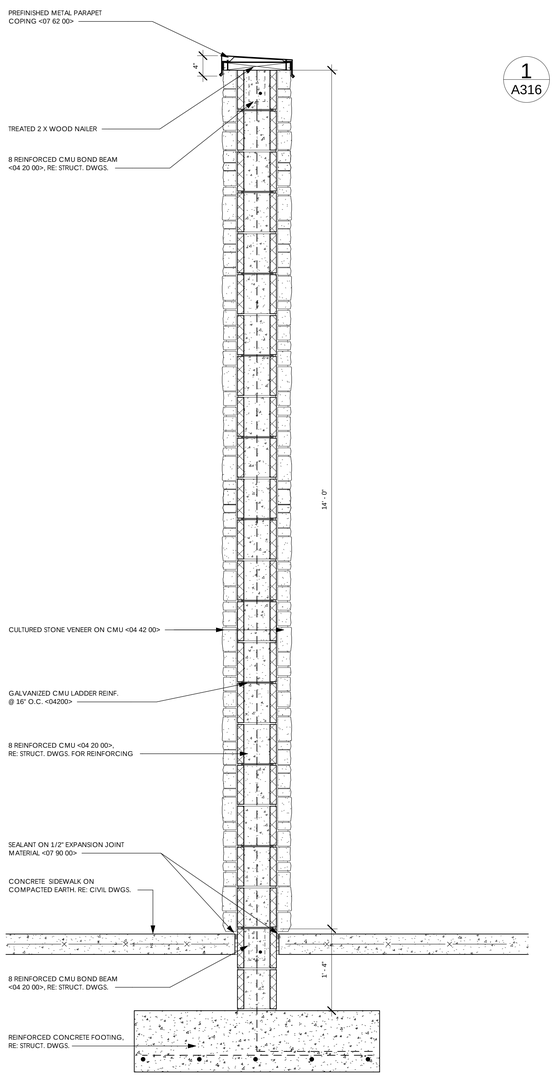
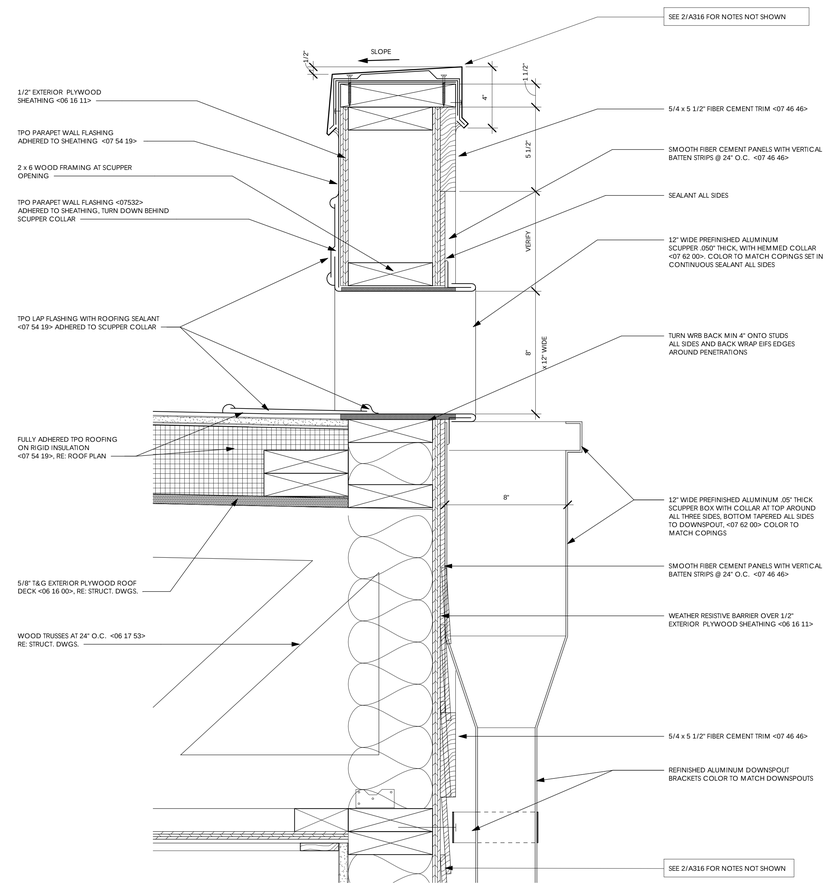


1 A316 DETAIL AT PARAPET COPING AT CULTURED STONE
3" = 1'-0"

2 A316 DETAIL AT PARAPET COPING
3" = 1'-0"



4 A316 SECTION THRU SCREEN WALL
1" = 1'-0"



3 A316 DETAIL AT SCUPPER BOX
3" = 1'-0"

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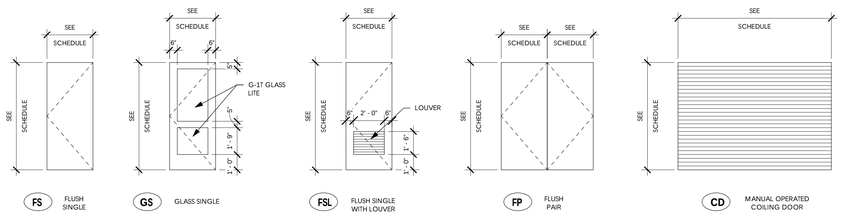
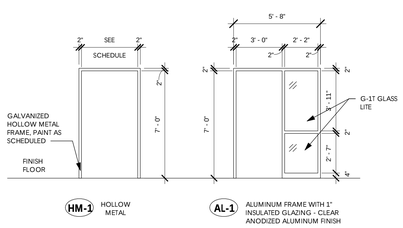
DOOR SCHEDULE

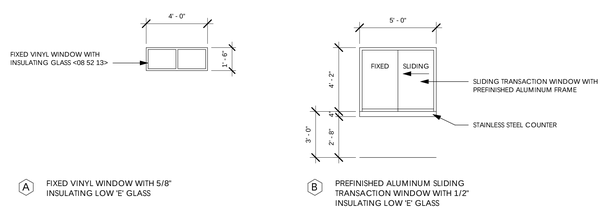
DOOR #	DOOR SIZE	DOOR TYPE	DOOR MAT'L.	FRAME	HEAD	JAMB	SILL	LABEL	HRDWR.	GENERAL NOTES
A1	3'-0" x 7'-0"	FSL	HM	HM-1	HX-1	JX-1	SX-1	---		
A2	3'-0" x 7'-0"	FSL	HM	HM-1	HX-1	JX-1	SX-1	---		
A3	3'-0" x 7'-0"	FS	HM	HM-1	HX-1	JX-1	SX-1	---		
A4	3'-0" x 7'-0"	FS	HM	HM-1	HI-1	JI-1	---	---		
A5A	3'-0" x 7'-0"	FS	HM	HM-1	HX-1	JX-1	SX-1	---		
A5B	4'-2" x 5'-0" COILING COUNTER SHUTTER	CD	STEEL	STEEL	1/A306	1/A306	1/A306	---		CURTAIN SLATS AND HOOD TO BE FACTORY POWDER COATED
A5C	4'-2" x 5'-0" COILING COUNTER SHUTTER	CD	STEEL	STEEL	1/A306	1/A306	1/A306	---		CURTAIN SLATS AND HOOD TO BE FACTORY POWDER COATED
A6	7'-0" X 7'-2" COILING OVERHEAD DOOR	CD	STEEL	STEEL	1/A304	1/A304	1/A304	---		DOOR SLATS AND HOOD TO BE FACTORY POWDER COATED
A7	2'-0" x 6'-0"	FS	HM	HM-1	HI-1	JI-1	---	---		
B1	3'-0" x 7'-0"	FSL	HM	HM-1	HX-1	JX-1	SX-1	---		
B2	3'-0" x 7'-0"	FSL	HM	HM-1	HX-1	JX-1	SX-1	---		
B3	3'-0" x 7'-0"	FSL	HM	HM-1	HX-1	JX-1	SX-1	---		
B4	3'-0" x 7'-0"	FS	HM	HM-1	HX-1	JX-1	SX-1	---		
C1A	3'-0" x 7'-0"	GS	ALUM.	AL-1	HX-2	JX-2	SX-1	---		PREFINISHED ALUMINUM STOREFRONT DOOR
C1B	4'-2" x 5'-0" COILING COUNTER SHUTTER	CD	STEEL	STEEL	1/A308	1/A308	1/A308	---		CURTAIN SLATS AND HOOD TO BE FACTORY POWDER COATED
C2	3'-0" x 7'-0"	FS	HM	HM	HI-1	JI-1	---	---		
C3	7'-0" X 7'-2" COILING OVERHEAD DOOR	CD	STEEL	STEEL	1/A304	1/A304	1/A304	---		DOOR SLATS AND HOOD TO BE FACTORY POWDER COATED
C4A	3'-0" x 7'-0"	FSL	HM	HM	HX-1	JX-1	SX-1	---		
C4B	3'-0" x 7'-0"	FS	HM	HM-1	HI-1	JX-1	---	---		
D1	3'-0" x 7'-0"	GS	ALUM.	AL-1	HX-2	JX-2	SX-1	---		PREFINISHED ALUMINUM STOREFRONT DOOR
D2	3'-0" x 7'-0"	FS	HM	HM-1	HI-1	JI-1	---	---		
D4	3'-0" x 7'-0"	FS	HM	HM-1	HX-1	JX-1	SX-1	---		
D5	PR. 3'-0" x 7'-10"	FP	HM	HM-1	HX-1	JX-1	SX-1	---		
E1	3'-0" x 7'-0"	FSL	HM	HM-1	HX-1	JX-1	SX-1			
E2	3'-0" x 7'-0"	FSL	HM	HM-1	HX-1	JX-1	SX-1			



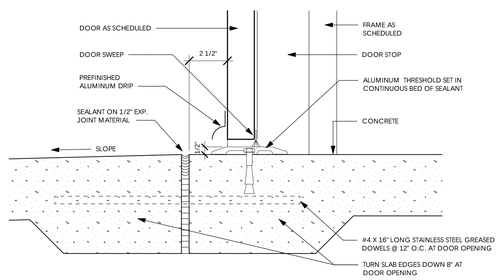
1 A601 DOOR TYPES
1/4" = 1'-0"



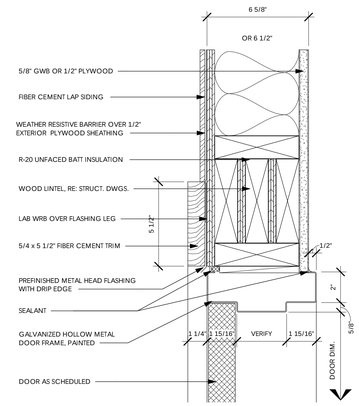
2 A601 DOOR FRAME TYPES
1/4" = 1'-0"



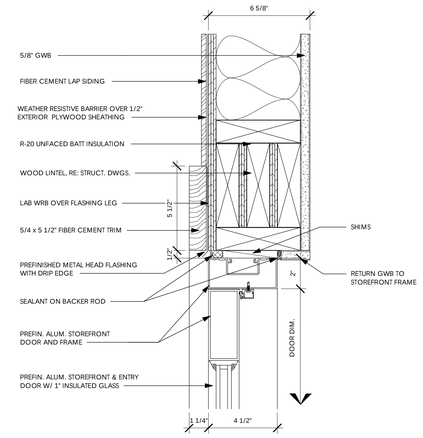
3 A601 WINDOW TYPES
1/4" = 1'-0"



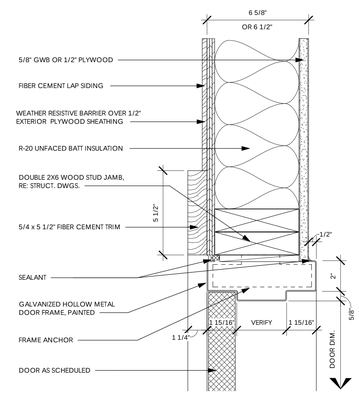
SX-1 A601 EXTERIOR SILL
3" = 1'-0"



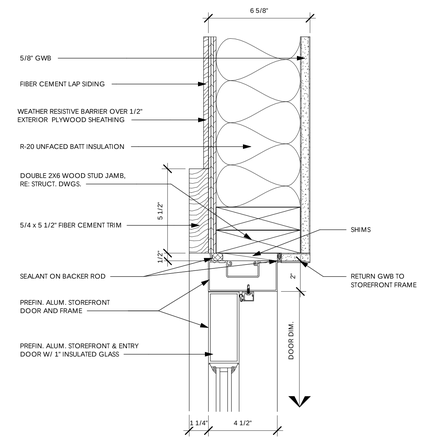
HX-1 A601 HM HEAD DETAIL @ EXTERIOR
3" = 1'-0"



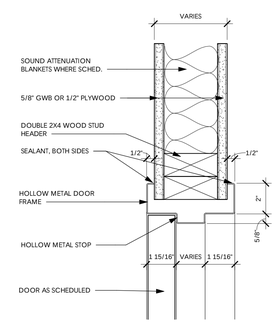
HX-2 A601 HM HEAD DETAIL @ EXTERIOR
3" = 1'-0"



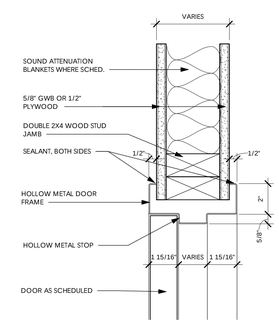
JX-1 A601 HM JAMB DETAIL @ EXTERIOR
3" = 1'-0"



JX-2 A601 SF JAMB DETAIL @ EXTERIOR
3" = 1'-0"



HI-1 A601 HM HEAD @ GWB
3" = 1'-0"



JI-1 A601 HM JAMB @ GWB
3" = 1'-0"

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Revisions:

DOOR & WINDOW SCHEDULE AND DETAILS

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ROOM FINISH SCHEDULE

Number	Name	Base	Floor	Wall	Ceiling	Notes
A1	MEN	EPOXY	EPOXY	FRP OVER GWB, TILE	FIBER CEMENT, PAINT IP-2	PROVIDE 6' HIGH WALL TILE WITH FRP PANELS ABOVE ON WET WALL
A2	WOMEN	EPOXY	EPOXY	FRP OVER GWB, TILE	FIBER CEMENT, PAINT IP-2	PROVIDE 6' HIGH WALL TILE WITH FRP PANELS ABOVE ON WET WALL
A3	STORAGE	EPOXY	EPOXY	PLYWOOD, PAINT IP-1	PLYWOOD, PAINT IP-2	
A4	MECHANICAL	NONE	SEALED CONCRETE	PLYWOOD, PAINT IP-1	PLYWOOD, PAINT IP-2	
A5	CONCESSION	EPOXY	EPOXY	FRP OVER GWB	FIBER CEMENT, PAINT IP-2	
B1	UNISEX FAMILY RESTROOM	EPOXY	EPOXY	FRP OVER GWB	FIBER CEMENT, PAINT IP-2	
B2	MEN	EPOXY	EPOXY	FRP OVER GWB, TILE	FIBER CEMENT, PAINT IP-2	PROVIDE 6' HIGH WALL TILE WITH FRP PANELS ABOVE ON WET WALL
B3	WOMEN	EPOXY	EPOXY	FRP OVER GWB, TILE	FIBER CEMENT, PAINT IP-2	PROVIDE 6' HIGH WALL TILE WITH FRP PANELS ABOVE ON WET WALL
B4	JANITOR	NONE	SEALED CONCRETE	PLYWOOD, PAINT IP-1	PLYWOOD, PAINT IP-2	
C1	TICKETS / SNACKS	RUBBER	SEALED CONCRETE	GWB, PAINT IP-1	FIBER CEMENT, PAINT IP-2	
C2	STORAGE	RUBBER	SEALED CONCRETE	GWB, PAINT IP-1	FIBER CEMENT, PAINT IP-2	
C3	PUMP ROOM	NONE	SEALED CONCRETE	PLYWOOD, PAINT IP-1	PLYWOOD, PAINT IP-2	
C4	CHEMICAL STORAGE	NONE	SEALED CONCRETE	PLYWOOD, PAINT IP-1	PLYWOOD, PAINT IP-2	
D1	MULTI-PURPOSE ROOM	RUBBER	EPOXY	GWB, PAINT IP-1	FIBER CEMENT, PAINT IP-2	
D2	RESTROOM	RUBBER	EPOXY	GWB, PAINT IP-1	FIBER CEMENT, PAINT IP-2	
D4	A / V AND TECHNOLOGY	NONE	SEALED CONCRETE	PLYWOOD, PAINT IP-1	PLYWOOD, PAINT IP-2	
D5	STORAGE	NONE	SEALED CONCRETE	PLYWOOD, PAINT IP-1	PLYWOOD, PAINT IP-2	
E1	MEN	EPOXY	EPOXY	FRP OVER GWB	FIBER CEMENT, PAINT IP-2	
E2	WOMEN	EPOXY	EPOXY	FRP OVER GWB	FIBER CEMENT, PAINT IP-2	

FINISH MATERIAL AND COLOR NOTES

A. The material types and colors scheduled are intended to indicate quality and color desired for the project and are to be used in conjunction with the technical specifications for the particular material or item. In considering the design of proposed substitutes for any item or material which is a component of the building design finish, the color (including texture and pattern) of the proposed substitute will be considered of equal importance with the features involving materials and fabrication methods. The Contractor shall be completely responsible for obtaining the colors hereinafter scheduled, and must ascertain that any materials proposed as substitutes for those specified and scheduled can be obtained in the color, texture and pattern listed.

B. The color, design and pattern selections listed in this schedule do not supersede the requirements of the technical specifications or drawings. Should a specific material, surface or item requiring color, design or pattern selection not be listed in this schedule, the Contractor shall immediately request a selection for such color, design or pattern from the Architect.

C. The following list of applications of colors and materials is intended to assist the Contractor. It is not inclusive. Uses, as defined below, indicate general and/or specific uses of materials. Contractor is required to refer to the Finish Schedule and Drawings to coordinate this information with additional information as may be required on the Project or not specifically addressed within the following descriptions.

D. The Owner reserves the right to change colors of paint, flooring, tile, laminate, etc. during the Architects shop drawing review process without extra cost to the project, so long as substitute colors are selected from the manufacturer's similarly priced color groups.

EXTERIOR NOTES

1. Paint all exposed steel lintels, lintel angles, access doors, grilles, etc., to match adjacent brick or soffit surface, Semi-gloss Finish. Submit color for approval by Architect.
2. Metal parapet copings, flashings, counterflashings, etc. shall be prefinished, color to be selected by the Owner / Architect.
3. Vinyl and aluminum storefront windows shall be prefinished in manufacturer's standard white.
4. Brick veneer shall be modular size in color to be selected by the Owner / Architect.
5. Standing seam metal roofing, gutters, downspouts, flashing, trim, etc. shall be prefinished in color to be selected by the Owner / Architect.
6. Exterior insulation finish system (EIFs) color to be pure white with fine textured finish to be approved by the Architect.

INTERIOR NOTES

1. Paint all metal grilles, access doors, electrical panels, and covers and other similar items, mounted in walls and ceilings to match adjacent surfaces with Semi-gloss Finish.

PAINT

Interior Paint

IP-1:	To be selected by Owner / Architect	Semi-gloss	Typical paint for interior drywall and plywood walls
IP-2:	To be selected by Owner / Architect	Semi-gloss	Typical paint for interior fiber cement and plywood ceilings
EP-1:	To be selected by Owner / Architect	Semi-gloss	Typical paint for exterior fiber cement lap and board/batten siding
EP-2:	To be selected by Owner / Architect	Semi-gloss	Typical paint for interior fiber cement and plywood ceilings

EPOXY FLOORING WITH INTEGRAL BASE

Color and Texture to be selected by Owner / Architect

RUBBER BASE AND TRANSITION STRIPS

RB-1: Color to be selected by Owner / Architect

PLASTIC LAMINATE

Multi-Purpose Room D1 Cabinet Surfaces: Color to selected by Owner / Architect

SOLID SURFACE

Multi-Purpose Room D1 Counter: Color to be selected by Owner / Architect

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Harrisburg Park Expansion

Harrisburg, North Carolina

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Date: 06-17-19

Revisions:

FINISH AND PARTITION SCHEDULE

Architectural

A602

YCH Commission Number

18030.00

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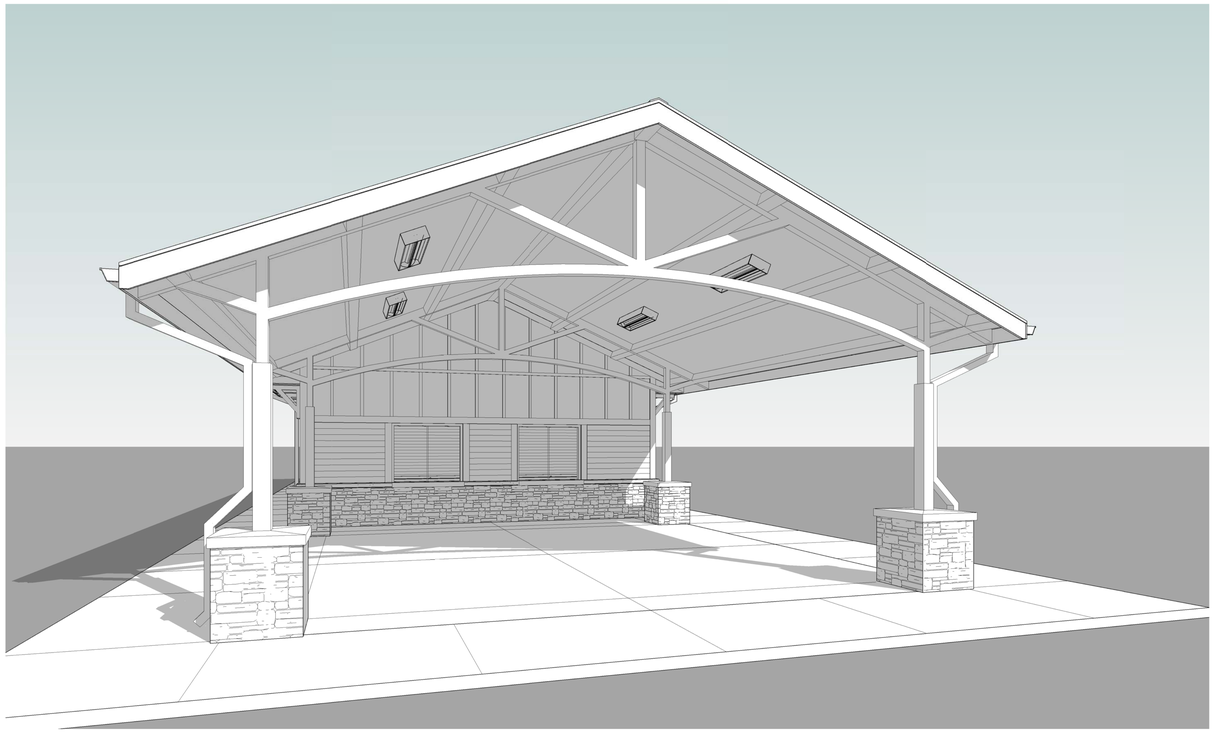
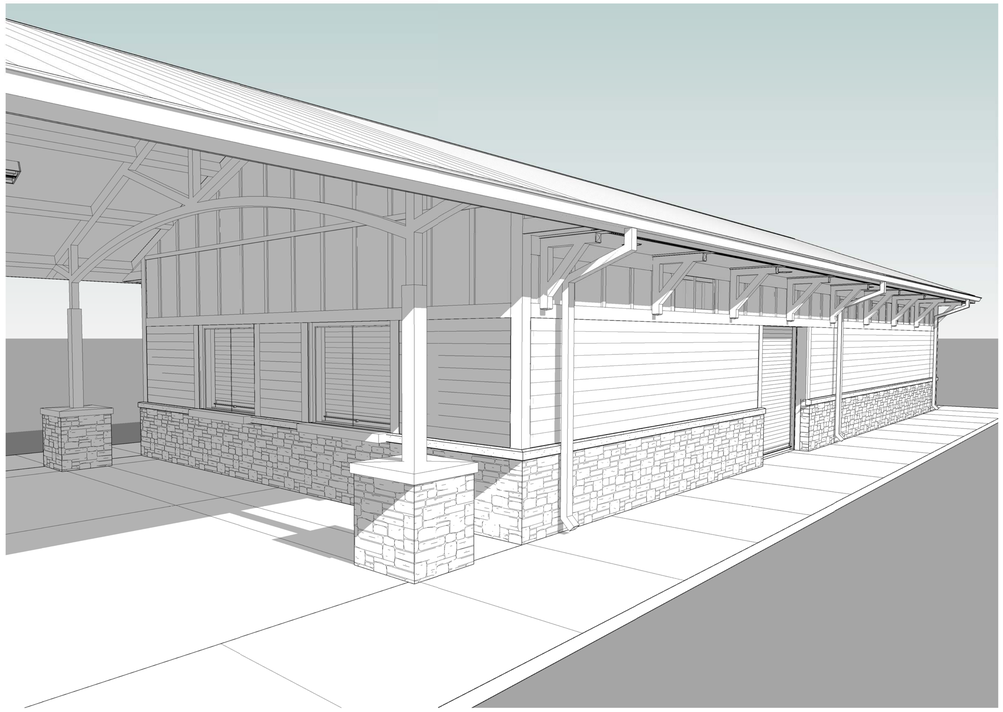
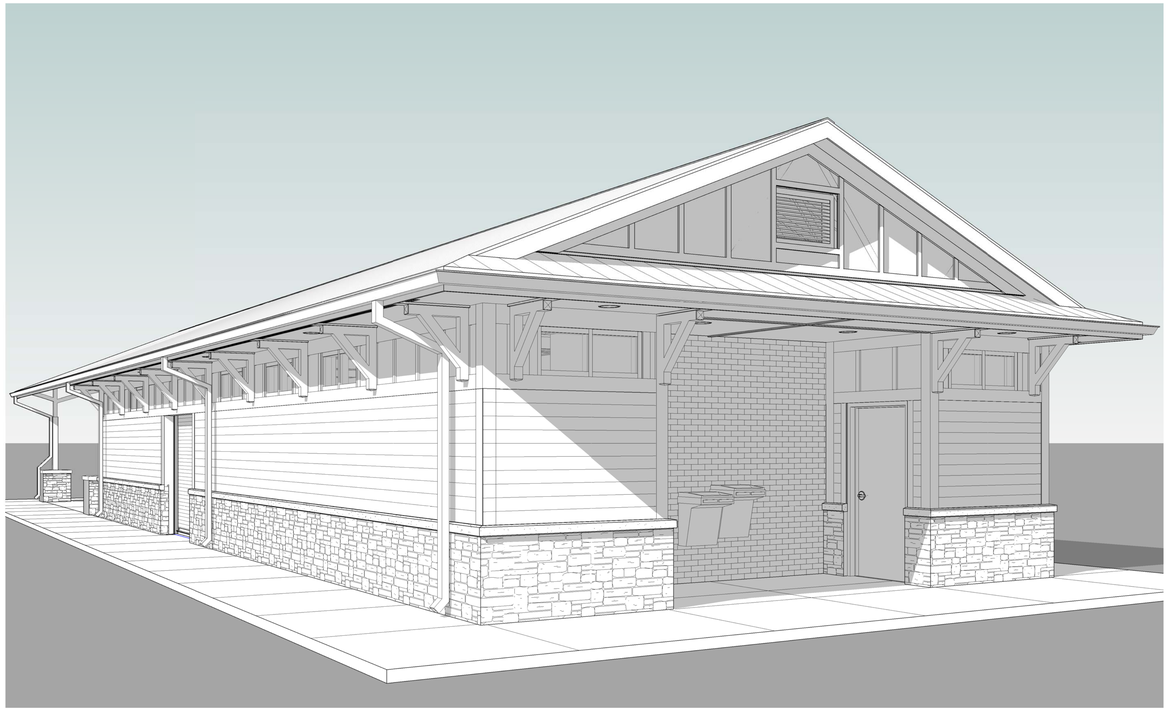


1 A900 3D VIEW - CONCESSIONS PAVILLION



2 A900 3D VIEW - CONCESSIONS



3 A900 3D VIEW - RESTROOMS

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Revisions:

3D VIEWS - BUILDING A

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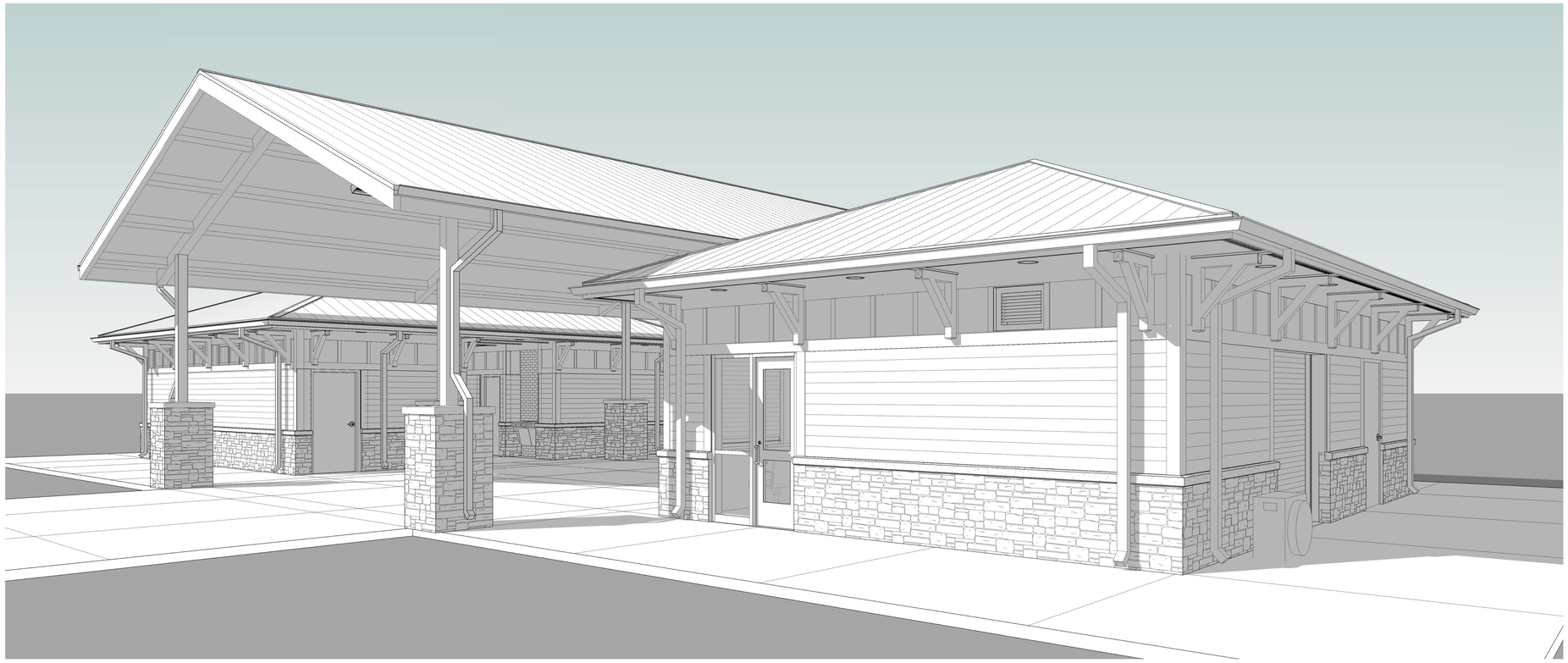
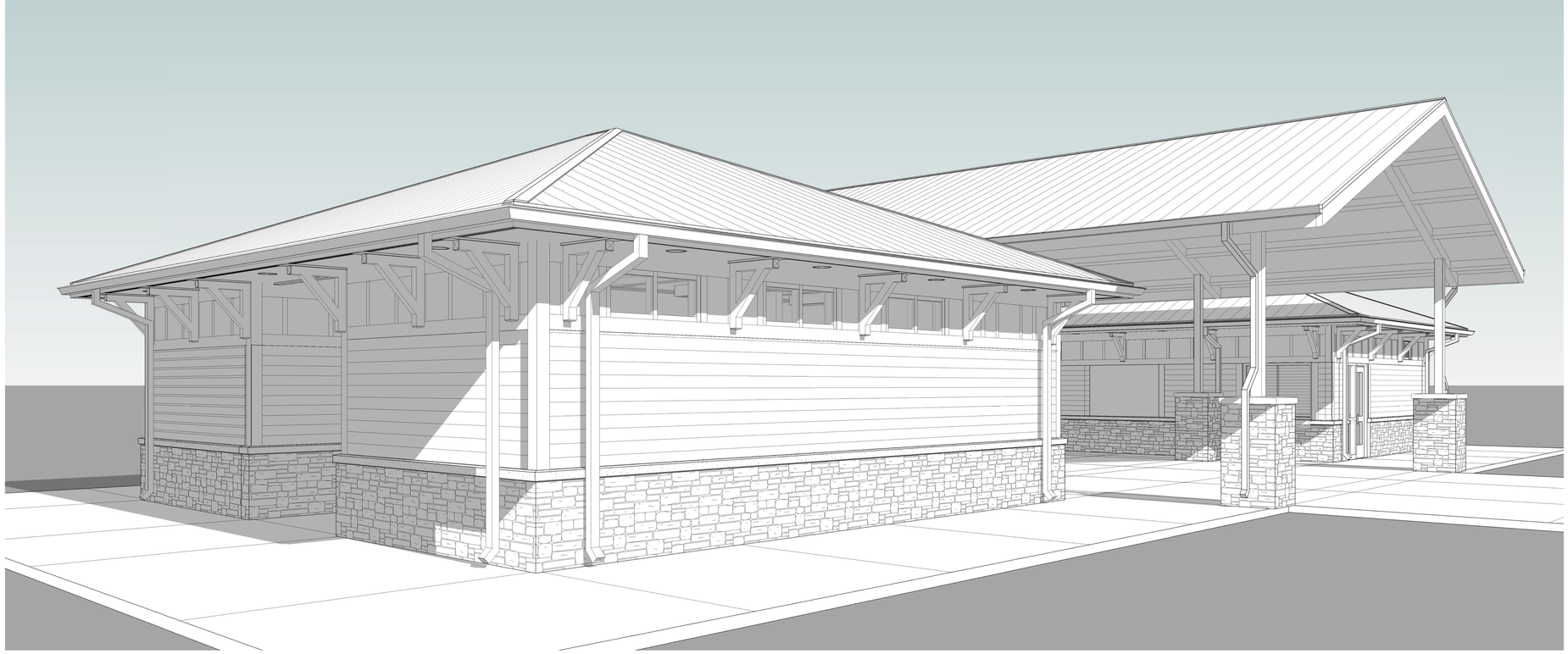


1
A901
3D View - TICKET / PUMP ROOM BUILDING



2
A901
3D View - PLAYGROUND RESTROOM BUILDING

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3D VIEWS - BUILDING B & C

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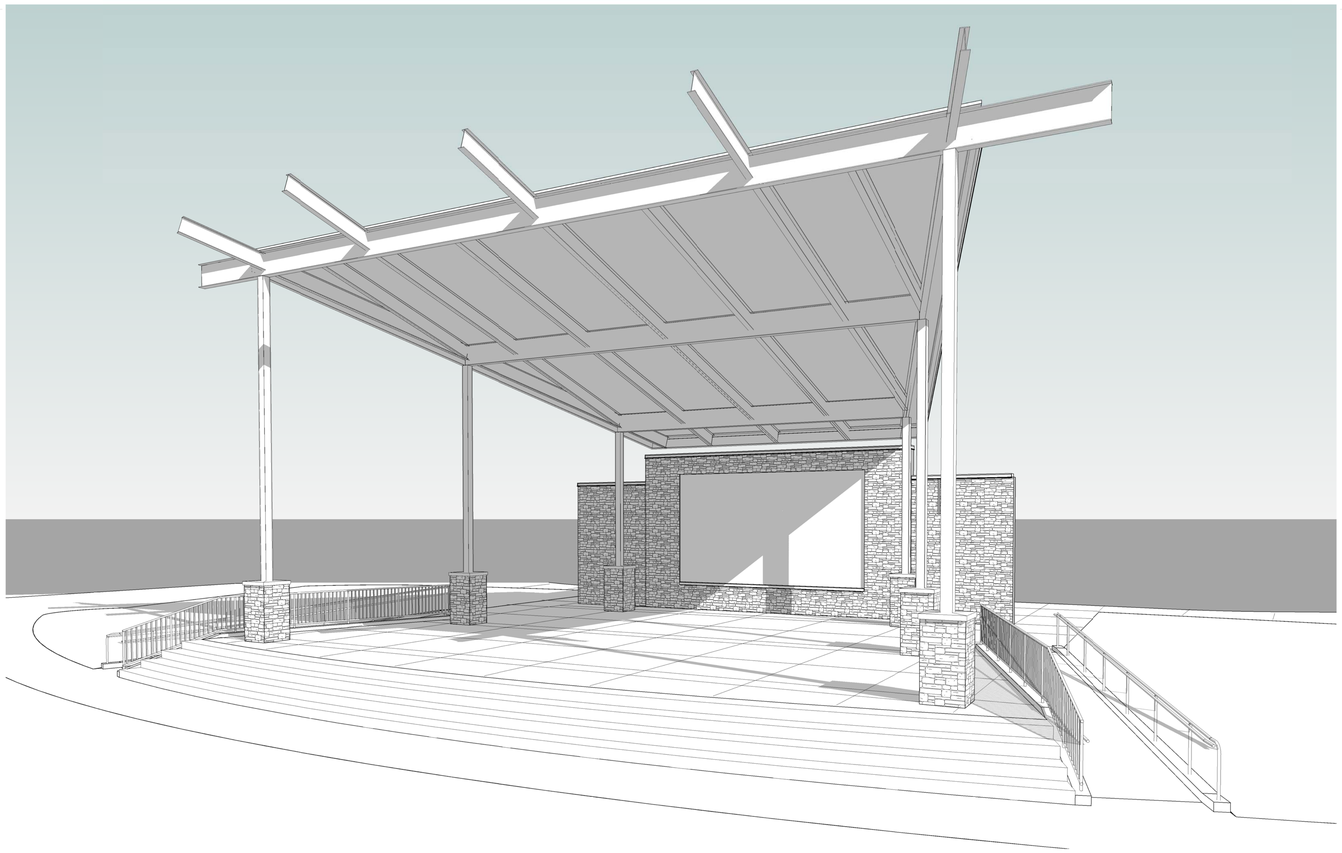
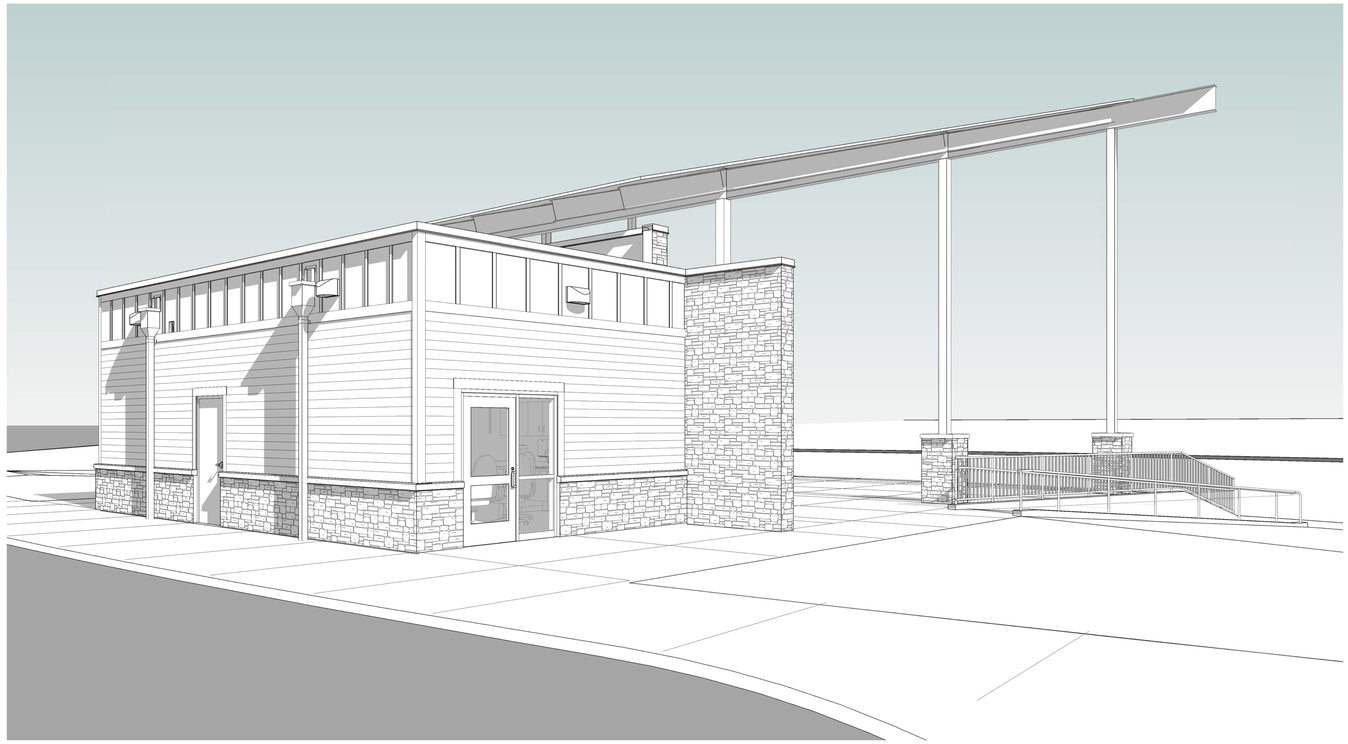


1
A902
3D VIEW - AMPHITHEATER



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A902
3D VIEW - BUILDING D

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3D VIEWS - AMPHITHEATER / BUILDING D

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PLUMBING FIXTURE SCHEDULE

SYM	DESCRIPTION	CW	HW	W	V	MODEL NUMBER	REMARKS
P-1	WATER CLOSET	1-1/4"	–	3"	2"	KOHLER "WELLCOMME" K-96053-0; BENEKE 527SS SEAT; SLOAN ECOS 111-1.6/1.1-HW W/EL-451 TRANSFORMER	1,4,5,6
P-2	WATER CLOSET (HDC)	1-1/4"	–	3"	2"	KOHLER "HIGHCLIFF" K-96057-0; BENEKE 527SS SEAT; SLOAN ECOS 111-1.6/1.1-HW W/EL-451 TRANSFORMER	1,4,5,6,7,8
P-3	URINAL	3/4"	–	2"	2"	KOHLER "DEXTER" K-5016-ET W/SLOAN ECOS 186-1-HW W/EL-451 TRANSFORMER	1,3,4,6
P-4	LAVATORY (PUSH-METERED)	1/2"	1/2"	2"	2"	KOHLER "HUDSON" K-2861; CHICAGO FAUCET # 802-V665CP FAUCET; K-7607 SUPPLY; K-8998 TRAP; K-7129-A DRAIN.	1,2,3,9,14, 15,18
P-4K	LAVATORY (CONSECIONS)	1/2"	1/2"	2"	2"	ADVANCE TABCO 7-PS-40 INLCUDES FAUCET, P-TRAP, DRAIN; K-7607 SUPPLIES	1,2,3,9,14, 18
P-5	DRINKING FOUNTAIN	1/2"	–	2"	2"	EDFP217FPK (Bi-level,Non-Filtered Non-Refrigerated,Freeze Resistant) ALL STAINLESS STEEL FINISH. P.C. SHALL PROVIDE TRAP & STOP.	1,3,12
P-6	MOP BASIN	1/2"	1/2"	3"	2"	FIAT MSB-2424 W/ 830-AA FAUCET, 832-AA HOSE BRACKET (INCLUDES SS RIM GUARD) & SEALANT AS REQUIRED.	4,9,13,20
P-6A	MOP BASIN	1/2"	1/2"	3"	2"	FIAT MSB-3636 W/ 830-AA FAUCET, 832-AA HOSE BRACKET (INCLUDES SS RIM GUARD) & SEALANT AS REQUIRED.	4,9,13,20
P-7	UTILITY BOX	1/2"	–	–	–	GUY GRAY AB9700HA	22
P-8	SINGLE CMPT. SINK (ADA)	1/2"	1/2"	2"	2"	ELKAY LRAD-2219-65 W/LK-335 STRAINER; CHICAGO 201A-GN8A-E28-1000 FAUCET; KOHLER K-7607 SUPPLY, K-9000 TRAP	1,2,10,15, 16

1. SEE ARCHITECTURAL PLANS FOR EXACT LOCATION AND MOUNTING HEIGHTS OF ALL FIXTURES.
2. PROVIDE TRUEBRO MODEL 102 INSULATION KIT, PLUMBEREX MODEL PRO-2000 OR McGUIRE PWV8902 PREWRAPPED CAST P-TRAP ASSEMBLY KIT ON ALL HANDICAP ACCESSIBLE LAVATORIES AND/OR SINKS.
3. PROVIDE CARRIERS FOR ALL WALL MOUNTED FIXTURES. FOR LAVATORIES: SINGLE HANGER FOR BLOCK WALLS; FOR GYPBOARD WALL, PROVIDE FLOOR-MOUNT ARM CARRIERS (CONCEALED OR EXPOSED PER MFR'S REQUIREMENTS).
4. EQUAL CHINA FIXTURE BY AMERICAN STANDARD, ZURN & SLOAN.
5. EQUAL TOILET SEAT BY BEMIS, OLSONITE & BENEKE.
6. EQUAL FLUSH VALVES BY ZURN & TOTO.
7. TOP OF FLUSH VALVE SHALL BE LOCATED MINIMUM 3" BELOW BOTTOM OF GRAB BAR. P.C. TO CUT OUTLET TUBE AS REQUIRED.
8. FLUSH VALVE MECHANISM SHALL BE LOCATED OPPOSITE OF HAND RAIL AS PER ADA REQUIREMENT.
9. EQUAL FAUCETS BY SYMMONS, CHICAGO FAUCETS, DELTA, MOEN & AMERICAN STANDARD.
10. EQUAL STAINLESS STEEL SINKS BY FRANKE & JUST.
11. EQUAL SHOWER TRIM BY BY LEONARD, ZURN & SPEAKMAN. (PROVIDE SHOWER PAN AS REQ'D PER CODE SECTION 417.4 & 417.5; SEE ARCH DWGS/SPECS FOR DETAILS).
12. EQUAL WATER COOLERS/DRINKING FOUNTAINS BY HALSEY TAYLOR, SUNROC, HAWS & ELKAY.
13. EQUAL MOP BASINS BY SWANSTONE, E.L.MUSTEE.
14. WHEN ASTERISK ("*") PREFIX IS USED, PROVIDE TRAP PRIMER AND PIPE 1/2" LINE BELOW SLAB TO FLOOR DRAIN.
15. PROVIDE VANDAL-PROOF AERATORS ON LAVATORY FAUCETS (E26-05-05).
16. EQUAL SAFETY SHOWER/EYEWASH BY BRADLEY & GUARDIAN.
17. EQUAL FAUCETS BY CHICAGO FAUCETS, T&S, ELKAY, ZURN & AMERICAN STANDARD. SINGLE SINK = RIGID SPOUT; DOUBLE SINK = RESTRICTED SPOUT.
18. EQUAL CAST IRON LAVATORIES BY CECO & ZURN.
19. PROVIDE TRAP AND TAILPIECE (FIRE RETARDANT POLYPROPYLENE – ACID RESISTANT).
20. PROVIDE INTEGRAL CHECK STOPS AT ALL WALL FAUCETS.
21. ACCESSORY APRON MAY BE OMITTED IF WATER COOLER IS RECESSED.
22. EQUALS SPECIALTY FIXTURES BY OATEY, SIOUX CHIEF.
23. PROVIDE EL-451 TRANSFORMERS PER MFR REQUIREMENTS (1 PER 5 FLUSH VALVES) WIRING BY PC.

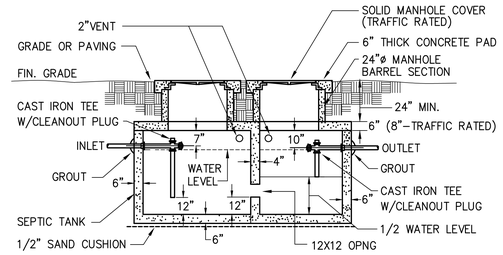
PLUMBING SPECIALTIES SCHEDULE

SYM	DESCRIPTION	MODEL NUMBER	REMARKS
FD	FLOOR DRAIN	ZURN ZN-415-S	1,7
SFD	SHOWER FLOOR DRAIN	ZURN Z-415-B WITH POLISHED CHROME TOP	1
FCO	FLOOR CLEANOUT	ZURN ZN-1400-T WITH NIKALOY TOP, CARPET MARKERS AS REQUIRED, SEE ARCHITECTURAL FINISH SCHEDULE FOR CARPETED AREAS.	1
YCO	YARD CLEANOUT	ZURN Z-1406-HD WITH CAST IRON TOP ZURN Z-1474-HD WITH CAST IRON TOP (TRAFFIC AREAS)	1
FPH	FROST-PROOF HYDRANT	WOODFORD #67 W/ DBL CHECK VALVE (ASSE 1052)	2,3
HB	HOSE BIBB	WOODFORD #26 WITH LOOSE KEY, CHROME PLATED, (ASSE 1052).	2,3
RHY	ROOF HYDRANT	WOODFORD #SRH-MS W/ DBL CHECK VALVE (ASSE 1052).	2,3
WCO	WALL CLEANOUT	ZURN Z-1446 W/STAINLESS STEEL COVER	1, 8
RD	ROOF DRAIN	ZURN Z-100, DECKCLAMP,ADJ. SLEEVE, DRAIN RECEIVER & C.I. DOME	1
OD	OVERFLOW DRAIN	ZURN Z-100-W4, DECKCLAMP,ADJ. SLEEVE, DRAIN RECEIVER & C.I. DOME	1
◯	SHOCK ABSORBER	SIOUX CHIEF, A=652-A, B=653-B, C=654-C, D=655-D	6
TP	TRAP PRIMER	PRECISION PRODUCTS MODEL PR-500 W/SS-X & DU-X.	1,7
TP	TRAP PRIMER	ZURN Z-1022 @ TRAP TO Z-1023 @ FLOOR DRAIN.	1,7
FS	FLOOR SINK	ZURN ZN-1901-2 W/ 1/2 GRATE & SEDIMENT BUCKET.	1,5,7
FSA	FLOOR SINK	ZURN ZN-1901 W/SEDIMENT BUCKET & NICKEL BRONZE GRATE.	1,5,7
FSB	FLOOR SINK	ZURN ZN-1901 W/ DEPRESSED GRATE & SEDIMENT BUCKET.	1,5,7
FSDW	FLOOR SINK (DISHWASHER)	ZURN ZN-1920-2 W/ 1/2 GRATE & SEDIMENT BUCKET.	1,5,7
TD	FLOOR SINK	ZURN Z-890 (6"w) /Z-895 (12"w), STAINLESS STEEL. PROVIDE ZS880 FOR SHWRS	1,7
WH	WALL HYDRANT	WOODFORD MODEL HC67 SERIES (ASSE 1052)	2,3
AAV	AIR ADMITTANCE VALVE	STUDOR VENT (SIZED PER MFG. RECOMMENDATION)	4

1. EQUALS BY JOSAM, JAY R. SMITH, ZURN, MIFAB, WATTS.
2. EQUALS BY JOSAM, JAY R. SMITH.
3. PROVIDE INTEGRAL CHECK STOPS AT ALL WALL FAUCETS.
4. EQUALS BY OATEY, SIOUX CHIEF.
5. PROVIDE WITH NB FRAMING GRATE
6. EQUALS BY JOSAM, JAY R. SMITH, WATTS – ASSE 1010 APPROVED. PROVIDE AT QUICK-CLOSING FIXTURES PER IPC 604.9.
7. AT EACH FLOOR DRAIN & FLOOR SINK, PROVIDE WITH TRAP PRIMER CONNECTION (SUFFIX –P) AND INCLUDE PRIMER OPTION "TP" NOTED ABOVE.
8. PROVIDE WCO AT BASE OF EACH WASTE STACK PER IPC 708.3.4.

PLUMBING LEGEND

SYMBOL	ABBREVIATION	DESCRIPTION
	CW	COLD WATER
	HW (110°F)	HOT WATER
	HW (140°F)	HOT WATER
	HWR (110°F)	HOT WATER RETURN
	HWR (140°F)	HOT WATER RETURN
	W	WASTE
	GW	GREASE LADEN WASTE LINE
	V	VENT
	RL	ROOF LEADER
	SD	STORM DRAIN
—G—	G	GAS
	VTR	VENT THRU ROOF
		GLOBE VALVE
		BALL VALVE
		CHECK VALVE
		UNION
		PRESSURE REDUCING VALVE
	FPH	FROST PROOF HYDRANT
	HB	HOSE BIBB
		SHOCK ABSORBER
	RD	ROOF DRAIN
	FCO	FLOOR CLEANOUT
	FCO/YCO	FLOOR OR YARD CLEANOUT
	FS/FD	FLOOR SINK OR SQUARE FL. DRAIN
	SFD	SHOWER FLOOR DRAIN
		VACUUM BREAKER
		AQUASTAT
	HD	HUB DRAIN
—F—	F	FIRE PROTECTION
		CONNECT TO EXISTING



6 / P100 GREASE INTERCEPTOR DETAIL

NTS (750) GALLON TANK AS MFG. BY STAY-RIGHT PRECAST CONCRETE (OR EQUAL)

GREASE INTERCEPTOR NOTES:

A. INTERIOR BAFFLES SHALL DISTRIBUTE FLOWS. BAFFLES SHALL EXTEND SIX (6) INCHES ABOVE WATER LINE BUT, CANNOT FLOOD THE INLET PIPE.

B. MINIMUM 2:1 LENGTH TO WIDTH RATIO.

C. LOW VELOCITY FLOW NEAR OUTLET.

D. BAFFLE WALL BE LOCATED A DISTANCE FROM INLET WALL OF 2/3 TO 3/4 OF THE TOTAL LENGTH OF THE INTERCEPTOR

E. NINE (9) INCHES OF FREEBOARD AT GREASE INTERCEPTOR TOP.

F. EACH GREASE INTERCEPTOR SHALL HAVE INLET AND OUTLET TEES. THE OUTLET TEE SHALL EXTEND 50% INTO THE LIQUID DEPTH. THE INLET TEE SHALL EXTEND 25% INTO THE LIQUID DEPTH. INLET AND OUTLET TEE MUST BE PLUGGED AT THE TOP OF THE SANITARY TEE AND BE A MINIMUM OF THREE (3) INCHES IN DIAMETER.

G. ACCESS OPENINGS OVER THE INLET, OUTLET, AND EACH COMPARTMENT WITHIN THE GREASE INTERCEPTOR. EACH OPENING SHALL BE TWENTY-FOUR (24) INCHES IN DIAMETER AND CONTAIN PICK HOLES. ALL COVERS SHALL BE CONSTRUCTED OF CAST IRON OR EQUIVALENT TRAFFIC BEARING MATERIAL. MANHOLES/COVERS MUST EXTEND TO THE FINISHED GRADE AND SHALL BE INSTALLED TO EXCLUDE THE ENTRANCE OF SURFACE OR STORM WATER INTO THE INTERCEPTOR.

H. FULL SIZE CLEANOUTS SHALL BE INSTALLED ON THE INLET AND OUTLET SIDES OF THE INTERCEPTOR AND EXTENDED TO GRADE.

I. GREASE INTERCEPTORS MUST BE VENTED IN ACCORDANCE WITH STATE & LOCAL PLUMBING CODE WITH A MINIMUM 2" DIAMETER VENT PIPING. VENT CONNECTIONS MAY BE MADE THROUGH THE TOP OF THE INTERCEPTOR, IN WHICH CASE THE BOTTOM OF THE VENT SHALL EXTEND NO CLOSER THAN 6" TO THE STATIC WATER LEVEL, OR MAY BE MADE THROUGH THE SIDE OF THE INTERCEPTOR'S ACCESS OPENING. 2 (2") VENTS SHALL REMAIN SEPERATE VENTING FROM GREASE TRAP UNTIL VERTICAL RISE IN BLDG. BEFORE TYING TOGETHER.

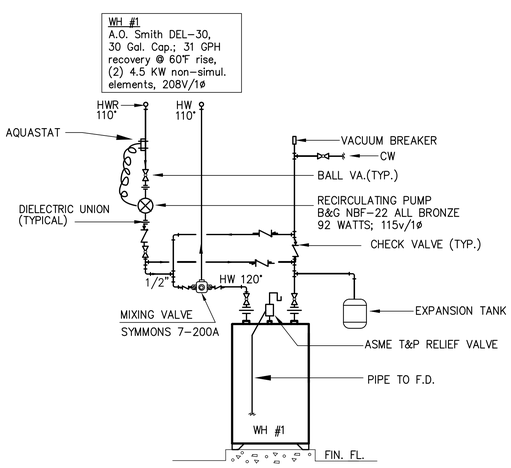
J. MINIMUM CONCRETE COMPRESSIVE STRENGTH OF 3,500 PSI.

K. JOINTS SHOULD BE PROPERLY SEALED TO PREVENT INFILTRATION OR EXFILTRATION.

L. GREASE INTERCEPTORS MUST MEET A MINIMUM STRUCTURAL DESIGN OF 150-POUNDS/SQUARE FOOT FOR NON TRAFFIC INSTALLATIONS. FOR VEHICULAR TRAFFIC CONDITIONS THE GREASE INTERCEPTOR SHALL BE DESIGNED TO WITHSTAND A H-20 WHEEL LOAD.

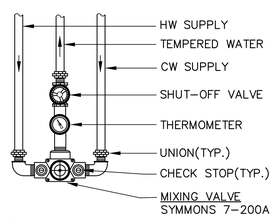
M. GREASE INTERCEPTORS SHALL MEET THE FOLLOWING STANDARDS: ASTM C-1227 FOR SEPTIC TANKS, C-913 FOR PRECAST CONCRETE WATER AND WASTEWATER STRUCTURES, ACI-318 FOR DESIGN AND ASTM C-890 FOR ESTABLISHING MINIMUM STRUCTURAL DESIGN LOADING.

N. A STATE REGISTERED DESIGN PROFESSIONAL WILL SPECIFICALLY DESIGN CAST IN PLACE OR MASONRY TANKS. TANKS MUST BE MANUFACTURED AS A GREASE INTERCEPTOR.



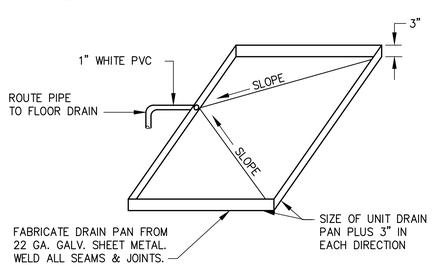
1 / P100 WATER HEATER DETAIL

NTS NOTE: PIPING ARRANGEMENT SHALL BE PER MFR'S RECOMMENDATIONS



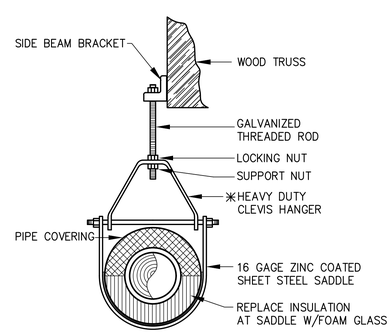
5 / P100 MIXING VALVE DETAIL (TMV)

NTS EQUALS BY LEONARD, POWERS, BRADLEY, LAWLER



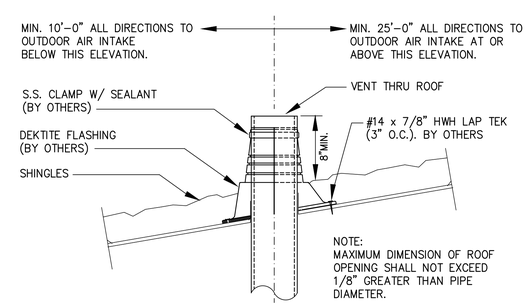
2 / P100 AUXILIARY DRAIN PAN DETAIL

NTS



3 / P100 PIPE HANGER DETAIL

NTS *CONTRACTOR OPTION: MICHIGAN HANGER #403



4 / P100 VENT THRU ROOF DETAIL

NTS

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PLUMBING SCHEDULES & DETAILS

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P100

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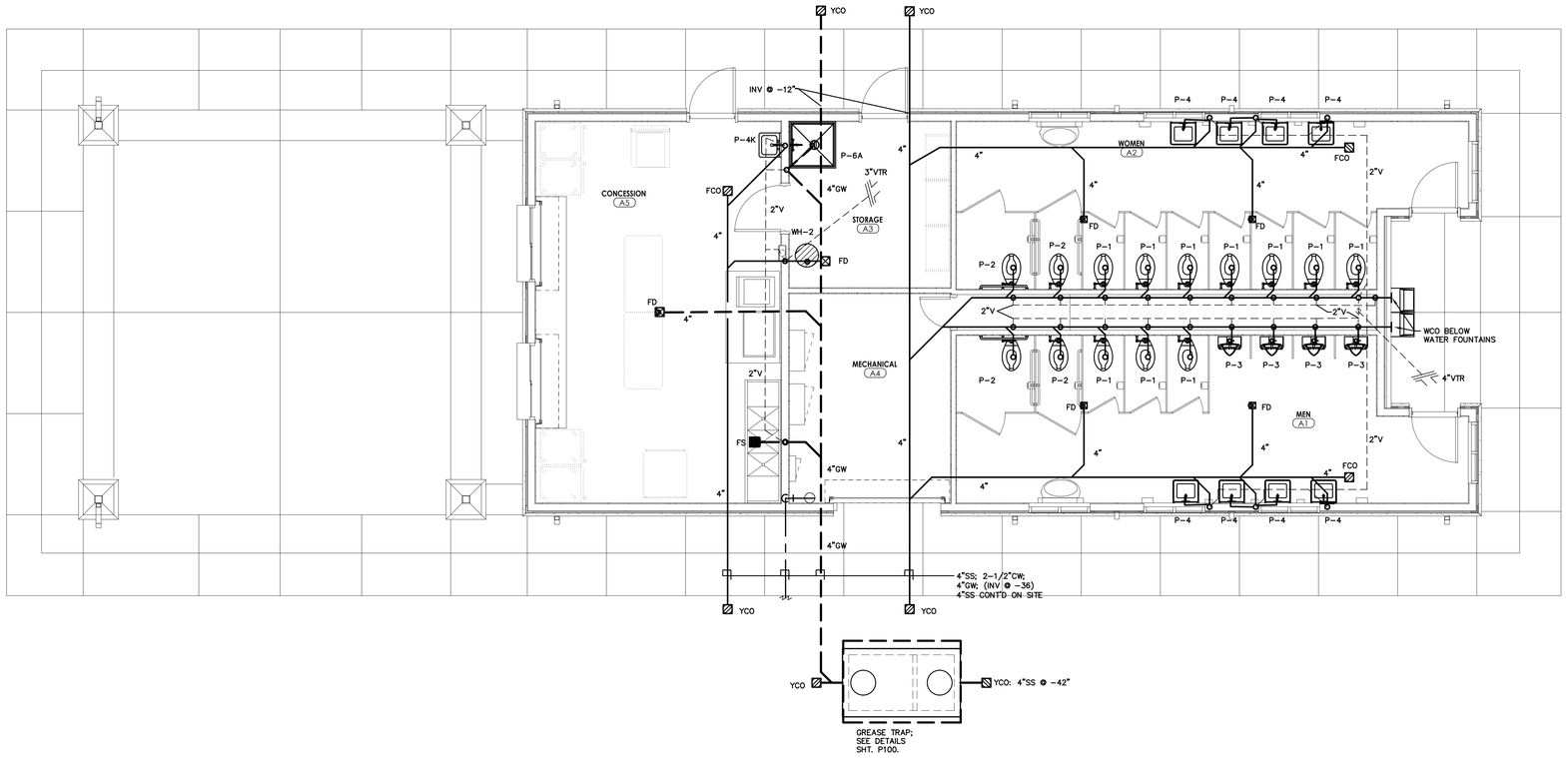
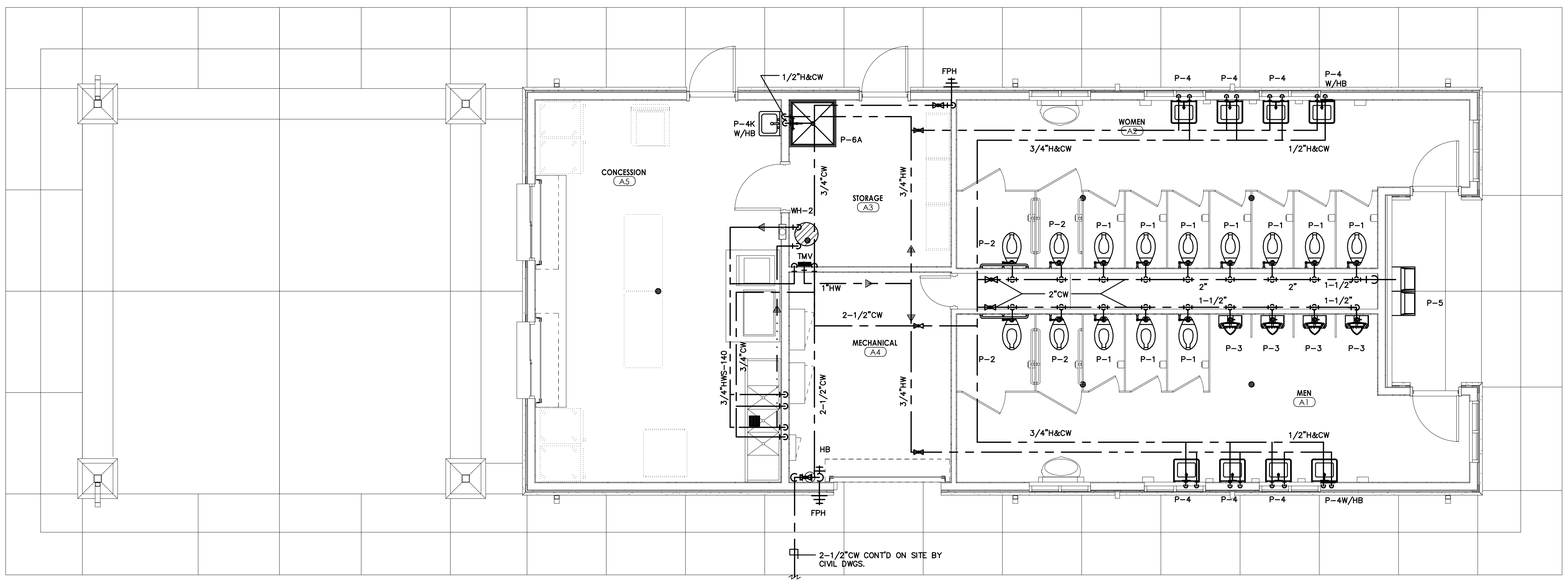


1 P101 DWV FLOOR PLAN – CONCESSIONS / TOILET BUILDING A

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

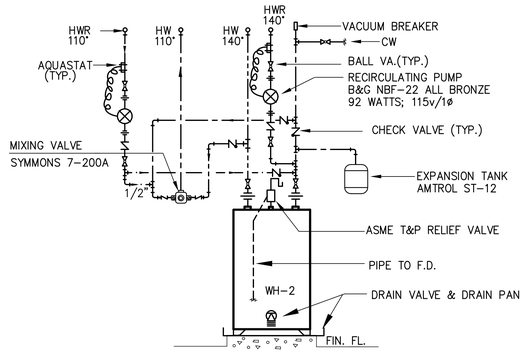


2 P101 WATER PIPING FLOOR PLAN – CONCESSIONS / TOILET BUILDING A

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

BLDG. LOAD SUMMARY	
WATER FIXTURE UNITS	185
WATER GPM	88
WASTE FIXTURE UNITS	80
HW GPH (110°F)	60
HW GPH (140°F)	80

WH #2
A.O. Smith DRE-80-36
80 Gal. Cap.; 146 GPH
recovery @ 100°F rise,
36 KW; 480V/3 Ph.
elements



3 P101 WATER HEATER DETAIL

NTS

NOTE: PIPING ARRANGEMENT SHALL BE PER MFR'S RECOMMENDATIONS

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PLUMBING FLOOR PLAN - TOILET / CONCESSIONS BUILDING A

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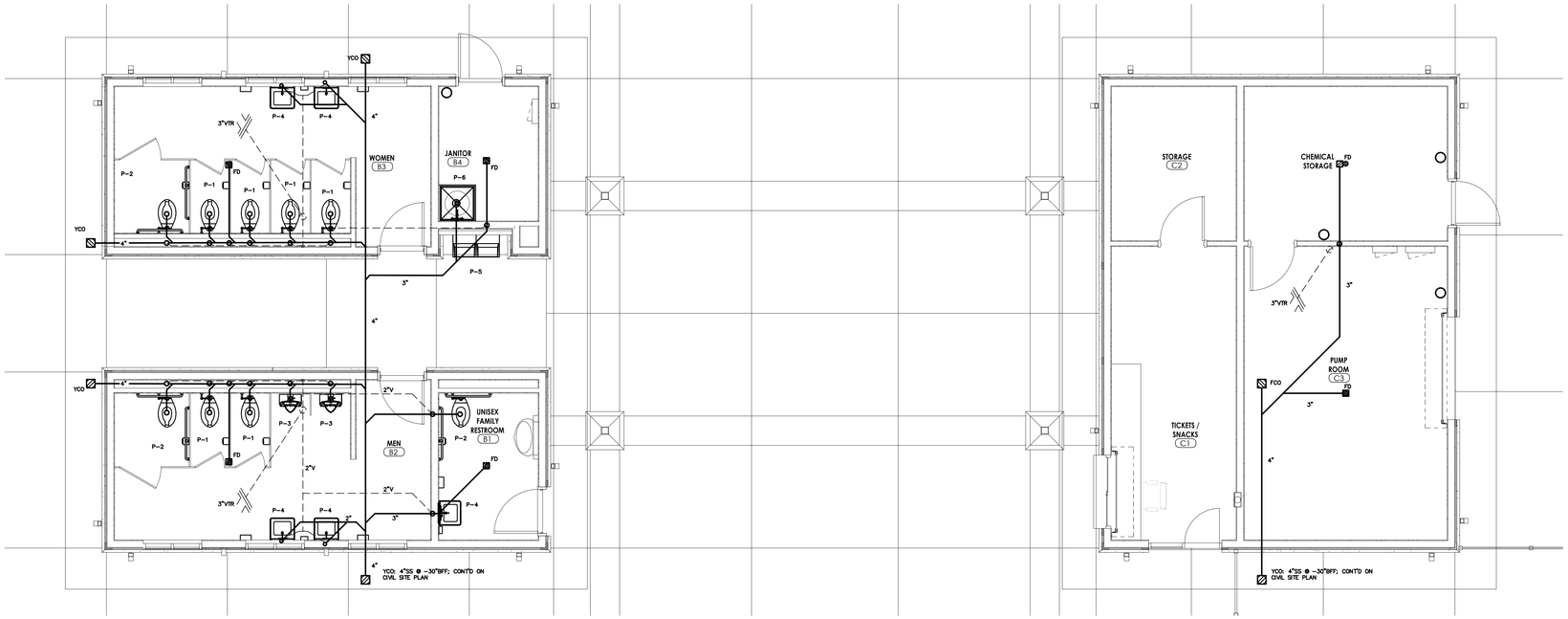
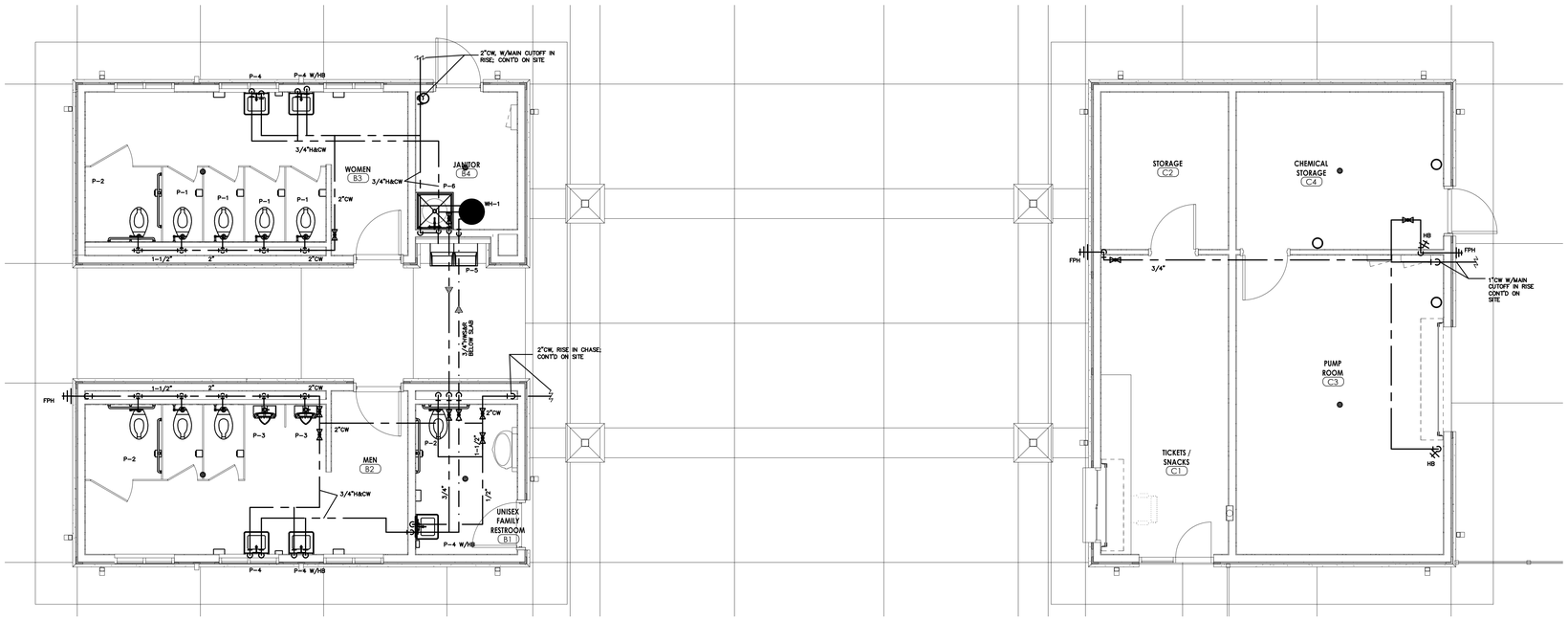


1 / P102 DWV PLAN – TOILET AND TICKET / PUMP BUILDINGS B AND C

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



2 / P102 WATER PIPING PLAN – TOILET AND TICKET / PUMP BUILDINGS B AND C

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

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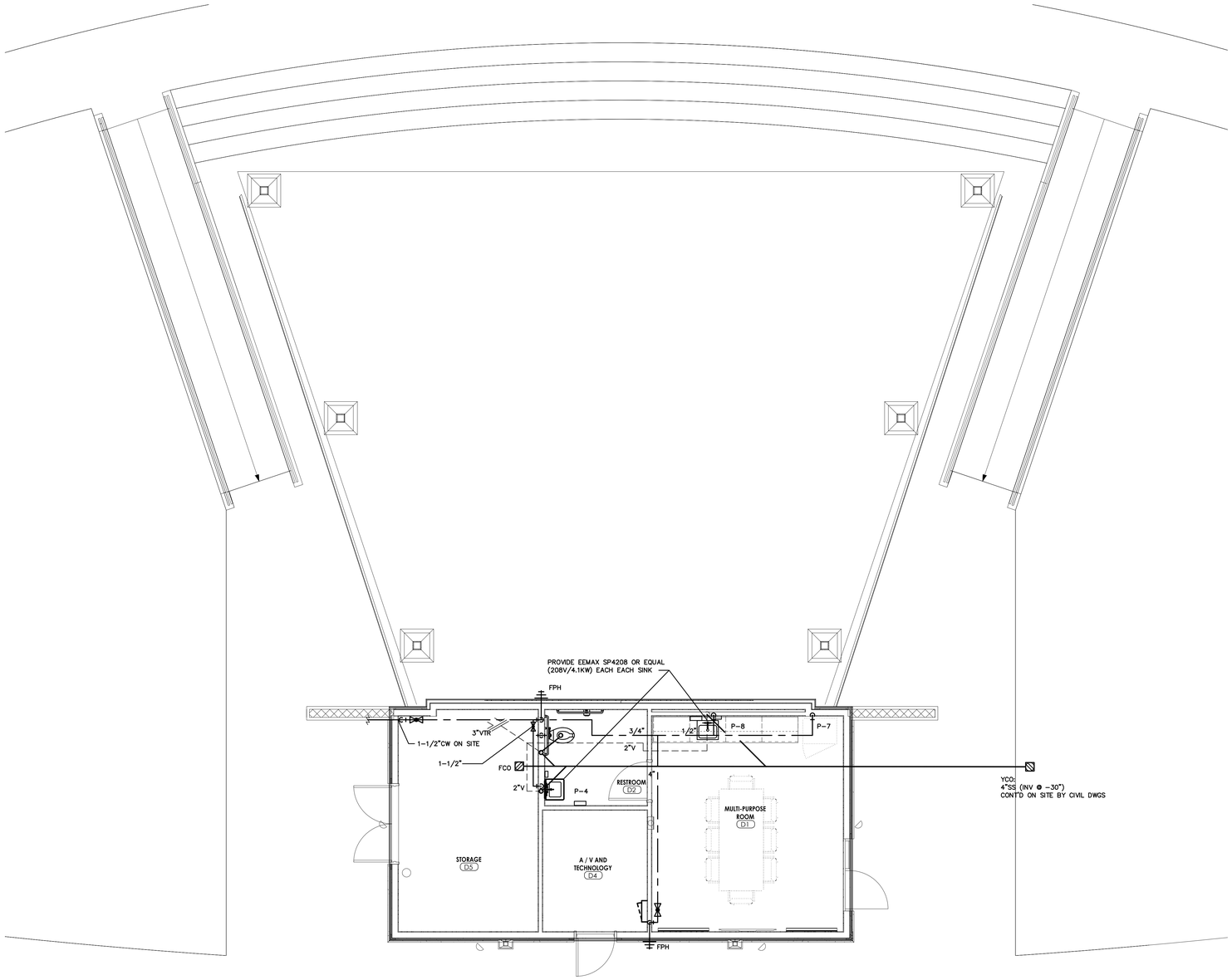

1 / P103 PLUMBING FLOOR PLAN – AMPHITHEATER BUILDING D

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

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Plumbing

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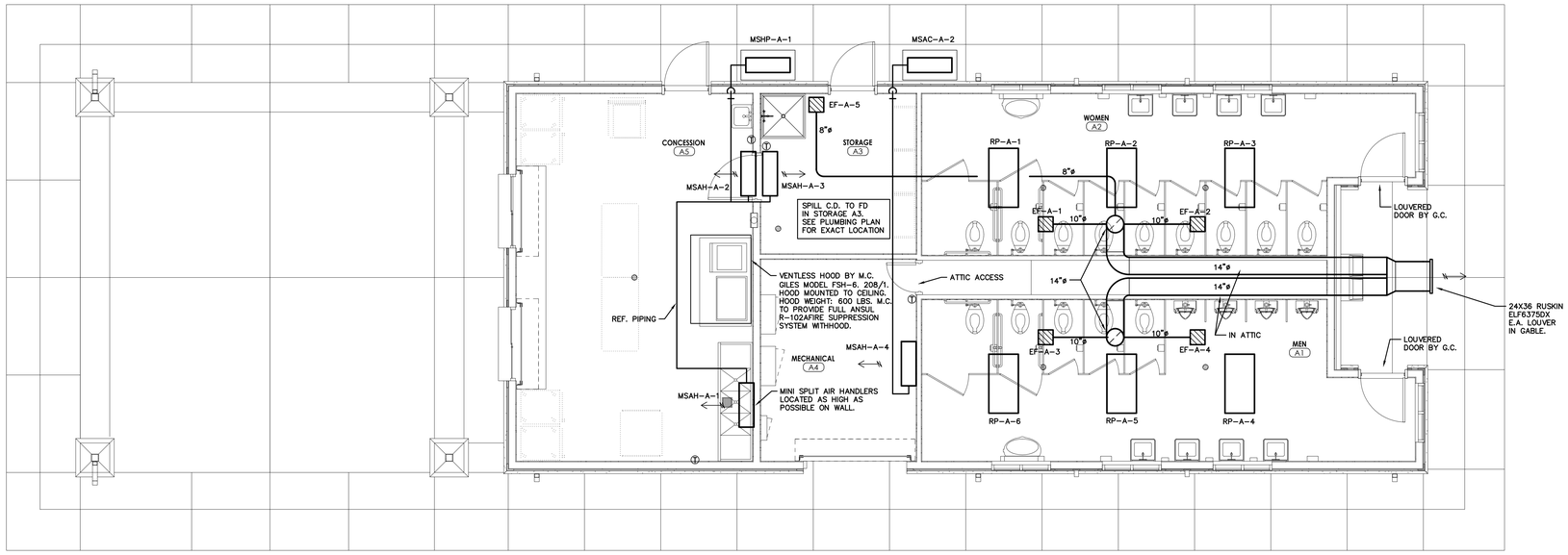

1
M101

MECHANICAL FLOOR PLAN – CONCESSIONS / TOILET BUILDING A

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

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MECHANICAL FLOOR PLAN - TOILET / CONCESSIONS BUILDING A

Mechanical

M101

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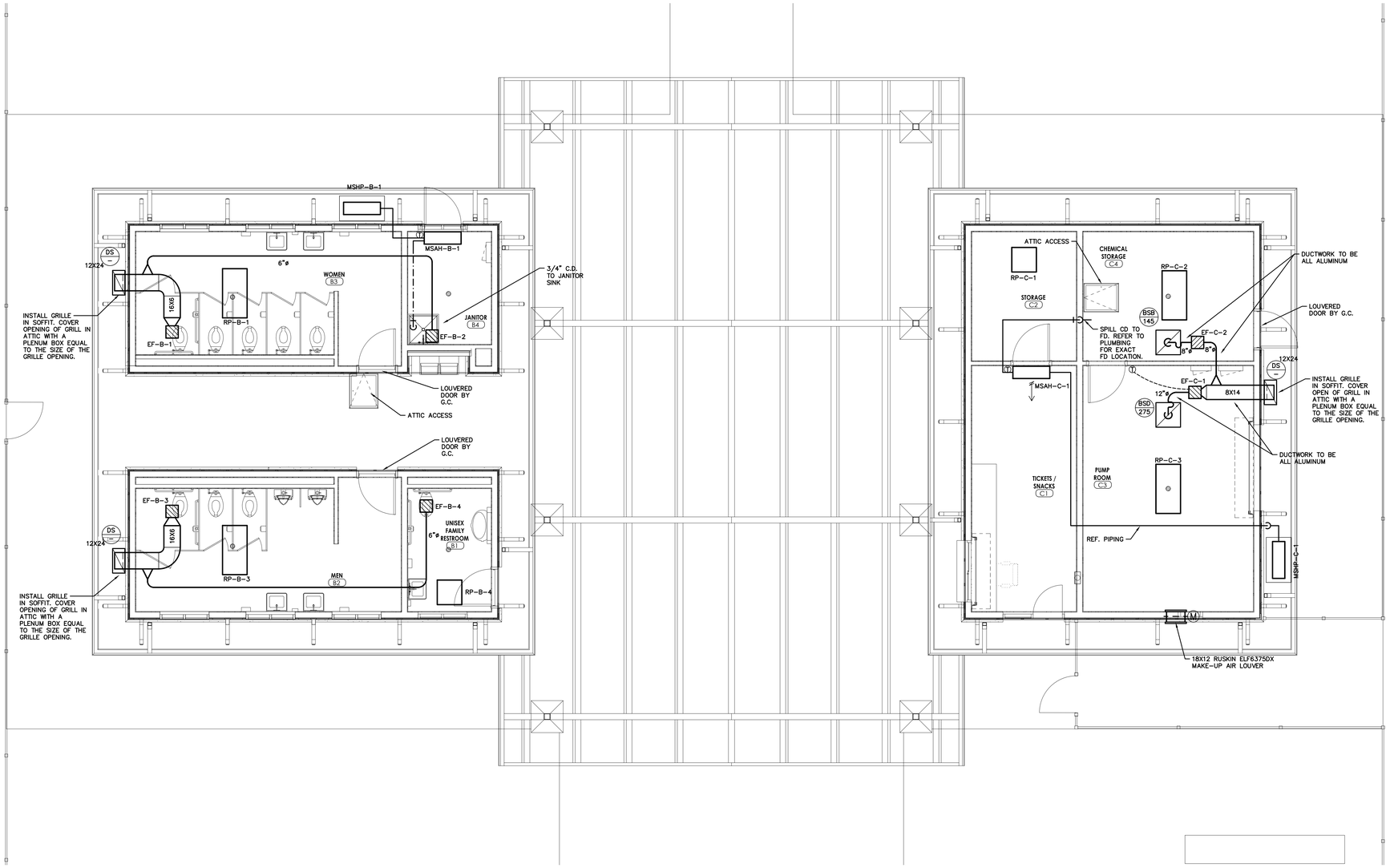

1 M102 MECHANICAL FLOOR PLAN – TOILET AND TICKET / PUMP BUILDINGS B AND C

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

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Mechanical

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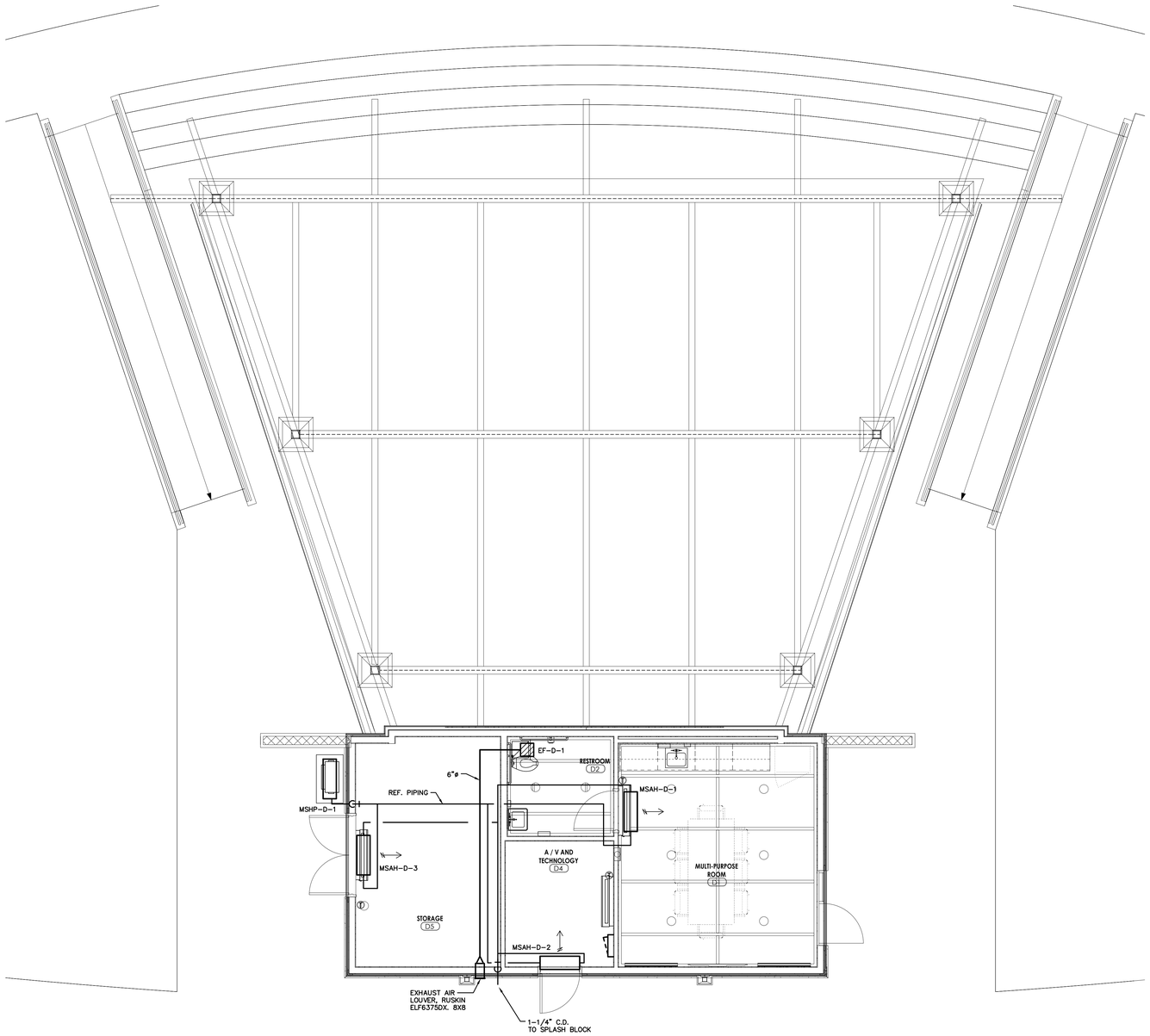

1 M103 MECHANICAL FLOOR PLAN – AMPHITHEATER BUILDING D
SCALE: 1/4" = 1'-0"

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MECHANICAL FLOOR PLAN - AMPHITHEATER BUILDING D

Mechanical

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RADIANT PANEL SCHEDULE

Unit Tag	Size	Watts	Volts	Phase	Model	Remarks
RP-A-1	24X48	750	115	1	RCP-127	1-2
RP-A-2	24X48	750	115	1	RCP-127	1-2
RP-A-3	24X48	750	115	1	RCP-127	1-2
RP-A-4	24X48	750	115	1	RCP-127	1-2
RP-A-5	24X48	750	115	1	RCP-127	1-2
RP-A-6	24X48	750	115	1	RCP-127	1-2
RP-B-1	24X48	750	115	1	RCP-127	1-2
RP-B-2	NOT USED					
RP-B-3	24X48	750	115	1	RCP-127	1-2
RP-B-4	24X24	250	115	1	RCP-122	1-2
RP-C-1	24X24	250	115	1	RCP-122	1-2
RP-C-2	24X48	750	115	1	RCP-127	1-2
RP-C-3	24X48	750	115	1	RCP-127	1-2
RP-E-1	24X24	250	115	1	RCP-122	1-2
RP-E-2	24X24	250	115	1	RCP-122	1-2

1. MODEL NUMBERS BASED ON MARKEL. EQUALS BY SINGER AND CHROMALOX.
2. WALL MOUNTED T'STAT / DISCONNECT BY MFG.

FAN SCHEDULE

Unit Tag	CFM	ESP (IN.)	Fan RPM	Sones	Drive	HP (W)	Volts	Phs	Type	Model	Remarks
EF-A-1	375	0.3	1350	5.8	DIRECT	135	115	1	CEILING MNT	SP-A390	1-3
EF-A-2	375	0.3	1350	5.8	DIRECT	135	115	1	CEILING MNT	SP-A390	1-3
EF-A-3	375	0.3	1350	5.8	DIRECT	135	115	1	CEILING MNT	SP-A390	1-3
EF-A-4	375	0.3	1350	5.8	DIRECT	135	115	1	CEILING MNT	SP-A390	1-3
EF-A-5	100	0.3	950	2.5	DIRECT	(80)	115	1	CEILING MNT	SP-B110	1-3
EF-B-1	375	0.3	999	4.3	DIRECT	(224)	115	1	CEILING MNT	SP-A510	1-3
EF-B-2	100	0.3	950	2.5	DIRECT	(80)	115	1	CEILING MNT	SP-B110	1-3
EF-B-3	375	0.3	999	4.3	DIRECT	(224)	115	1	CEILING MNT	SP-A510	1-3
EF-B-4	75	0.3	756	1.1	DIRECT	(80)	115	1	CEILING MNT	SP-B110	1-3
EF-C-1	275	0.4	1700	14.7	BELT	1/4	115	1	INLINE	BSQ-70-4	1-4, 6
EF-C-2	145	0.4	1288	9.2	BELT	1/4	115	1	INLINE	BSQ-70-4	1-5
EF-D-1	75	0.3	756	1.1	DIRECT	(80)	115	1	CEILING MNT	SP-B110	1-3
EF-E-1	75	0.3	756	1.1	DIRECT	(80)	115	1	CEILING MNT	SP-B110	1-3
EF-E-2	75	0.3	756	1.1	DIRECT	(80)	115	1	CEILING MNT	SP-B110	1-3

1. MODEL NUMBER BASED ON GREENHECK.
   EQUALS BY PENN, ILG, LOREN COOK.
2. SOLID STATE SPEED CONTROL SWITCH ON FAN OR NEARBY FOR ALL DIRECT DRIVE SINGLE PHASE MOTORS.
3. DISCONNECT SWITCH (OR PLUG) BY MFGR. FOR ALL SINGLE PHASE MOTORS (U.N.O.).
4. SPARK PROOF HOUSING AND EXPLOSION PROOF CONSTRUCTION.
5. FAN TO OPERATE CONTINUOUS
6. INTERLOCKED WITH T-STAT

LOL

VRF SYSTEM

Unit Tag	Area Served	CFM (peak)	MCA	MOCP	Fan Motor Volts	Fan Motor Phase	DX Coil Performance EAT	DX Coil Performance BTU Total	DX Coil Performance BTU Sens.	Heating Performance EAT	Heating Performance Heating BTU	Outdoor Unit Unit Tag	Outdoor Unit MCA	Outdoor Unit MOCP	Outdoor Unit Volts	Outdoor Unit Phase	Outdoor Unit Cooling BTU	Outdoor Unit Heating BTU	Outdoor Unit Model (Outdoor Unit)	Outdoor Unit Model (Indoor Unit)	Remarks
												MSHP-A-1	36	40	208	1	60,000	66,000	PUMY-P60NKMU1		1-5
MSAH-A-1	SEE PLANS	918	0.63	15	208	1	80/67	21,302	18,588	70	24,222									PKFY-P24NKMU	1-5
MSAH-A-1	SEE PLANS	918	0.63	15	208	1	80/67	21,302	18,588	70	24,222									PKFY-P24NKMU	1-5
MSAH-A-1	SEE PLANS	424	0.38	15	208	1	80/67	15,976	11,117	70	17,942									PKFY-P18NHMU	1-5
												MSHP-D-1	36	40	208	1	60,000	66,000	PUMY-P60NKMU1-BS		1-5
MSAH-D-1	SEE PLANS	918	0.63	15	208	1	80/67	23,348	19,360	70	26,148									PKFY-P24NKMU	1-5
MSAH-D-2	SEE PLANS	918	0.63	15	208	1	80/67	23,348	19,148	70	26,148									PKFY-P24NKMU	1-5
MSAH-D-3	SEE PLANS	413	0.38	15	208	1	80/67	11,674	8,699	70	13,074									PKFY-P12NHMU	1-5

1. MODELS BY MITSUBISHI. EQUALS BY TOSHIBA, DAIKIN AND APPROVED MANUFACTURERS CONTRACTOR SHALL VERIFY SERVICE CLEARANCES FOR ALL SUBSTITUATIONS
2. INDOOR AND OUTDOOR UNITS SHALL EACH HAVE SEPARATE POWER CONNECTIONS
3. PROVIDE MANUFACTURER'S CONTROLS AS REQUIRED FOR COMPLETE STAND ALONE OPERATION. CONTROLS SHALL INCLUDE ALL THERMOSTAT, EQUIPMENT, ETC. AS REQUIRED.
4. ALL FAN COILS HAVE CONDENSATE PUMPS FOR UNIT MFG.
5. COMPLETE REFERIGERANT PIPING SYSTEM PER UNIT MFG.

GRILLE & DIFFUSER SCHEDULE-CLUBHOUSE

SYM	TYPE	USE	CFM RANGE	NECK SIZE	OVER-ALL SIZE	FINISH	FRAME	PRICE MODEL NO	REMARKS
B--	PERF.	RETURN/ EXHAUST	SEE PLANS & RMK 6	RMK 7	RMK 4	OFF WHITE	RMK 3	PDDR	1-8

REMARKS
1. EQUALS: METALAIRE, TITUS, KRUEGER, TUTTLE & BAILEY, NAIL-OR, CARNES. SCHEDULE IS GENERAL, SOME MAY NOT BE USED. PAINT ALL INSIDE VISIBLE SURFACES FLAT BLACK.
2. SYMBOL EXPLANATION:
   XXX/CFM = SYMBOL, FRAME (RMK 3), NECK (RMK 5,7)/CFM
3. FRAME TYPES:
   S = FLUSH SURF. MTD.. PLASTER FRAME FOR CEILING MOUNTING.
   T = T-BAR
   E = DUCT MOUNTED: V-BEVELED DROP SURF. (TYPE "A" DIFFUSER)
   D = DROPPED FRAME
   NOTE: VERIFY FRAME/CEILING COMPATIBILITY.
4. OVERALL SIZE: LAY-IN = 2'x2', OTHER GRILLES = NECK + 2"+/-.
5. "B" & "E" EXH/RETURN NECK SIZES ("E" = SQ. NK. ONLY)

NO.	ROUND NK SIZE	CFM	NO.	SQUARE NK SIZE	CFM
A	6"	100	G	8x8	220
B	8"	175	H	10x10	345
C	10"	275	I	12x12	500
D	12"	400	J	14x14	680
E	14"	535	K	16x16	885
F	16"	700	L	18x18	1125
NOTE: VERIFY			M	22x22	1680
CFM / NECK SIZE.			N	22x46	2600

6. NO NECK SIZE INDICATES NON-DUCTED, LAY-IN PANEL.
7. OBD IF USED AS SUPPLY OR EXHAUST.
8. ALL ALUM. CONSTRUCTION

NON-DUCTED MINI-SPLIT SYSTEM SCHEDULE

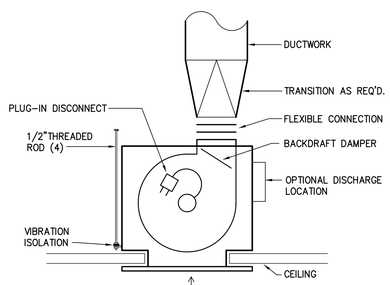
Unit Tag	Location	CFM (Med)	Fan Motor FLA	Fan Motor Volts	Fan Motor Phase	Cooling Performance EAT	Cooling Performance BTU Total	Cooling Performance BTU Sens.	Cooling Performance BTU Minimum	Cooling Performance Efficiency SEER	Heating Performance Capacity BTU (47 F)	Heating Performance Capacity BTU (17 F)	Outdoor Unit Unit Tag	Outdoor Unit Fan No.	Outdoor Unit Fan FLA(ea)	Outdoor Unit Compressor No.	Outdoor Unit Compressor LRA	Outdoor Unit Compressor RLA	Outdoor Unit MCA	Outdoor Unit Fuse Size	Outdoor Unit Volts	Outdoor Unit Phase	Model Outdoor Unit	Model Indoor Unit	Remarks
MSAH-A-4	SEE PLANS	335	0.33	208	1	80/67	18,000	-	8,000	18.5	-	-	MSAC-A-2	1	0.50	1	12	7	11	15	208	1	PUY-A18NKA7	PKA-A18HA7	1-6
MSAH-B-1	SEE PLANS	335	0.33	208	1	80/67	18,000	-	8,000	18.5	-	-	MSAC-B-1	1	0.50	1	12	7	11	15	208	1	PUY-A18NKA7	PKA-A18HA7	1-6
MSAH-C-1	SEE PLANS	237	0.76	208	1	80/67	12,000	8,520	-	18.0	12,200	7,500	MSHP-C-1	1	0.50	1	8.2	6.6	12	15	208	1	MUZ-HE12NA	MSZ-HE12NA	1-2, 4-6

1. MODELS BY MITUBISHI. EQUALS BY TOSHIBA AND DAIKIN
2. WIRED REMOTE CONTROLLER / T'STAT.
4. REFRIGERANT LINES AND ACCESSORIES PER SPECS AND AS RECOMMENDED BY UNIT MFG.
5. PROVIDE FACTORY CONDENSATE PUMP.
6. INDOOR UNIT IS POWERED BY OUTDOOR UNIT. COORDINATE SUBSTITUTE MFG. ELECTRICAL REQUIREMENTS W/ E.C. AT NO ADDITIONAL COST TO OWNER.

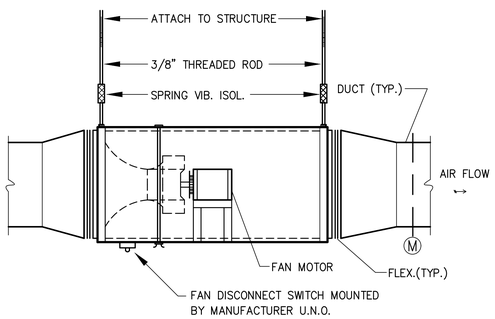
ELECTRIC WALL HEATER SCHEDULE

Unit Tag	Area Served	Watts	Volts	Phase	Model	Remarks
EWH-1	SEE PLANS	1800	120	1	E3058T2DWB	1-3

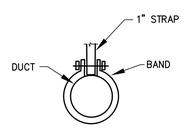
1. Model numbers based on Markel. Equals by Singer and Chromalox.
2. Disconnect by manufacturer.
3. Unit mounted thermostat.



1 M201 CEILING EXHAUST FAN DETAIL
NTS

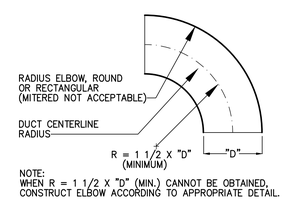


2 M201 INLINE FAN DETAIL
NTS



ROUND

3 M201 DUCTWORK HANGER DETAILS
NTS



4 M201 RADIUS ELBOW DETAIL
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Date: 06-17-2019
Revisions:

MECHANICAL SCHEDULES

Mechanical
M201
YCH Commission Number
18030.00

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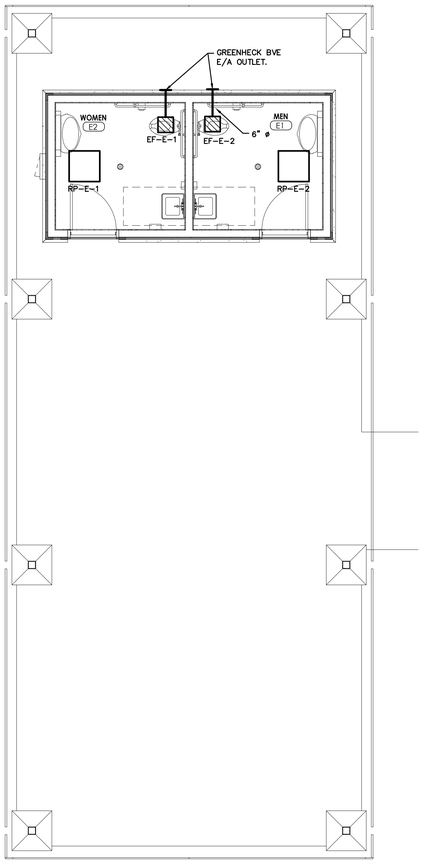
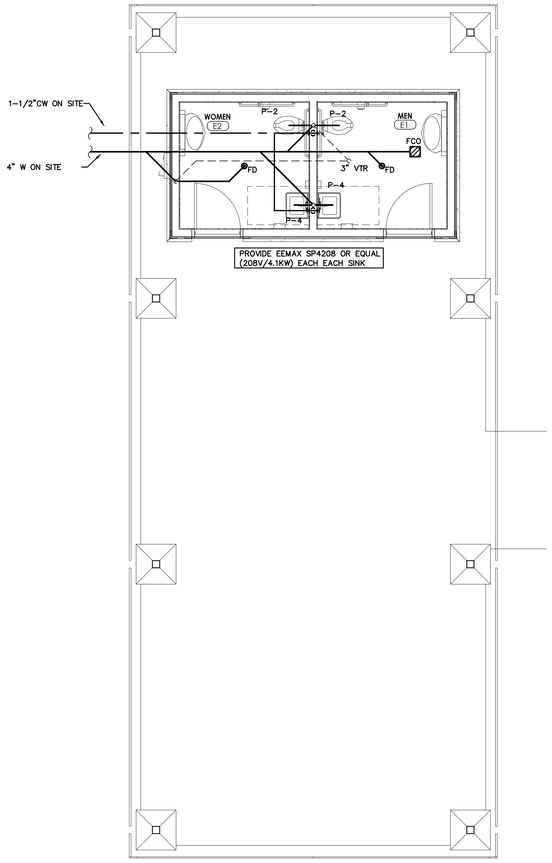


1 MP104 MECHANICAL FLOOR PLAN–BUILDING E
SCALE: 1/4" = 1'–0"



2 MP104 PLUMBING FLOOR PLAN–BUILDING E
SCALE: 1/4" = 1'–0"

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Revisions:
FLOOR PLANS - POND SHELTER RESTROOMS
BUILDING E - MECHANICAL & PLUMBING

MP104

YCH Commission Number
18030.00

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SYMBOL SCHEDULE

GENERAL SYMBOLS

SYMBOL	DESCRIPTION
	CONDUIT RUN CONCEALED ABOVE CEILINGS OR IN WALLS.
	CONDUIT RUN CONCEALED IN OR BELOW FLOORS OR UNDERGROUND.
	CONDUIT RUN EXPOSED.
	CONDUIT TURNING UP
	SQUARE ON CONDUIT SYMBOL INDICATES THAT CIRCUIT CONTINUES BUT NOT SWITCHLEG.
	HOMERUN TO PANEL AND CIRCUIT(S) DESIGNATED. ARROW(S) INDICATE QUANTITY OF CIRCUITS.
J	JUNCTION BOX PER N.E.C.
1	SPECIAL NOTE, NUMERALS IDENTIFY, SEE SCHEDULE.
1	SPECIAL CONNECTION TO A SPECIFIC ITEM OF EQUIPMENT. SEE CONNECTION SCHEDULE.

LIGHTING

SYMBOL	DESCRIPTION
	LED OR FLUORESCENT LIGHTING FIXTURE, DRAWN TO SCALE.
	LED OR FLUORESCENT LIGHTING FIXTURE, CONNECTED TO AN EMERGENCY CIRCUIT (SWITCHED)
	COMPACT FLUORESCENT, LED OR HID LIGHTING FIXTURE, CEILING MOUNTED.
	COMPACT FLUORESCENT, LED OR HID LIGHTING FIXTURE, CONNECTED TO AN EMERGENCY CIRCUIT OR EMERGENCY BALLAST.
	COMPACT FLUORESCENT, LED OR HID LIGHTING FIXTURE, WALL MOUNTED.
	COMPACT FLUORESCENT, LED OR HID LIGHTING FIXTURE, WALL MOUNTED. CONNECTED TO AN EMERGENCY CIRCUIT OR EMERGENCY BALLAST.
	EXIT SIGN, CEILING MOUNTED. SHADING INDICATES FACE ORIENTATION. CONNECT TO THE UNSWITCHED LEG OF THE CIRCUIT. } PROVIDE ARROWS AS SHOWN ON PLAN BESIDE SYMBOL
	EXIT SIGN, WALL MOUNTED. SHADING INDICATES FACE ORIENTATION. CONNECT TO THE UNSWITCHED LEG OF THE CIRCUIT. } PROVIDE ARROWS AS SHOWN ON PLAN BESIDE SYMBOL
P	PHOTOCELL CONTROL DEVICE. MOUNT ON ROOF FACING NORTH.
	TRACK LIGHTING ASSEMBLY.

DISTRIBUTION

SYMBOL	DESCRIPTION
	ELECTRICAL PANELBOARD, SURFACE MOUNTED.
	CONTROL CABINET, FLUSH OR SURFACE MOUNTED.
	ENCLOSED CIRCUIT BREAKER
	DISCONNECT SWITCH, NON-FUSIBLE.
	DISCONNECT SWITCH PROVIDED WITH EQUIPMENT.
	GROUND CONNECTION.
Δ-Y	DRY-TYPE TRANSFORMER, 480-120/208V 3-PHASE OR 208-120/208V 3-PHASE.

WIRING DEVICES

SYMBOL	DESCRIPTION
	DUPLEX RECEPTACLE, 125V, 3-WIRE GROUNDING TYPE.
GFI	DUPLEX RECEPTACLE, GROUND FAULT CIRCUIT INTERRUPTING.
WP	DUPLEX GFCI RECEPTACLE. PROVIDE WITH OPERABLE, IN-USE WEATHERPROOF COVER.
C	DUPLEX RECEPTACLE, 125V, 3-WIRE GROUNDING TYPE. CEILING MOUNTED.
	TWO DUPLEX RECEPTACLES, 125V, 3-WIRE GROUNDING TYPE, IN A TWO-GANG BOX WITH TWO-GANG FACEPLATE.
	SPECIAL PURPOSE RECEPTACLE, WITH SPECIAL NEMA CONFIGURATION AS NOTED.
	WALL OUTLET FOR TELECOMMUNICATIONS. SEE SPECIFICATIONS AND/OR DRAWINGS FOR CONDUIT AND CABLING REQUIREMENTS.
	DOT ABOVE OUTLETS INDICATES THAT THE DEVICE IS TO BE INSTALLED ABOVE CASEWORK OR OTHER OBSTACLE. COORDINATE.
S	LIGHT SWITCH, SINGLE-POLE,
S3	LIGHT SWITCH, 3-WAY,
SWP	LIGHT SWITCH, WEATHERPROOF.
ST	PROGRAMMABLE LIGHT SWITCH, WALL MOUNTED.
	FLOOR BOX WITH DUPLEX RECEPTACLE.
	FLOOR BOX FOR TELECOMMUNICATIONS.
	WHERE MULTIPLE FLOOR BOXES ARE SHOWN, USE APPROPRIATE MULTI-COMPARTMENT BOX.
OS	OCCUPANCY SENSOR, CEILING MOUNTED. PROVIDE WITH 10 FEET WHIP TO ALLOW FIELD ADJUSTMENT OF LOCATION. COORDINATE EXACT LOCATION WITH MANUFACTURERS RECOMMENDATION.

LIGHTING FIXTURE SCHEDULE

TYPE	DESCRIPTION	VOLT.	LAMPS QTY	LAMPS TYPE	LAMPS BULB	LAMPS BASE	LAMPS TEMP	LAMPS CRI	LAMPS LUMENS	BALLASTS QTY	BALLASTS TYPE	WATTS	MOUNTING	MANUF. CATALOG NO.
D1	RECESSED ROUND, LED DOWNLIGHT, SPECULAR CLEAR REFLECTOR WITH WHITE TRIM RING, 8" DIA. NOMINAL APERTURE, UL LISTED FOR WET LOCATION.	120	–	LED	–	–	4000 K	–	2000	1	LED DRIVER	23	CEILING RECESSED	GOTHAM #EVO WILLIAMS #L60 PORTFOLIO #LDBA OR APPROVED EQUAL
D1E	RECESSED ROUND, LED DOWNLIGHT, SPECULAR CLEAR REFLECTOR WITH WHITE TRIM RING, 8" DIA. NOMINAL APERTURE, UL LISTED FOR WET LOCATION. PROVIDE WITH INTEGRAL 700 LUMEN BATTERY PACK.	120	–	LED	–	–	4000 K	–	2000 700	1 1	LED DRIVER EMERGENCY	23	CEILING RECESSED	GOTHAM #EVO WILLIAMS #L60 PORTFOLIO #LDBA OR APPROVED EQUAL
D2	RECESSED ROUND, LED DOWNLIGHT, SPECULAR CLEAR REFLECTOR WITH WHITE TRIM RING, 8" DIA. NOMINAL APERTURE, UL LISTED FOR WET LOCATION.	120	–	LED	–	–	3500 K	–	3000	1	LED DRIVER	37	CEILING RECESSED	GOTHAM #EVO WILLIAMS #L60 PORTFOLIO #LDBA OR APPROVED EQUAL
D2E	RECESSED ROUND, LED DOWNLIGHT, SPECULAR CLEAR REFLECTOR WITH WHITE TRIM RING, 8" DIA. NOMINAL APERTURE, UL LISTED FOR WET LOCATION. PROVIDE WITH INTEGRAL 700 LUMEN BATTERY PACK.	120	–	LED	–	–	3500 K	–	3000 700	1 1	LED DRIVER EMERGENCY	37	CEILING RECESSED	GOTHAM #EVO WILLIAMS #L60 PORTFOLIO #LDBA OR APPROVED EQUAL
V1	FIBERGLASS VAPORTIGHT FLUORESCENT FIXTURE, CAM LATCHES, FROSTED POLYCARBONATE DIFFUSER.	120	–	LED	–	–	3500 K	–	4000	1	LED DRIVER	33	CEILING, SURFACE	LITHONIA #VAP LED METALUX #VT2 232 DR EB81 DAY-BRITE #V2 SERIES WILLIAMS #92 SERIES
V1E	FIBERGLASS VAPORTIGHT FLUORESCENT FIXTURE, CAM LATCHES, FROSTED POLYCARBONATE DIFFUSER. PROVIDE WITH INTEGRAL EMERGENCY BATTERY PACK.	120	–	LED	–	–	3500 K	–	4000	1	LED DRIVER	33	CEILING, SURFACE	LITHONIA #VAP LED METALUX #VT2 232 DR EB81 DAY-BRITE #V2 SERIES WILLIAMS #92 SERIES
V2	FIBERGLASS VAPORTIGHT FLUORESCENT FIXTURE, CAM LATCHES, FROSTED POLYCARBONATE DIFFUSER.	120	–	LED	–	–	3500 K	–	6000	1	LED DRIVER	49	CEILING, SURFACE	LITHONIA #VAP LED METALUX #VT2 232 DR EB81 DAY-BRITE #V2 SERIES WILLIAMS #92 SERIES
V2E	FIBERGLASS VAPORTIGHT FLUORESCENT FIXTURE, CAM LATCHES, FROSTED POLYCARBONATE DIFFUSER. PROVIDE WITH INTEGRAL EMERGENCY BATTERY PACK.	120	–	LED	–	–	3500 K	–	6000	1	LED DRIVER	49	CEILING, SURFACE	LITHONIA #VAP LED METALUX #VT2 232 DR EB81 DAY-BRITE #V2 SERIES WILLIAMS #92 SERIES
V3	FIBERGLASS VAPORTIGHT FLUORESCENT FIXTURE, CAM LATCHES, FROSTED POLYCARBONATE DIFFUSER.	120	–	LED	–	–	4000 K	–	4000	1	LED DRIVER	33	CEILING, SURFACE	LITHONIA #VAP LED METALUX #VT2 232 DR EB81 DAY-BRITE #V2 SERIES WILLIAMS #92 SERIES
V3E	FIBERGLASS VAPORTIGHT FLUORESCENT FIXTURE, CAM LATCHES, FROSTED POLYCARBONATE DIFFUSER. PROVIDE WITH INTEGRAL EMERGENCY BATTERY PACK.	120	–	LED	–	–	4000 K	–	4000	1	LED DRIVER	33	CEILING, SURFACE	LITHONIA #VAP LED METALUX #VT2 232 DR EB81 DAY-BRITE #V2 SERIES WILLIAMS #92 SERIES
WL	DECORATIVE EXTERIOR WALL MOUNTED LED FIXTURE, TRAPEZOID SHAPE DIE-CAST, ALUMINUM HOUSING, ACRYLIC LENS, ELECTRONIC DRIVERS, FORWARD THROW DISTRIBUTION, UL, LISTED FOR WET LOCATION. FINISH AS SELECTED BY ARCHITECT.	120	–	LED	–	–	4000 K	–	6000	1	FIXED OUTPUT DRIVER	52	WALL, SURFACE MTG HT AS DIRECTED BY ARCHITECT	LITHONIA #WST LED SERIES LUMARK #WP LSI #LED GREENBRIAR
WLE	DECORATIVE EXTERIOR WALL MOUNTED LED FIXTURE, TRAPEZOID SHAPE DIE-CAST, ALUMINUM HOUSING, ACRYLIC LENS, TWO LIGHT ENGINES (10 LED'S EACH), ELECTRONIC DRIVERS, WIDE DISTRIBUTION, UL, LISTED FOR WET LOCATION. FINISH AS SELECTED BY ARCHITECT. PROVIDE WITH INTEGRAL BATTERY PACK FOR 90 MINUTE MINIMUM ILLUMINATION.	120	–	LED	–	–	4000 K	–	3000	1	FIXED OUTPUT DRIVER	25	WALL, SURFACE MTG HT AS DIRECTED BY ARCHITECT	LITHONIA #WST LED SERIES LUMARK #WP LSI #LED GREENBRIAR
	EXIT SIGN, WHITE METAL HOUSING, UNIVERSAL MOUNTING, RED STENCIL FACE, QUANTITY OF FACES INDICATED BY SHADING ON SYMBOL, DIRECTIONAL ARROWS AS INDICATED, WITH SELF-CONTAINED BATTERY RESERVE, CONNECT FIXTURE AHEAD OF ALL LOCAL AREA SWITCHING, FIXTURE SHALL NOT BE SWITCHED.	120	–	LED DIFFUSE	–	–	–	–	–	–	–	5	WALL OR CEILING AS INDICATED BY SYMBOL	LITHONIA #LE SURE-LITES #CX7 HIGH-LITES #ZCLED EXITRONIX #400U LIGHTALARMS #XLD/XLED SERIES

ABBREVIATIONS

A	AMPERES	KW	KILOWATTS
ACC	ARMORED CLAD CABLE	LFNC	LIQUIDTIGHT FLEXIBLE NON-METALLIC CONDUIT
AFF	ABOVE FINISHED FLOOR	LFMC	LIQUIDTIGHT FLEXIBLE METALLIC CONDUIT
AFG	ABOVE FINISHED GRADE	LVC	LOW VOLTAGE CONTROL CABINET
ANN	FIRE ALARM ANNUNCIATOR CABINET	MCB	MAIN CIRCUIT BREAKER
C	CONDUIT	MCC	METAL CLAD CABLE
CB	CIRCUIT BREAKER	MLO	MAIN LUGS ONLY
CKT	CIRCUIT	MTD	MOUNTED
CLG	CEILING	NMC	NON-METALLIC CLAD CABLE
DN	DOWN	PB	PULLBOX
DW	DISHWASHER	PNL	PANELBOARD
EC	EMPTY CONDUIT	PRS	PROGRAM RAPID START
EMT	ELECTRICAL METALLIC TUBING	PS	PROGRAM START
ENT	ELECTRICAL NON-METALLIC TUBING	PWR	POWER
EWC	ELECTRIC WATER COOLER	REC	RECEPTACLE
FACP	FIRE ALARM CONTROL PANEL	RMC	RIGID METAL CONDUIT
FMC	FLEXIBLE METAL CONDUIT	RS	RAPID START
G	GROUND	SC	FIRE ALARM PULL STATION
GFI	GROUND FAULT INTERRUPTER	SW	SWITCH
HOA	HAND OFF AUTOMATIC	SWBD	SWITCHBOARD
HP	HORSEPOWER	TTB	TELEPHONE TERMINAL BOARD
HPF	HIGH POWER FACTOR	TEL	TELEPHONE
HX	HIGH REACTANCE	TV	TELEVISION
IG	ISOLATED GROUND	TYP	TYPICAL
IMC	INTERMEDIATE METAL CONDUIT	V	VOLTS
IS	INSTANT START	VP	VAPOR PROOF
JB	JUNCTION BOX	W	WALL MOUNTED
KVA	KILOVOLT-AMPERES	WG	WIRE GUARD
FPN	FUSE PER NAMEPLATE	WP	WEATHER PROOF
		XFMR	TRANSFORMER

MOUNTING HEIGHTS

(DISTANCE FROM FINISHED FLOOR TO CENTER OF DEVICE UNLESS OTHERWISE NOTED)

RECEPTACLE	
GENERAL	18" AFF. (UNLESS OTHERWISE NOTED)
ABOVE COUNTER TOP	46" AFF. (UNLESS OTHERWISE NOTED)
LIGHT SWITCH	46" AFF. (UNLESS OTHERWISE NOTED)
TELECOMMUNICATIONS	
GENERAL	18" AFF. (UNLESS OTHERWISE NOTED)
ABOVE COUNTER TOP	46" AFF. (UNLESS OTHERWISE NOTED)
WALL	46" AFF. (UNLESS OTHERWISE NOTED)
TELEVISION	
FIRE ALARM	
PULL STATION	46" AFF. (UNLESS OTHERWISE NOTED)
AUDIBLE/STROBE COMBINATION OR STROBE DEVICE ONLY	80" AFF. TO BOTTOM OF APPLIANCE

ELECTRICAL SYSTEM AND EQUIPMENT (2012 NC ENERGY CODE)

Method of Compliance:

Energy Code: ☒ Prescriptive ☐ Performance

ASHRAE 90.1: ☐ Prescriptive ☐ Performance

Lighting schedule

Lamp type required in fixture: REFER TO LIGHTING FIXTURE SCHEDULE
Number of lamps in fixture: REFER TO LIGHTING FIXTURE SCHEDULE
Ballast type used in the fixture: REFER TO LIGHTING FIXTURE SCHEDULE
Number of ballasts in fixture: REFER TO LIGHTING FIXTURE SCHEDULE
Total interior wattage per fixture: REFER TO LIGHTING FIXTURE SCHEDULE
Total interior wattage specified va allowed: XXXW SPECIFIED / XXXW ALLOWED
Lowest source efficacy for all exterior lamps: XXX LUMENS/WATT

Additional Prescriptive Compliance

- ☐ 506.2.1 More Efficient Mechanical Equipment
- ☒ 506.2.2 Reduced Lighting Power Density
- ☐ 506.2.3 Energy Recovery Ventilation Systems
- ☐ 506.2.4 Higher Efficiency Service Water Heating
- ☐ 506.2.5 On-Site Supply of Renewable Energy
- ☐ 506.2.6 Automatic Daylighting Control Systems

DESIGNER STATEMENT:

To the best of my knowledge and belief, the design of this building complies with the electrical system and equipment requirements of the North Carolina State Building Code, NC 2012 Energy Code.

SIGNED: Mark P. Arrington

NAME: MARK P. ARRINGTON

TITLE: ELECTRICAL ENGINEER

SPORTS LIGHTING FIXTURE SCHEDULE

POLE	MOUNTING HEIGHT	VOLT.	PER POLE LAMPS	AVERAGE LUMENS PER LAMP	SPECIFIED FIXTURE
S1, S2	STEEL POLE, 70' ABOVE GRADE,	480/3	8-1500W HID	134,000	8 – MUSCO #LSG 15MZ
S3, S4	STEEL POLE, 70' ABOVE GRADE,	480/3	8-1500W HID (FRONT) 8-1500W HID (BACK)	134,000	16 –MUSCO #LSG 15MZ
S5	STEEL POLE, 70' ABOVE GRADE,	480/3	8-1500W HID (FRONT) 7-1500W HID (BACK)	134,000	15 –MUSCO #LSG 15MZ
S6	STEEL POLE, 70' ABOVE GRADE,	480/3	8-1500W HID (FRONT) 8-1500W HID (BACK)	134,000	16 –MUSCO #LSG 15MZ
S7, S8	STEEL POLE, 70' ABOVE GRADE,	480/3	7-1500W HID (FRONT) 7-1500W HID (BACK)	134,000	14 –MUSCO #LSG 15MZ
S9, S10	STEEL POLE, 70' ABOVE GRADE,	480/3	7-1500W HID	134,000	7 – MUSCO #LSG 15MZ
S11, S12, S13, S14	STEEL POLE, 70' ABOVE GRADE,	480/3	7-1500W HID	134,000	7 – MUSCO #LSG 15MZ

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Revisions:

SYMBOLS AND SCHEDULES

Electrical

E100

YCH Commission Number

18030.00

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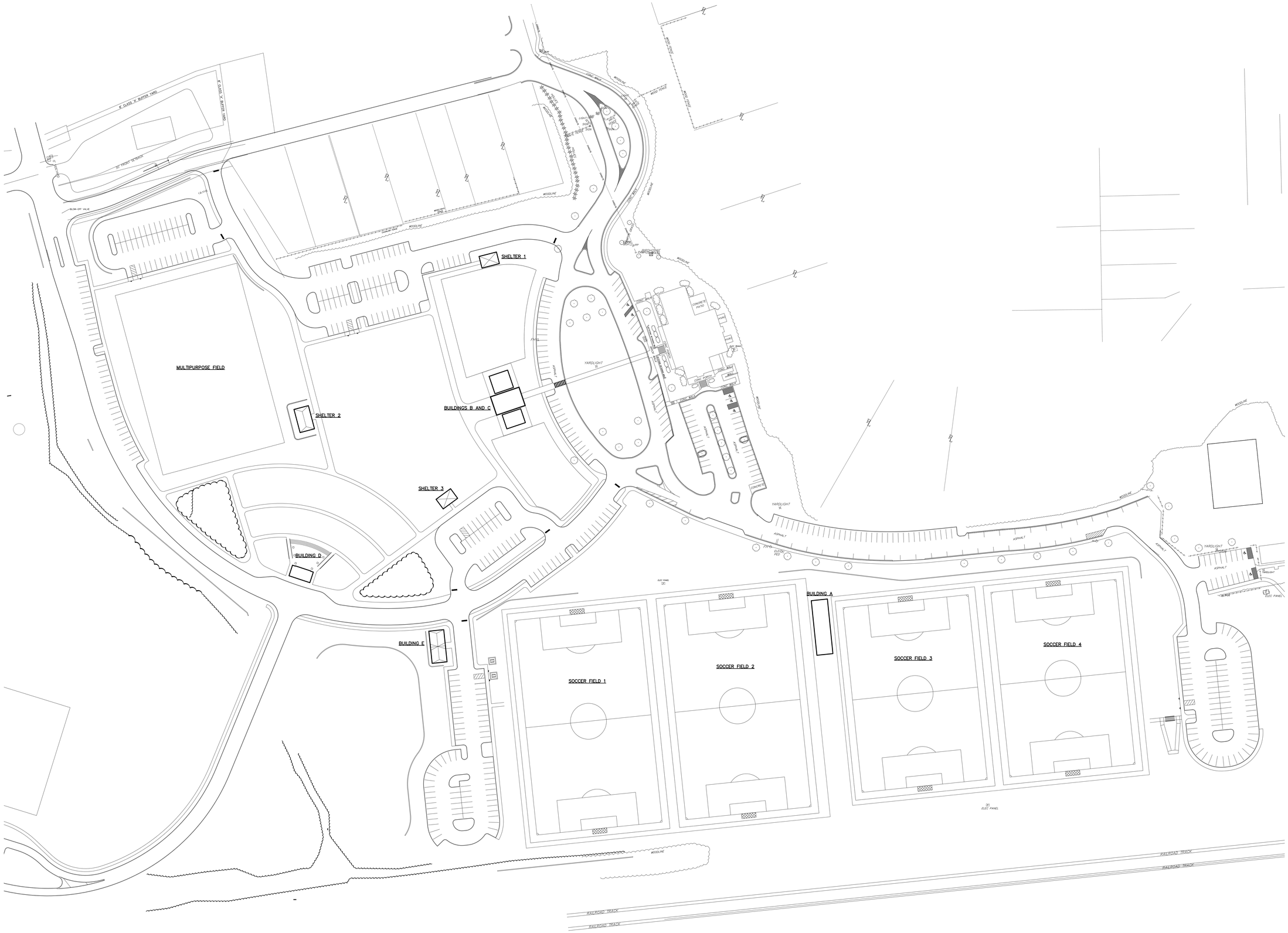

1 E101 SITE PLAN – OVERALL
SCALE: 1" = 60'-0"

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SITE PLAN - OVERALL

Electrical

E101

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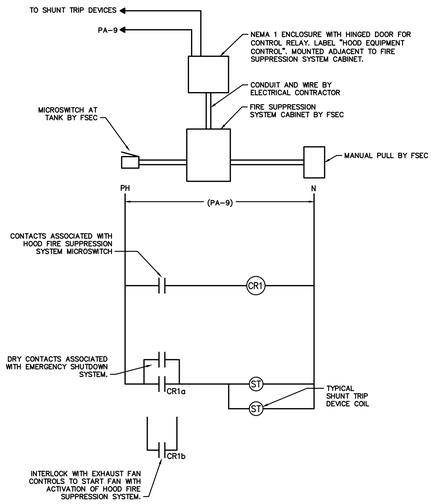
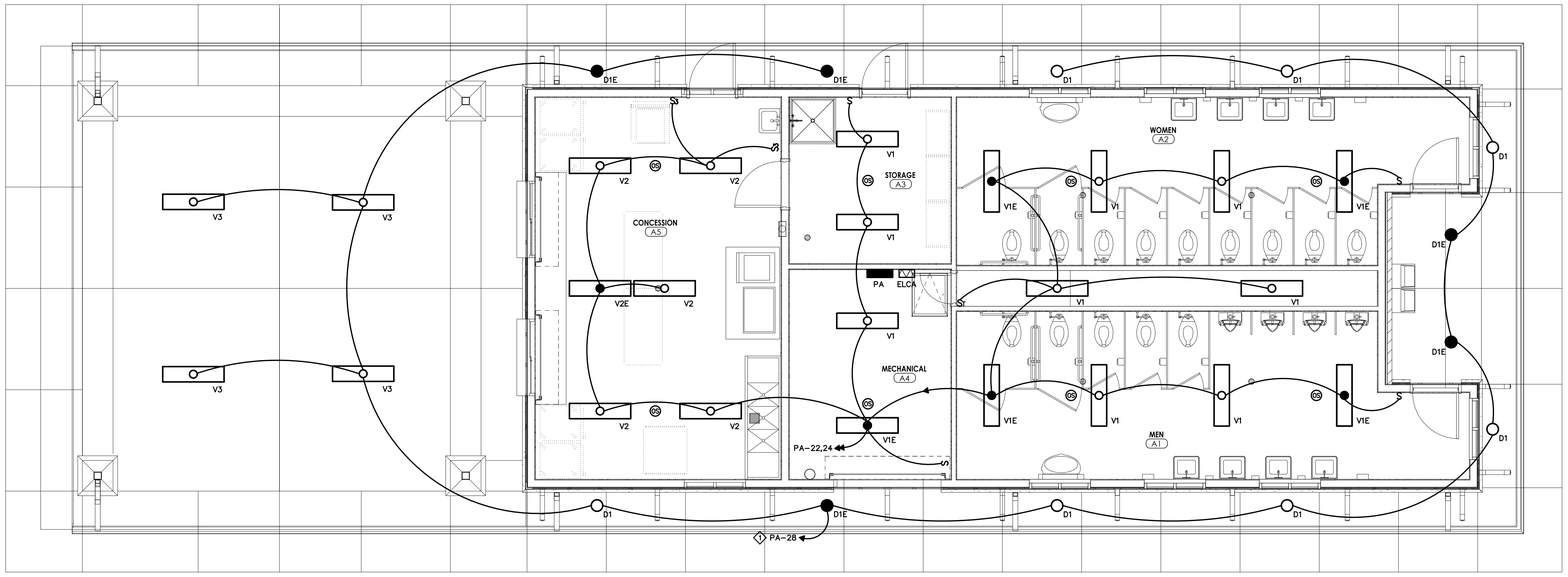


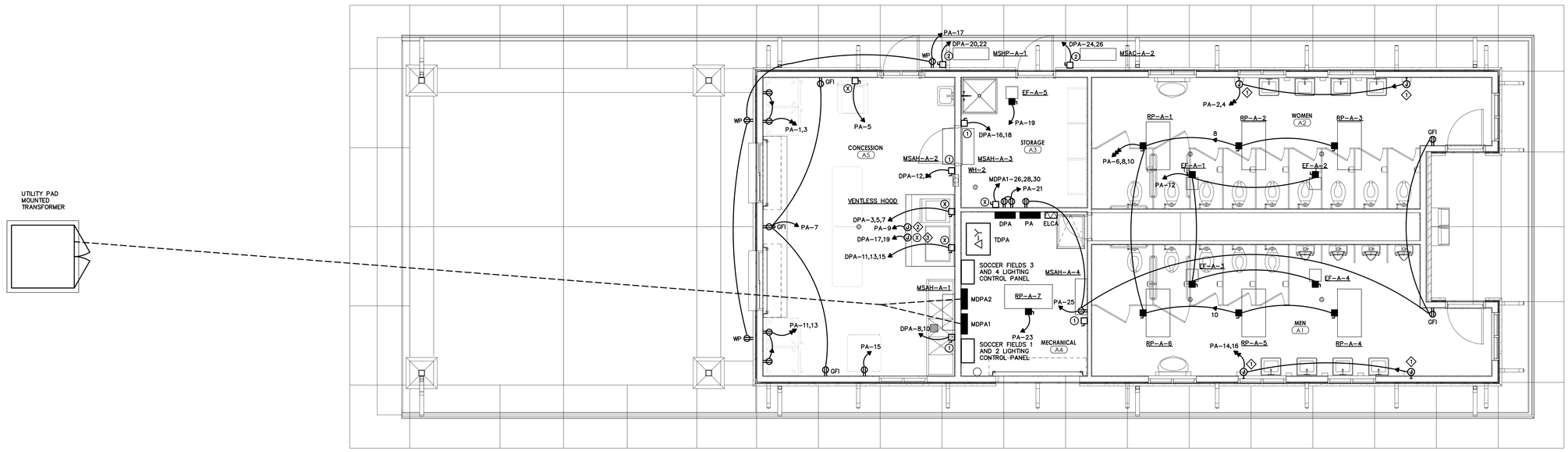
3 E201 KITCHEN HOOD EQUIPMENT CONTROL
NO SCALE



1 E201 FLOOR PLAN – CONCESSIONS / TOILET BUILDING A – LIGHTING
SCALE: 1/4" = 1'-0"

NOTES:

1. ROUTE CIRCUIT THROUGH EXTERIOR LIGHTING CONTACTOR ELCA. REFER TO EXTERIOR LIGHTING CONTROL DIAGRAM – ELCA FOR ADDITIONAL INFORMATION.



2 E201 FLOOR PLAN – CONCESSIONS / TOILET BUILDING A – POWER
SCALE: 1/4" = 1'-0"

NOTES:

1. FOR CONNECTION TO HAND DRYER. COORDINATE EXACT LOCATION WITH ARCHITECT.
2. FOR CONNECTION TO VENTLESS HOOD CONTROLS. COORDINATE EXACT LOCATION WITH HOOD MANUFACTURER.
3. FOR CONNECTION TO VENTLESS HOOD FAN. COORDINATE EXACT LOCATION WITH HOOD MANUFACTURER.

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FLOOR PLANS - CONCESSIONS / TOILET BUILDING A - ELECTRICAL

Electrical

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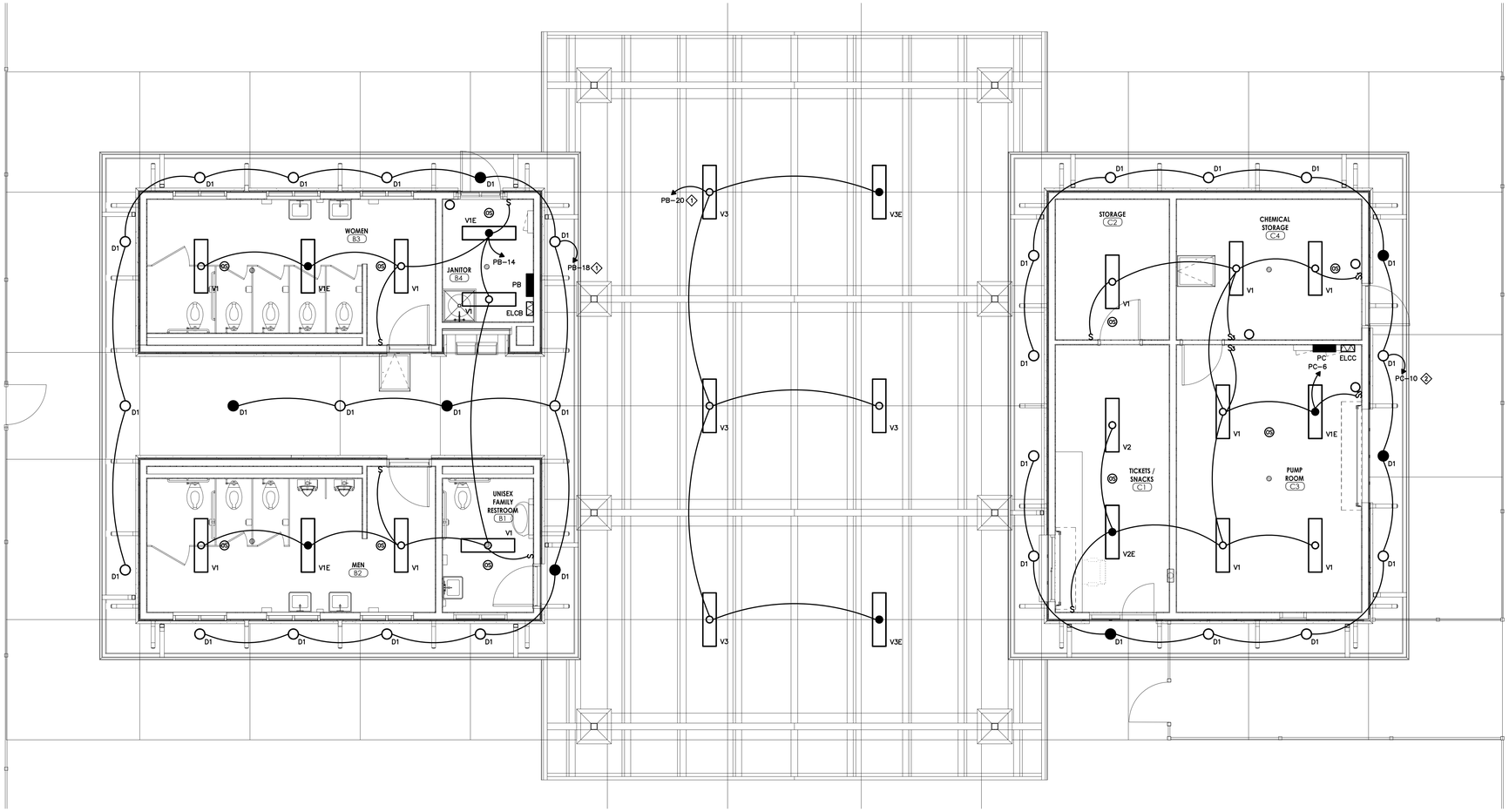

1
E202

FLOOR PLAN – FLOOR PLAN – TOILET AND TICKET / PUMP BUILDINGS B AND C – LIGHTING

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

NOTES:

1. ROUTE CIRCUIT THROUGH EXTERIOR LIGHTING CONTACTOR ELCB. REFER TO EXTERIOR LIGHTING CONTROL DIAGRAM – ELCB FOR ADDITIONAL INFORMATION.
2. ROUTE CIRCUIT THROUGH EXTERIOR LIGHTING CONTACTOR ELCC. REFER TO EXTERIOR LIGHTING CONTROL DIAGRAM – ELCC FOR ADDITIONAL INFORMATION.

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Revisions:

FLOOR PLAN - TOILET AND TICKET / PUMP BUILDINGS B AND C - LIGHTING

Electrical

E202

YCH Commission Number

18030.00

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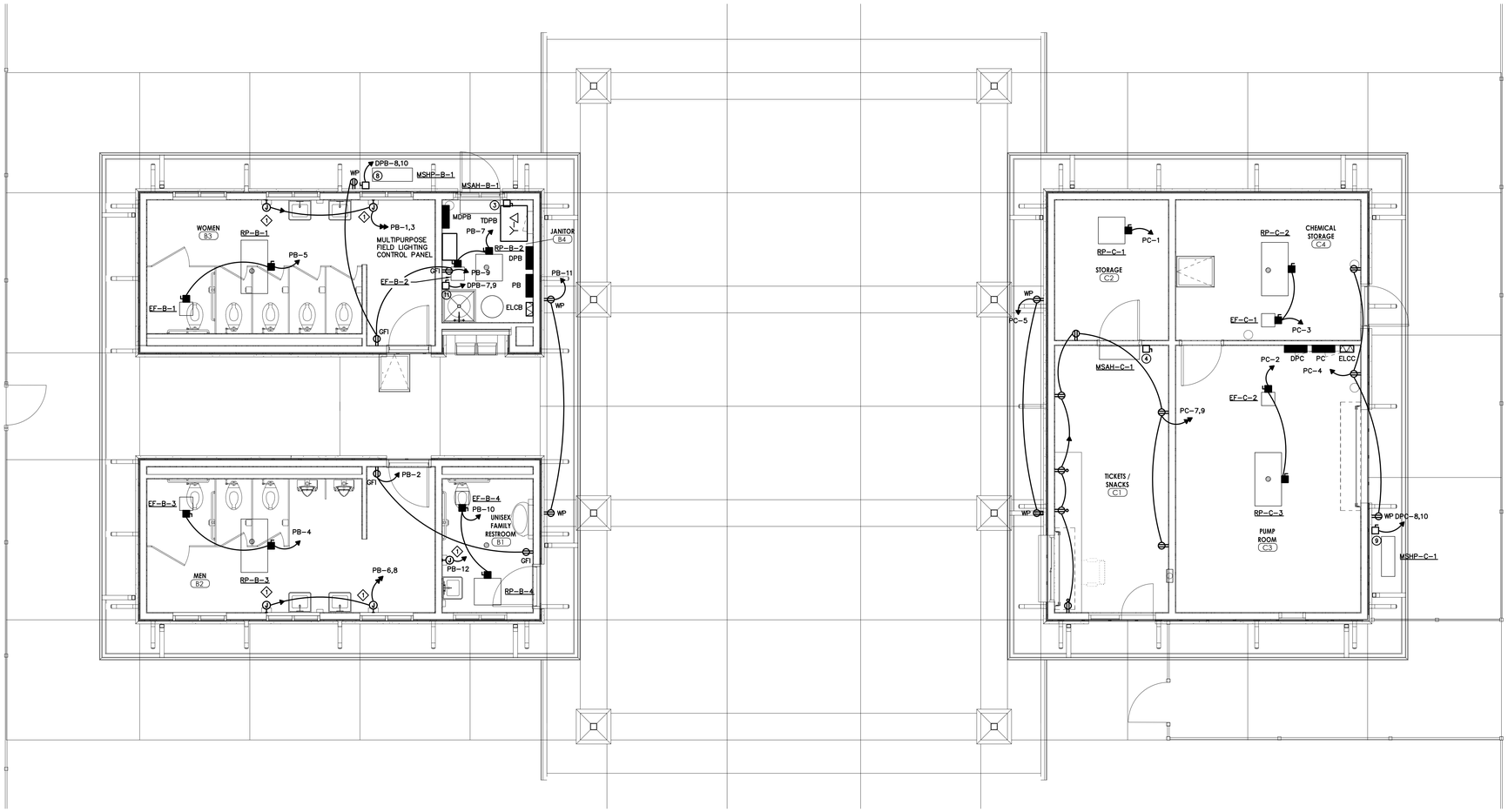

1
E203

FLOOR PLAN – TOILET AND TICKET / PUMP BUILDINGS B AND C – POWER

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

NOTES:

1. FOR CONNECTION TO HAND DRYER. COORDINATE EXACT LOCATION WITH ARCHITECT.

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FLOOR PLAN - TOILET AND TICKET / PUMP BUILDINGS B AND C - POWER

Electrical

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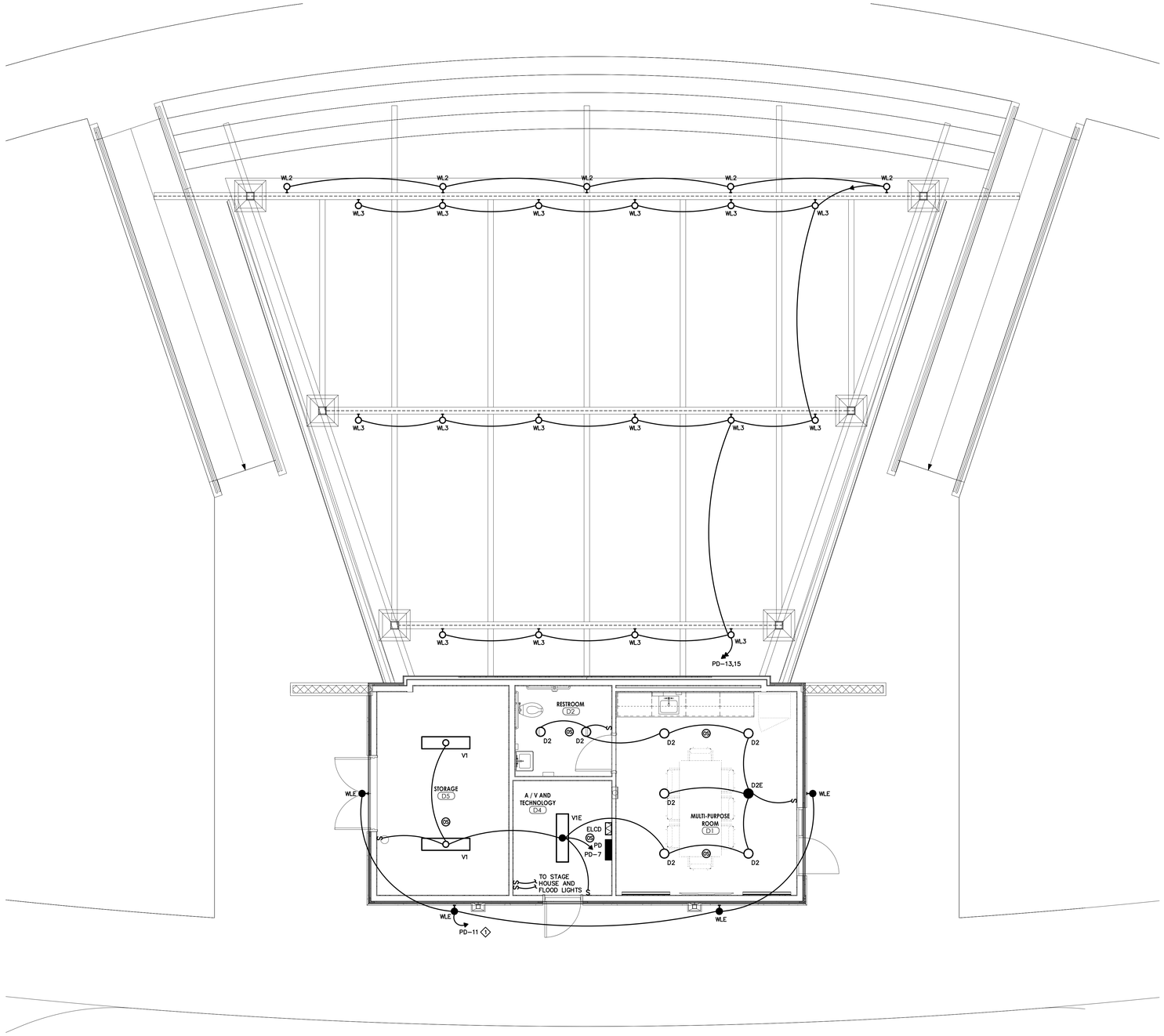

1 E204 FLOOR PLAN – AMPHITHEATER BUILDING D – LIGHTING

SCALE: 1" = 30'-0"

NOTES:

1. ROUTE CIRCUIT THROUGH EXTERIOR LIGHTING CONTACTOR ELCD. REFER TO EXTERIOR LIGHTING CONTROL DIAGRAM – ELCD FOR ADDITIONAL INFORMATION.

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FLOOR PLAN - AMPHITHEATER BUILDING D - LIGHTING

Electrical

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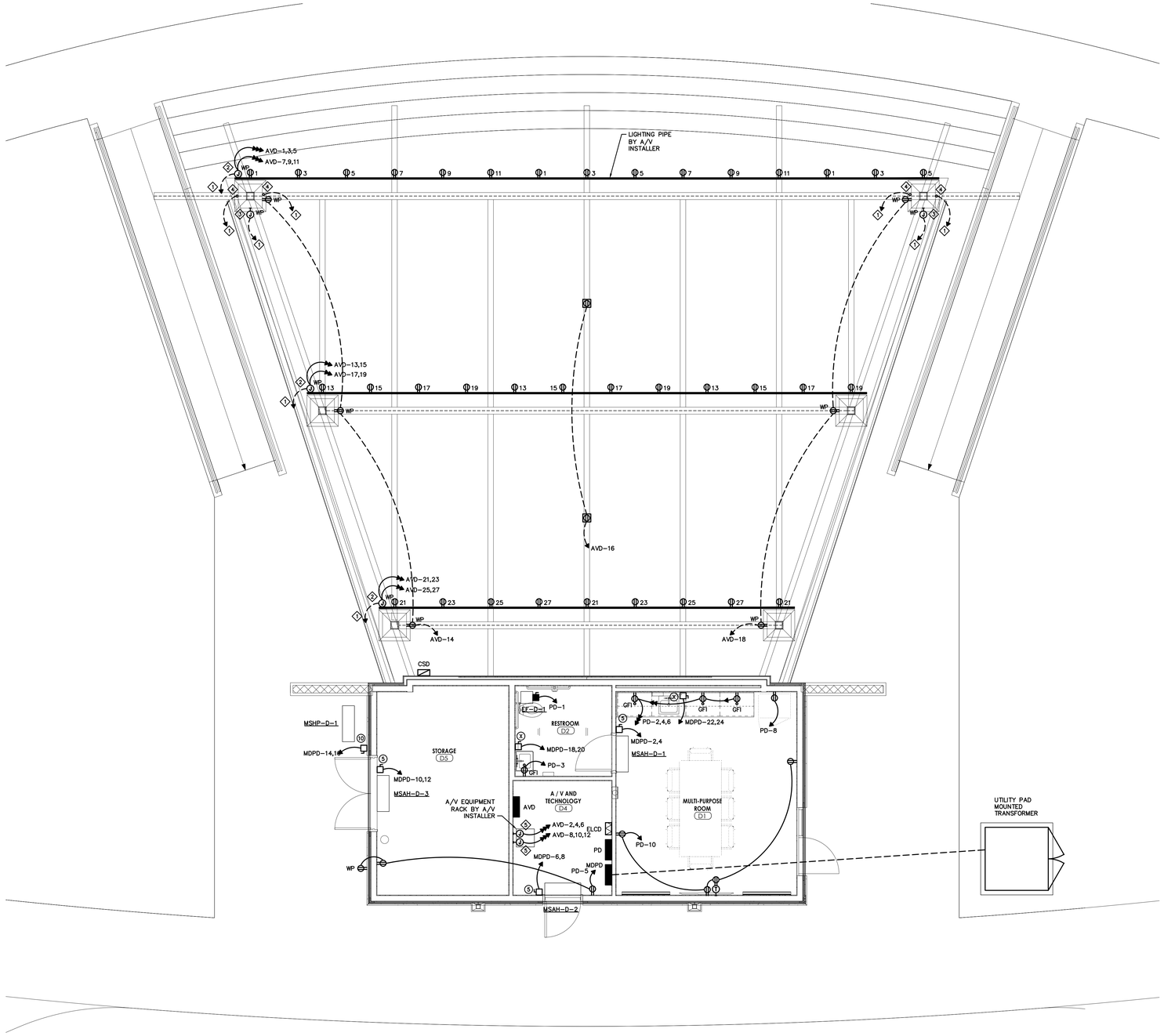

1 / E205 FLOOR PLAN – AMPHITHEATER BUILDING D – POWER

SCALE: 1" = 30'-0"

NOTES:

1. PROVIDE 1"C WITH PULL STRING TO A/V EQUIPMENT RACK LOCATED IN A/V AND TECHNOLOGY ROOM D4.
2. SINGLE GANG JUNCTION BOX FOR CONNECTION TO RECEPTACLES ON LIGHTING PIPE. PROVIDE AND INSTALL RECEPTACLES TO PIPE AS INDICATED. NUMBER ADJACENT TO RECEPTACLE ON LIGHTING PIPE INDICATES CIRCUIT DESIGNATION.
3. TWO GANG WEATHERPROOF JUNCTION BOX.
4. STUB CONDUIT UP ON SURFACE OF COLUMN FOR CONNECTION TO A/V SYSTEM SPEAKER.
5. SINGLE GANG JUNCTION BOX FOR CONNECTION TO A/V EQUIPMENT RACK POWER DISTRIBUTION STRIP.

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FLOOR PLAN - AMPHITHEATER BUILDING D - POWER

Electrical

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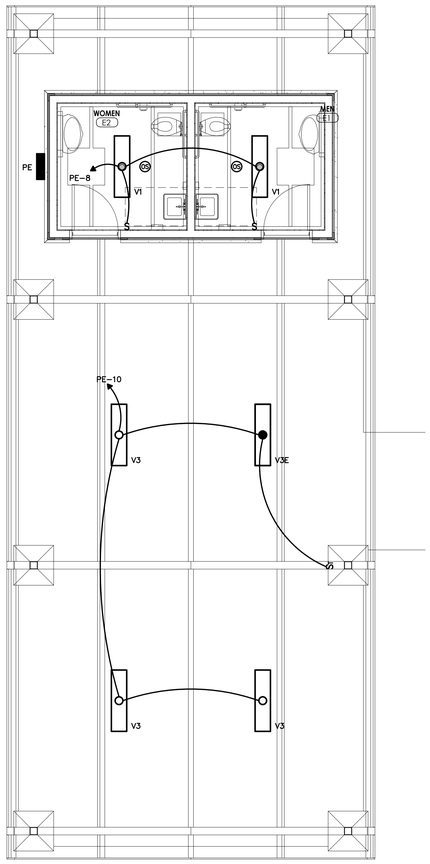
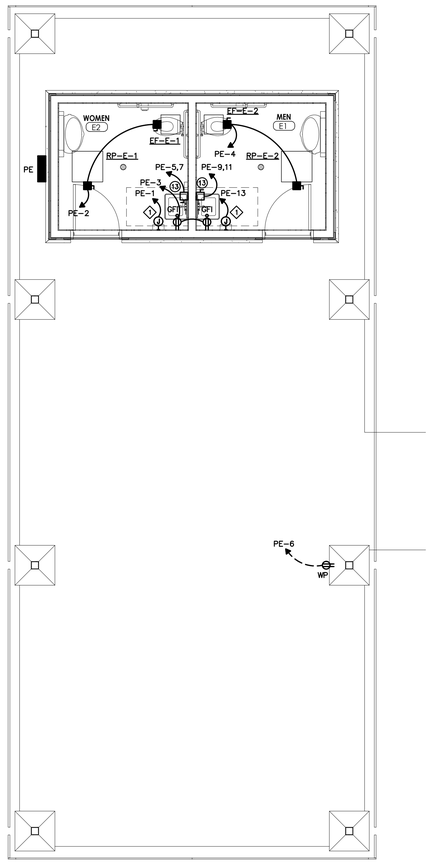


1 E201 FLOOR PLAN – POND SHELTER RESTROOMS BUILDING E – LIGHTING

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



2 E201 FLOOR PLAN – POND SHELTER RESTROOMS BUILDING E – POWER

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

NOTES:

1. FOR CONNECTION TO HAND DRYER. COORDINATE EXACT LOCATION WITH ARCHITECT.

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FLOOR PLANS - POND SHELTER RESTROOMS BUILDING E - ELECTRICAL

Electrical

E206

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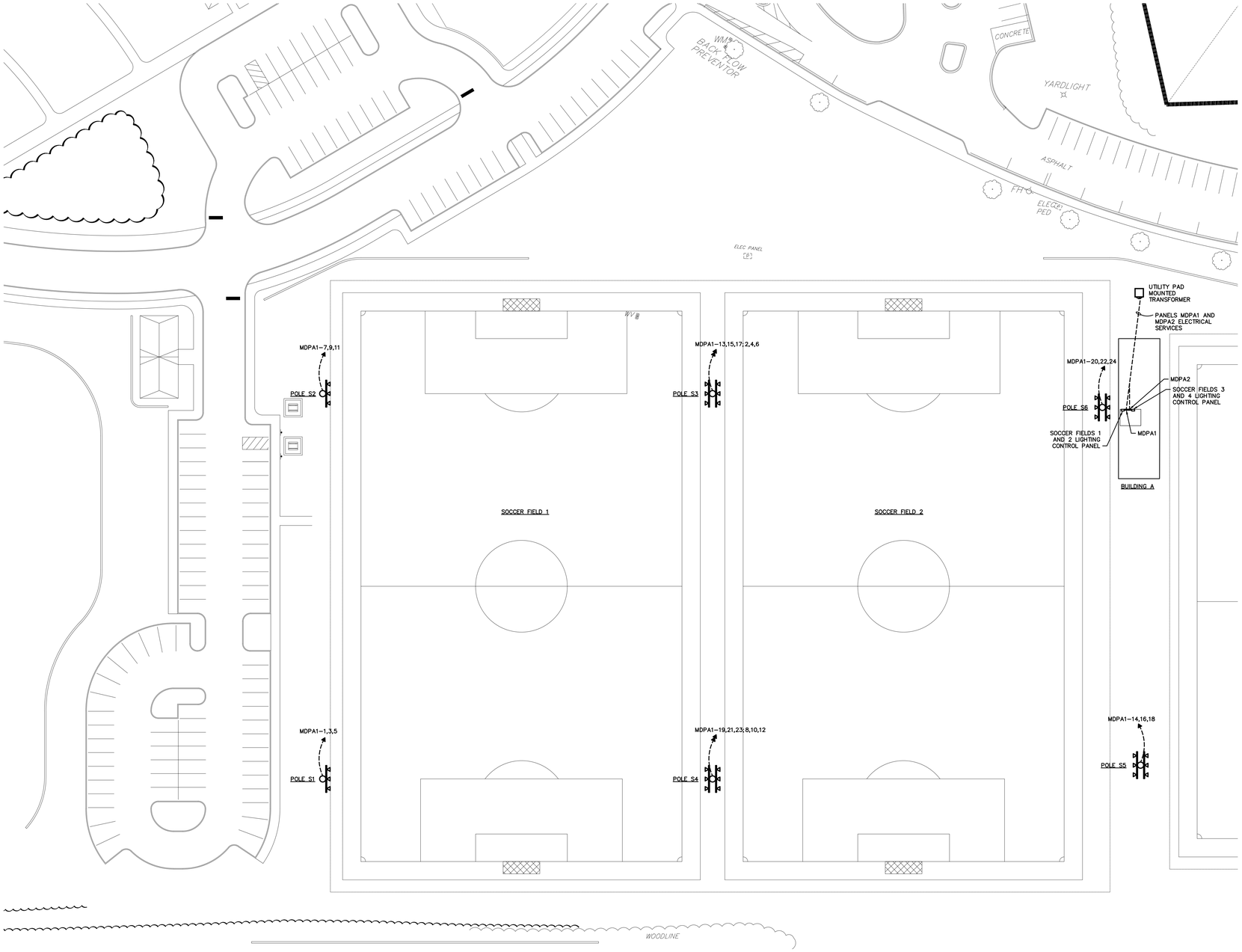

1 E207 SITE PLAN – SOCCER FIELDS – ELECTRICAL

SCALE: 1" = 30'-0"

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Revisions:

SITE PLAN - SOCCER FIELDS - ELECTRICAL

Electrical

E207

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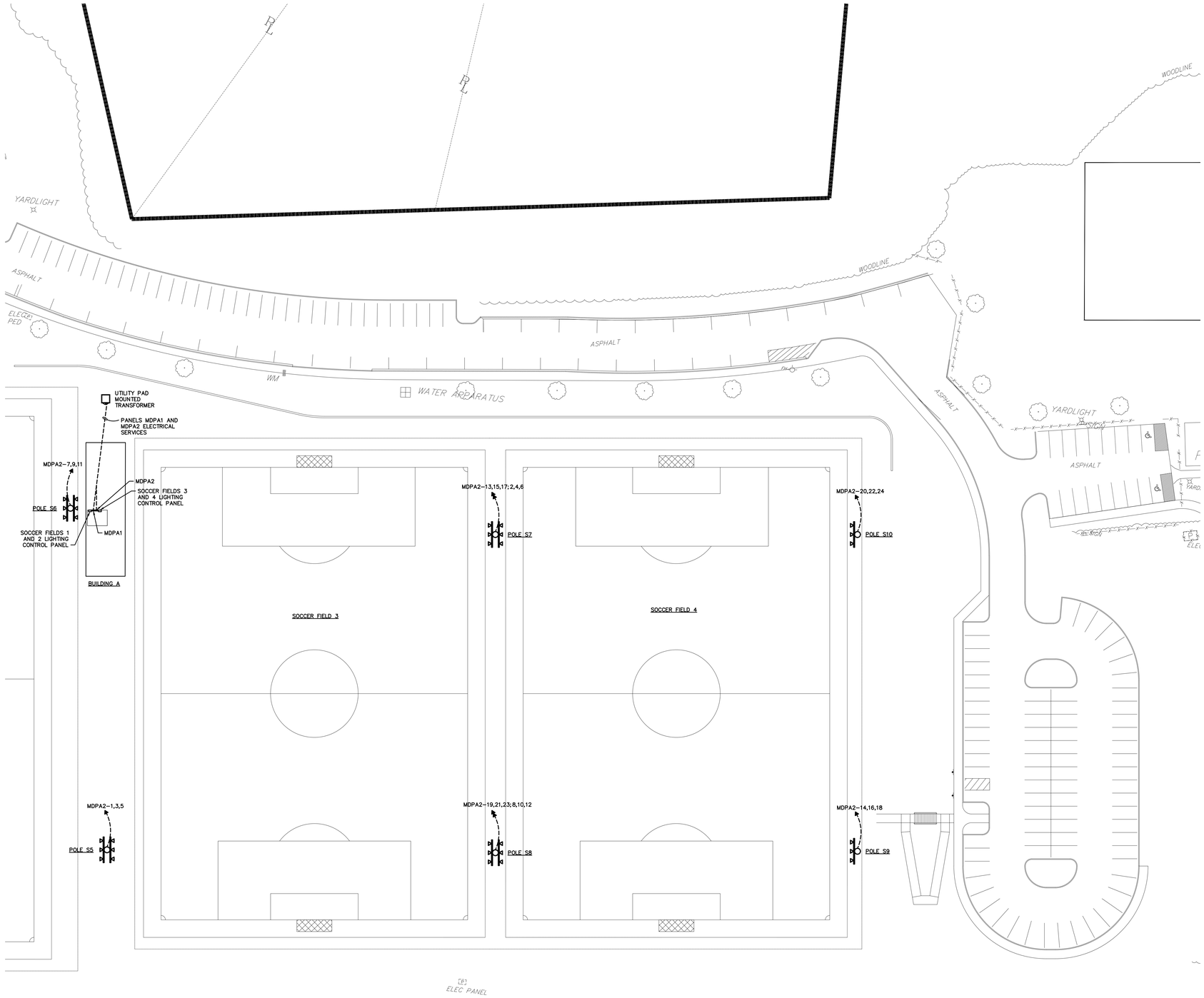

1 / E208 SITE PLAN – SOCCER FIELDS – ELECTRICAL

SCALE: 1" = 30'-0"

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SITE PLAN - SOCCER FIELDS - ELECTRICAL

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E208

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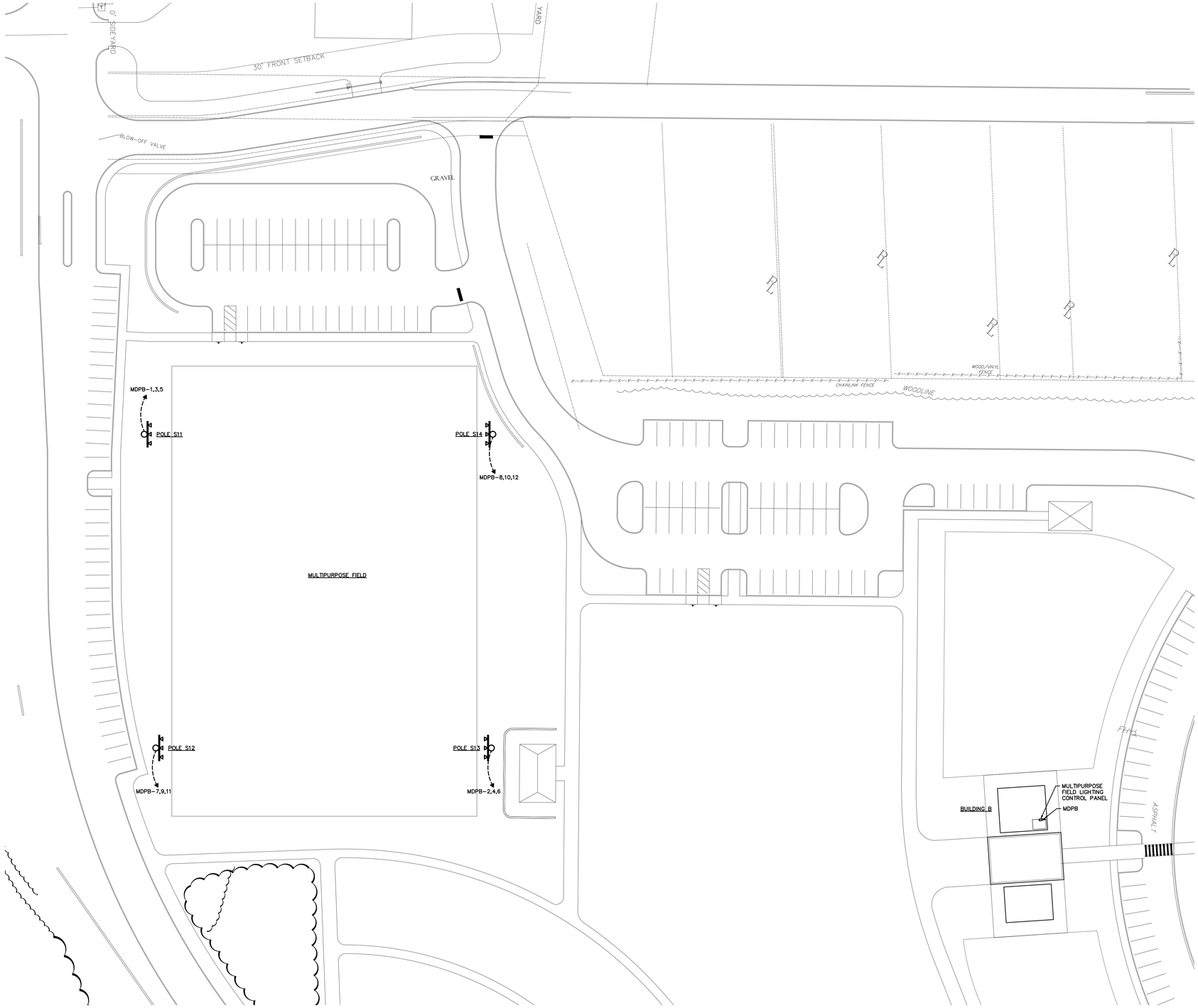

1 / E209 SITE PLAN – MULTIPURPOSE FIELD – ELECTRICAL

SCALE: 1" = 30'-0"

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SITE PLAN - MULTIPURPOSE FIELD - ELECTRICAL

Electrical

E209

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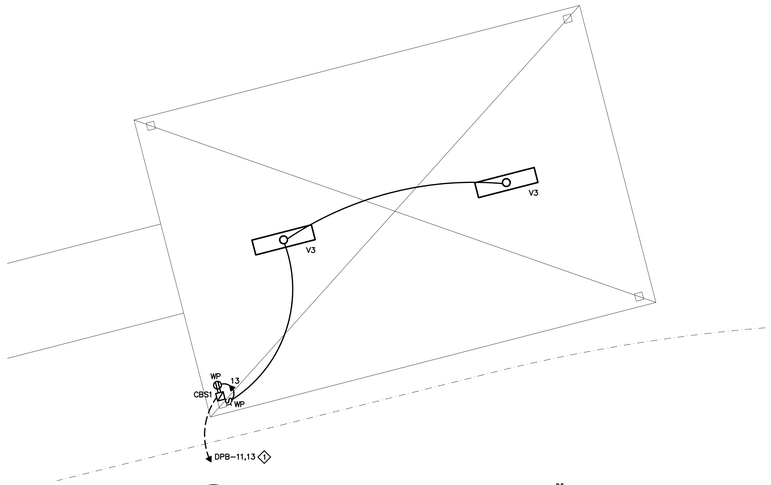
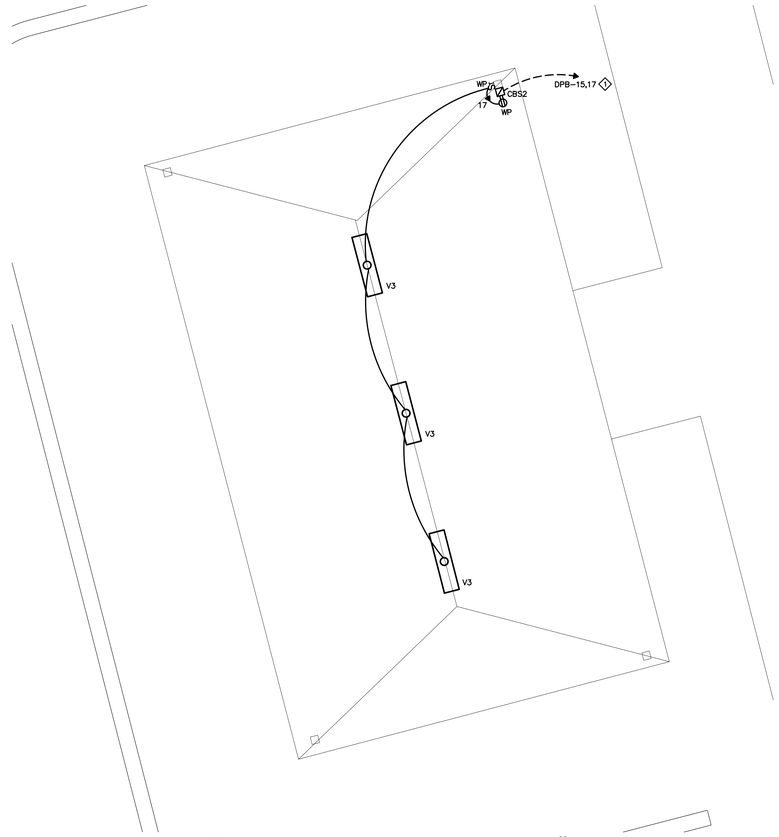


1 E210 SHELTER 1 – ELECTRICAL

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

NOTES:

1 CONNECT WITH 2#6, 1#6N, 1#6G, 1-1/4"C TO 20/2 CIRCUIT BREAKER IN PANEL AS INDICATED.

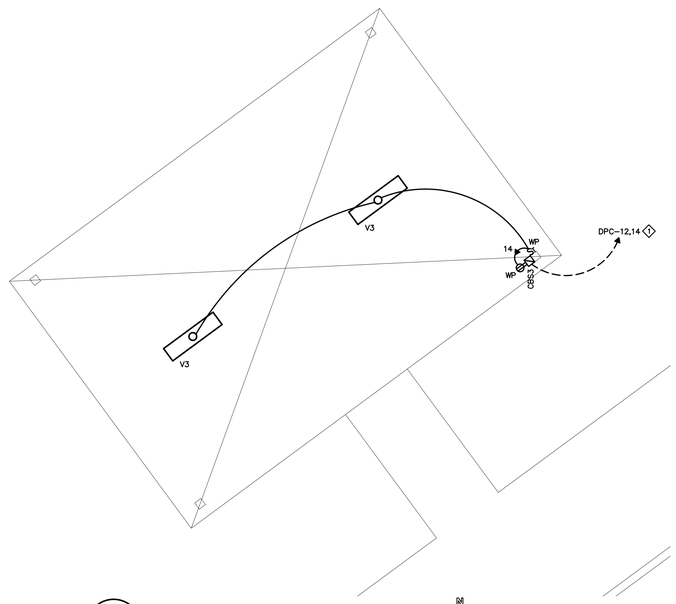


4 E210 SHELTER 2 – ELECTRICAL

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

NOTES:

1 CONNECT WITH 2#4, 1#4N, 1#4G, 1-1/4"C TO 20/2 CIRCUIT BREAKER IN PANEL AS INDICATED.



2 E210 SHELTER 3 – ELECTRICAL

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

NOTES:

1 CONNECT WITH 2#6, 1#6N, 1#6G, 1-1/4"C TO 20/2 CIRCUIT BREAKER IN PANEL AS INDICATED.

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SHELTER PLANS - ELECTRICAL

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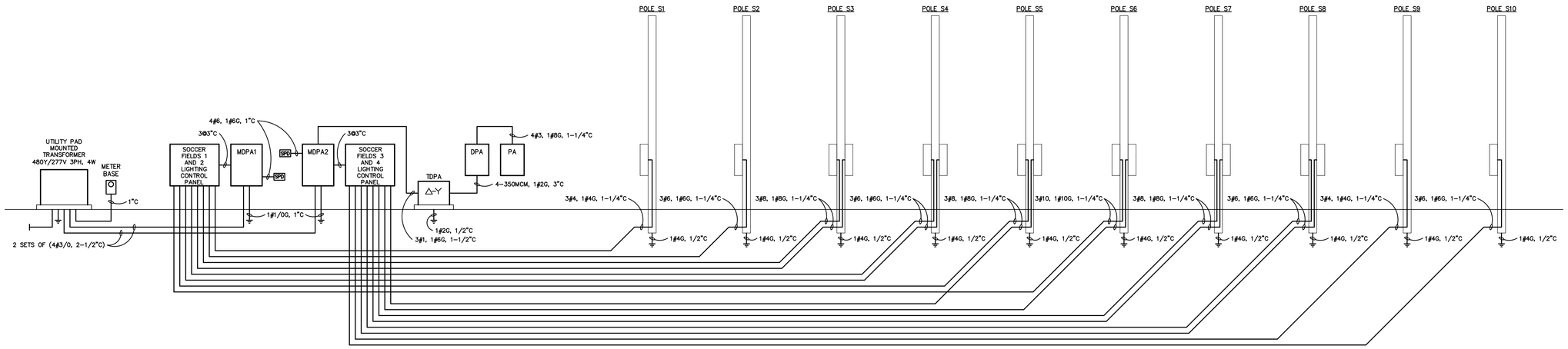
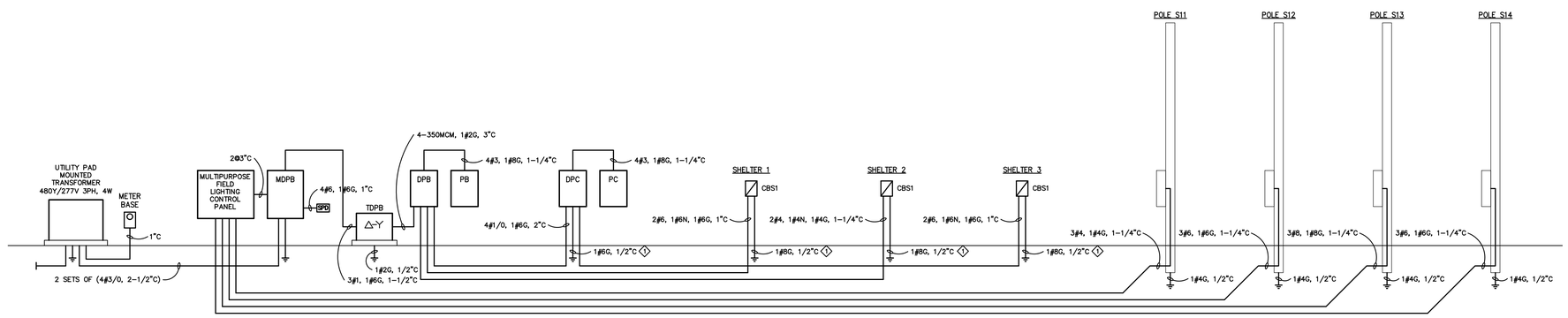


1 E301 POWER RISER DIAGRAM – BUILDING A

NOT TO SCALE



2 E301 POWER RISER DIAGRAM – BUILDINGS B AND C

NOT TO SCALE

NOTES:

1 DO NOT BOND TO SYSTEM NEUTRAL AT THIS POINT. CONNECT TO EQUIPMENT GROUND CONDUCTOR ONLY.

DRY-TYPE TRANSFORMER SCHEDULE

UNIT	LOCATION	KVA	PRIMARY	SECONDARY	TYPE	TEMP. RISE	MOUNTING	ENCLOSURE	NOTES
TDPA	MECHANICAL A4	75	480V	208Y/120V	LINEAR	115°	PAD	TEV	
TDPB	JANITOR B4	75	480V	208Y/120V	LINEAR	115°	PAD	TEV	

ENCLOSED SWITCH AND CIRCUIT BREAKER SCHEDULE

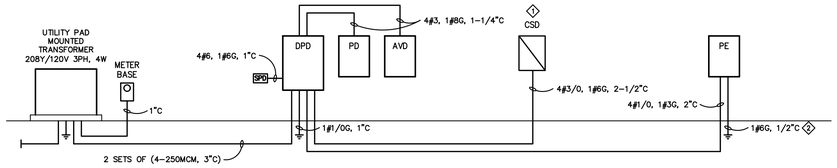
UNIT	LOCATION	TYPE	VOLTAGE	POLES	FRAME/SWITCH	TRIP/FUSE	SC RATING	ENCLOSURE	NOTES
CBS1	SHELTER 1	TMCB	208/120	2	30A	20A	10KAIC	3R	
CBS2	SHELTER 2	TMCB	208/120	2	30A	20A	10KAIC	3R	
CBS3	SHELTER 3	TMCB	208/120	2	30A	20A	10KAIC	3R	

LEGEND

DISCONNECT TYPES
- ETCB = ELECTRONIC-TRIP CIRCUIT BREAKER
- FDS = FUSIBLE DISCONNECT SWITCH
- MCP = MOTOR CIRCUIT PROTECTOR
- NFDS = NON-FUSIBLE DISCONNECT SWITCH
- ST/DS = COMBINATION STARTER/DISCONNECT SWITCH
- TMCB = THERMAL-MAGNETIC CIRCUIT BREAKER
- ATS = AUTOMATIC TRANSFER SWITCH
- C/DS = COMBINATION CONTACTOR/DISCONNECT SWITCH

DISCONNECT ENCLOSURE TYPES
- 1 = NEMA 1 ENCLOSURE
- 3R = NEMA 3R ENCLOSURE
- 4 = NEMA 4 ENCLOSURE
- 4X = NEMA 4X ENCLOSURE

RACEWAY TYPES
- EMT = ELECTRIC METALLIC TUBING
- FMC = FLEXIBLE METAL CONDUIT
- IMC = INTERMEDIATE METAL CONDUIT
- LFMC = LIQUID-TIGHT FLEXIBLE METAL CONDUIT
- PVC = NON-METALLIC PVC CONDUIT
- RMC = RIGID METAL CONDUIT



3 E301 POWER RISER DIAGRAM – BUILDING D

NOT TO SCALE

NOTES:

1 COMPANY SWITCH FOR TEMPORARY AV POWER DISTRIBUTION. 208Y/120V, 3 PHASE, 4 WIRE, 200 AMP 3 POLE BREAKER WITH SHUNT TRIP, NEMA 3R ENCLOSURE, HINGED PORTABLE CABLE ACCESS DOOR ON BOTTOM OF ENCLOSURE, FIVE SERIES 16 RECEPTACLES WITH SNAP BACK COVERS. UNION CONNECTOR #CSC-2010-CL-3R OR APPROVED EQUAL.

2 DO NOT BOND TO SYSTEM NEUTRAL AT THIS POINT. CONNECT TO EQUIPMENT GROUND CONDUCTOR ONLY.

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POWER RISER DIAGRAMS

Electrical

E301

YCH Commission Number

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PANELBOARD: MDPA1 — GROUND BUS — **SC RATING:** 22 KAMPS RMS SYMM.
SERVICE: 480Y/277V 3PH 4W — **MOUNTING:** SURFACE
MAINS: 400 AMP MCB — **TYPE:** BRANCH — **ENCLOSURE:** NEMA 1

LOAD DESCRIPTION	WIRE	BKR	CKT	NEUT	A	B	C	CKT	BKR	WIRE	LOAD DESCRIPTION
POLE S1	4	30/3	1A		5.4 5.4			2A	30/3	8	POLE S3
(SOCCER FIELD 1)	4	/	3B			5.4 5.4		4B	/	8	(SOCCER FIELD 2)
	4	/	5C				5.4 5.4	6C	/	8	
POLE S2	6	30/3	7A		5.4 5.4			8A	30/3	6	POLE S4
(SOCCER FIELD 1)	6	/	9B			5.4 5.4		10B	/	6	(SOCCER FIELD 2)
	6	/	11C				5.4 5.4	12C	/	6	
POLE S3	8	30/3	13A		5.4 5.4			14A	30/3	8	POLE S5
(SOCCER FIELD 1)	8	/	15B			5.4 5.4		16B	/	8	(SOCCER FIELD 2)
	8	/	17C				5.4 5.4	18C	/	8	
POLE S4	6	30/3	19A		5.4 5.4			20A	30/3	10	POLE S6
(SOCCER FIELD 1)	6	/	21B			5.4 5.4		22B	/	10	(SOCCER FIELD 2)
	6	/	23C				5.4 5.4	24C	/	10	
SPACE ONLY		/3	25A		0.0 12.0			26A	60/3	6	WH-2
		/	27B			0.0 12.0		28B	/	6	
		/	29C				0.0 12.0	30C	/	6	
SPACE ONLY		/3	31A		0.0 0.0			32A	/3		SPACE ONLY
		/	33B			0.0 0.0		34B	/		
		/	35C				0.0 0.0	36C	/		
SPACE ONLY		/3	37A		0.0 0.0			38A	/3		SPACE ONLY
		/	39B			0.0 0.0		40B	/		
		/	41C				0.0 0.0	42C	/		
				0.0	55.2	55.2	55.2				

NOTES:
1. PROVIDE WITH SERVICE ENTRANCE LABEL.

LIGHTS	129.6	KVA
RECEPTS	0.0	KVA
MOTORS	0.0	KVA
HEAT	36.0	KVA
KITCHEN	0.0	KVA
CMPTR	0.0	KVA
OTHER	0.0	KVA
TOTAL	165.6	KVA

PANELBOARD: MDPA2 — GROUND BUS — **SC RATING:** 22 KAMPS RMS SYMM.
SERVICE: 480Y/277V 3PH 4W — **MOUNTING:** SURFACE
MAINS: 400 AMP MCB — **TYPE:** BRANCH — **ENCLOSURE:** NEMA 1

LOAD DESCRIPTION	WIRE	BKR	CKT	NEUT	A	B	C	CKT	BKR	WIRE	LOAD DESCRIPTION
POLE S5	8	30/3	1A		5.4 5.4			2A	30/3	8	POLE S7
(SOCCER FIELD 3)	8	/	3B			5.4 5.4		4B	/	8	(SOCCER FIELD 4)
	8	/	5C				5.4 5.4	6C	/	8	
POLE S6	10	30/3	7A		5.4 5.4			8A	30/3	6	POLE S8
(SOCCER FIELD 3)	10	/	9B			5.4 5.4		10B	/	6	(SOCCER FIELD 4)
	10	/	11C				5.4 5.4	12C	/	6	
POLE S7	8	30/3	13A		5.4 5.4			14A	30/3	4	POLE S9
(SOCCER FIELD 3)	8	/	15B			5.4 5.4		16B	/	4	(SOCCER FIELD 4)
	8	/	17C				5.4 5.4	18C	/	4	
POLE S8	6	30/3	19A		5.4 5.4			20A	30/3	6	POLE S10
(SOCCER FIELD 3)	6	/	21B			5.4 5.4		22B	/	6	(SOCCER FIELD 4)
	6	/	23C				5.4 5.4	24C	/	6	
SPACE ONLY		/3	25A		0.0 20.0			26A	175/3	2/0	PANEL DPA
		/	27B			0.0 19.0		28B	/	2/0	VIA XFMR TDPA
		/	29C				0.0 15.5	30C	/	2/0	
SPACE ONLY		/3	31A		0.0 0.0			32A	/3		SPACE ONLY
		/	33B			0.0 0.0		34B	/		
		/	35C				0.0 0.0	36C	/		
SPACE ONLY		/3	37A		0.0 0.0			38A	/3		SPACE ONLY
		/	39B			0.0 0.0		40B	/		
		/	41C				0.0 0.0	42C	/		
				0.0	63.2	62.2	58.7				

NOTES:
1. PROVIDE WITH SERVICE ENTRANCE LABEL.

LIGHTS	131.5	KVA
RECEPTS	1.8	KVA
MOTORS	13.7	KVA
HEAT	35.3	KVA
KITCHEN	0.0	KVA
CMPTR	0.0	KVA
OTHER	1.8	KVA
TOTAL	184.1	KVA

PANELBOARD: DPA — GROUND BUS — **SC RATING:** 10 KAMPS RMS SYMM.
SERVICE: 208Y/120V 3PH 4W — **MOUNTING:** SURFACE
MAINS: 300 AMP MCB — **TYPE:** BRANCH — **ENCLOSURE:** NEMA 1

LOAD DESCRIPTION	WIRE	BKR	CKT	NEUT	A	B	C	CKT	BKR	WIRE	LOAD DESCRIPTION
SHUNT TRIP		/1	1A	7.7	0.0 7.7			2A	100/3	3	PANEL PA
CONVECTION OVEN	8	50/3	3B	7.8		4.0 7.8		4B	/	3	
	8	/	5C	6.2			4.0 6.2	6C	/	3	
	8	/	7A		4.0 0.1			8A	15/2	12	MSAH-A-1
SHUNT TRIP		/1	9B			0.0 0.1		10B	/	12	
GRIDDLE	8	50/3	11C				4.0 0.1	12C	15/2	12	MSAH-A-2
	8	/	13A		4.0 0.1			14A	/	12	
	8	/	15B			4.0 0.1		16B	15/2	12	MSAH-A-3
VENTLESS HOOD	12	15/2	17C	1.1			1.1 0.1	18C	/	12	
	12	/	19A	1.1	1.1 3.0			20A	40/2	8	MSHP-A-1
SPACE ONLY		/2	21B			0.0 3.0		22B	/	8	
		/	23C				0.0 0.8	24C	15/2	12	MSAC-A-2
SPACE ONLY		/3	25A		0.0 0.8			26A	/	12	
		/	27B			0.0 0.0		28B	/2		SPACE ONLY
		/	29C				0.0 0.0	30C	/		
SPACE ONLY		/3	31A		0.0 0.0			32A	/3		SPACE ONLY
		/	33B			0.0 0.0		34B	/		
		/	35C				0.0 0.0	36C	/		
SPACE ONLY		/3	37A		0.0 0.0			38A	/3		SPACE ONLY
		/	39B			0.0 0.0		40B	/		
		/	41C				0.0 0.0	42C	/		
				23.9	20.8	19.0	16.3				

NOTES:

LIGHTS	1.9	KVA
RECEPTS	1.8	KVA
MOTORS	15.3	KVA
HEAT	35.3	KVA
KITCHEN	0.0	KVA
CMPTR	0.0	KVA
OTHER	1.8	KVA
TOTAL	56.1	KVA

PANELBOARD: PA — GROUND BUS — **SC RATING:** 10 KAMPS RMS SYMM.
SERVICE: 208Y/120V 3PH 4W — **MOUNTING:** SURFACE
MAINS: 100 AMP MLO — **TYPE:** BRANCH — **ENCLOSURE:** NEMA 1

LOAD DESCRIPTION	WIRE	BKR	CKT	NEUT	A	B	C	CKT	BKR	WIRE	LOAD DESCRIPTION
REFRIGERATOR		20/1	1A	0.5 1.5	0.5 1.5			2A	20/1		HAND DRYER
REFRIGERATOR		20/1	3B	0.5 1.5		0.5 1.5		4B	20/1		HAND DRYER
ICE MACHINE		20/1	5C	1.4 1.5			1.4 1.5	6C	20/1		RP-A-1,6
REC: CONCESSION		20/1	7A	0.5 1.5	0.5 1.5			8A	20/1		RP-A-2,3
VENTLESS HOOD CONTROLS		20/1	9B	0.5 1.5		0.5 1.5		10B	20/1		RP-A-4,5
REFRIGERATOR		20/1	11C	0.5 0.6			0.5 0.6	12C	20/1		EF-A-1,2,3,4
REFRIGERATOR		20/1	13A	0.5 1.5	0.5 1.5			14A	20/1		HAND DRYER
REFRIGERATOR		20/1	15B	1.0 1.5		1.0 1.5		16B	20/1		HAND DRYER
REC: EXTERIOR		20/1	17C	0.5 0.5			0.5 0.5	18C	20/1		SOCCER LTG CONTROLS
EF-A-5		20/1	19A	0.1 0.5	0.1 0.5			20A	20/1		SOCCER LTG CONTROLS
RECIRC PUMPS		20/1	21B	0.2 0.6		0.2 0.6		22B	20/1		LTG: CONCESSION
RP-A-7		20/1	23C	0.8 0.4			0.8 0.4	24C	20/1		LTG: RESTROOMS
REC: RESTROOMS		20/1	25A	0.7 0.3	0.7 0.3			26A	20/1		ELCA
SPARE		20/1	27B	0.0 0.5		0.0 0.5		28B	20/1		LTG: EXTERIOR
SPARE		20/1	29C	0.0 0.0			0.0 0.0	30C	20/1		SPARE
SPARE		20/1	31A	0.0 0.0	0.0 0.0			32A	21/1		SPARE
SPARE		20/1	33B	0.0 0.0		0.0 0.0		34B	22/1		SPARE
SPARE		20/1	35C	0.0 0.0			0.0 0.0	36C	23/1		SPARE
SPACE ONLY		/1	37A	0.0 0.0	0.0 0.0			38A	/1		SPACE ONLY
SPACE ONLY		/1	39B	0.0 0.0		0.0 0.0		40B	/1		SPACE ONLY
SPACE ONLY		/1	41C	0.0 0.0			0.0 0.0	42C	/1		SPACE ONLY
				21.7	7.7	7.8	6.2				

NOTES:

LIGHTS	1.5	KVA
RECEPTS	1.8	KVA
MOTORS	5.3	KVA
HEAT	11.3	KVA
KITCHEN	0.0	KVA
CMPTR	0.0	KVA
OTHER	1.8	KVA
TOTAL	21.7	KVA

PANELBOARD: MDPB — GROUND BUS — **SC RATING:** 22 KAMPS RMS SYMM.
SERVICE: 480Y/277V 3PH 4W — **MOUNTING:** SURFACE
MAINS: 300 AMP MCB — **TYPE:** BRANCH — **ENCLOSURE:** NEMA 1

LOAD DESCRIPTION	WIRE	BKR	CKT	NEUT	A	B	C	CKT	BKR	WIRE	LOAD DESCRIPTION
POLE S11	4	30/3	1A		5.4 5.4			2A	30/3	8	POLE S13
(MULTIPURPOSE FIELD)	4	/	3B			5.4 5.4		4B	/	8	(MULTIPURPOSE FIELD)
	4	/	5C				5.4 5.4	6C	/	8	
POLE S12	6	30/3	7A		5.4 5.4			8A	30/3	6	POLE S14
(MULTIPURPOSE FIELD)	6	/	9B			5.4 5.4		10B	/	6	(MULTIPURPOSE FIELD)
	6	/	11C				5.4 5.4	12C	/	6	
SPACE ONLY		/3	13A		0.0 19.2			14A	175/3	2/0	PANEL DPB
		/	15B			0.0 17.5		16B	/	2/0	VIA XFMR TDPB
		/	17C				0.0 13.0	18C	/	2/0	
SPACE ONLY		/3	19A		0.0 0.0			20A	/3		SPACE ONLY
		/	21B			0.0 0.0		22B	/		
		/	23C				0.0 0.0	24C	/		
SPACE ONLY		/3	25A		0.0 0.0			26A	/3		SPACE ONLY
		/	27B			0.0 0.0		28B	/		
		/	29C				0.0 0.0	30C	/		
SPACE ONLY		/3	31A		0.0 0.0			32A	/3		SPACE ONLY
		/	33B			0.0 0.0		34B	/		
		/	35C				0.0 0.0	36C	/		
SPACE ONLY		/3	37A		0.0 0.0			38A	/3		SPACE ONLY
		/	39B			0.0 0.0		40B	/		
		/	41C				0.0 0.0	42C	/		
				0.0	40.8	39.1	34.6				

NOTES:
1. PROVIDE WITH SERVICE ENTRANCE LABEL.

LIGHTS	67.4	KVA
RECEPTS	4.3	KVA
MOTORS	27.0	KVA
HEAT	14.8	KVA
KITCHEN	0.0	KVA
CMPTR	0.0	KVA
OTHER	1.1	KVA
TOTAL	114.6	KVA

PANELBOARD: DPB — GROUND BUS — **SC RATING:** 10 KAMPS RMS SYMM.
SERVICE: 208Y/120V 3PH 4W — **MOUNTING:** SURFACE
MAINS: 300 AMP MCB — **TYPE:** BRANCH — **ENCLOSURE:** NEMA 1

LOAD DESCRIPTION	WIRE	BKR	CKT	NEUT	A	B	C	CKT	BKR	WIRE	LOAD DESCRIPTION
PANEL PB	3	100/3	1A	5.2 3.3	5.2 11.3			2A	150/3	1/0	PANEL DPC
	3	/	3B	4.1 3.2		4.1 11.2		4B	/	1/0	
	3	/	5C	4.7 1.1			4.7 9.1	6C	/	1/0	
WH-1	10	30/2	7A		2.3 0.8			8A	15/2	12	MSAH-B-1 / MSHP-B-1
	10	/	9B			2.3 0.8		10B	/	12	
SHELTER 1	6	20/2	11C	0.4			0.4 0.0	12C	/1		SPACE ONLY
	6	/	13A	0.2	0.2 0.0			14A	/3		SPACE ONLY
SHELTER 2	4	20/2	15B	0.4		0.4 0.0		16B	/		
	4	/	17C	0.2			0.2 0.0	18C	/		
SPACE ONLY		/3	19A		0.0 0.0			20A	/3		SPACE ONLY
		/	21B			0.0 0.0		22B	/		
		/	23C				0.0 0.0	24C	/		
SPACE ONLY		/3	25A		0.0 0.0			26A	/3		SPACE ONLY
		/	27B			0.0 0.0		28B	/		
		/	29C				0.0 0.0	30C	/		
SPACE ONLY		/3	31A		0.0 0.0			32A	/3		SPACE ONLY
		/	33B			0.0 0.0		34B	/		
		/	35C				0.0 0.0	36C	/		
SPACE ONLY		/3	37A		0.0 0.0			38A	/3		SPACE ONLY
		/	39B			0.0 0.0		40B	/		
		/	41C				0.0 0.0	42C	/		
				22.7	19.7	18.7	14.3				

NOTES:

LIGHTS	2.6	KVA
RECEPTS	4.3	KVA
MOTORS	28.5	KVA
HEAT	16.3	KVA
KITCHEN	0.0	KVA
CMPTR	0.0	KVA
OTHER	1.1	KVA
TOTAL	52.8	KVA

PANELBOARD: PB — GROUND BUS — **SC RATING:** 10 KAMPS RMS SYMM.
SERVICE: 208Y/120V 3PH 4W — **MOUNTING:** SURFACE
MAINS: 100 AMP MLO — **TYPE:** BRANCH — **ENCLOSURE:** NEMA 1

LOAD DESCRIPTION	WIRE	BKR	CKT	NEUT	A	B	C	CKT	BKR	WIRE	LOAD DESCRIPTION
HAND DRYER	12	20/1	1A	1.5 0.4	1.5 0.4			2A	20/1	12	REC: RESTROOM
HAND DRYER	12	20/1	3B	1.5 1.1		1.5 1.1		4B	20/1	12	RP-B-3, EF-B-3
RP-B-1, EF-B-1	12	20/1	5C	1.1 1.5			1.1 1.5	6C	20/1	12	HAND DRYER
RP-B-2, EF-B-2	12	20/1	7A	0.9 1.5	0.9 1.5			8A	20/1	12	HAND DRYER
REC: RESTROOM	12	20/1	9B	0.4 0.4		0.4 0.4		10B	20/1	12	RP-B-4, EF-B-4
REC: EXTERIOR	12	20/1	11C	0.4 0.3			0.4 0.3	12C	20/1	12	LTG: RESTROOMS
MULTIPURPOSE LTG CONTROLS	12	20/1	13A	0.5 0.3	0.5 0.3			14A	20/1	12	ELCB
SPARE		20/1	15B	0.0 0.5		0.0 0.5		16B	20/1	12	LTG: EXTERIOR
SPARE		20/1	17C	0.0 0.3			0.0 0.3	18C	20/1	12	LTG: EXTERIOR
SPARE		20/1	19A	0.0 0.0	0.0 0.0			20A	20/1		SPARE
SPARE		20/1	21B	0.0 0.0		0.0 0.0		22B	20/1		SPARE
SPARE		20/1	23C	0.0 0.0			0.0 0.0	24C	20/1		SPARE
SPACE ONLY		/1	25A	0.0 0.0	0.0 0.0			26A	/1		SPACE ONLY
SPACE ONLY		/1	27B	0.0 0.0		0.0 0.0		28B	/1		SPACE ONLY
SPACE ONLY		/1	29C	0.0 0.0			0.0 0.0	30C	/1		SPACE ONLY
SPACE ONLY		/1	31A	0.0 0.0	0.0 0.0			32A	/1		SPACE ONLY
SPACE ONLY		/1	33B	0.0 0.0		0.0 0.0		34B	/1		SPACE ONLY
SPACE ONLY		/1	35C	0.0 0.0			0.0 0.0	36C	/1		SPACE ONLY
SPACE ONLY		/1	37A	0.0 0.0	0.0 0.0			38A	/1		SPACE ONLY
SPACE ONLY		/1	39B	0.0 0.0		0.0 0.0		40B	/1		SPACE ONLY
SPACE ONLY		/1	41C	0.0 0.0			0.0 0.0	42C	/1		SPACE ONLY
				12.3	5.0	3.8	3.5				

NOTES:

LIGHTS	1.1	KVA
RECEPTS	1.1	KVA
MOTORS	0.8	KVA
HEAT	8.5	KVA
KITCHEN	0.0	KVA
CMPTR	0.0	KVA
OTHER	0.8	KVA
TOTAL	12.3	KVA

EQUIPMENT CONNECTION SCHEDULE

SYM.	EQUIPMENT	LOAD	VOLT/ PHASE	DISCONNECT TYPE	DISCONNECT RATING	DISCONNECT POLES	DISCONNECT TRIP/FUSE	DISCONNECT ENCLO.	CONDUCTORS	RACEWAY TYPE	RACEWAY SIZE	NOTES
1	MSAH-A-1,2,3	0.7FLA	208/1	NFDS	30A	2	--	1	2#12, 1#12G	FMC	1/2"	
2	MSAH-A-4	0.4FLA	208/1	NFDS	30A	2	--	1	2#12, 1#12G	FMC	1/2"	◇1
3	MSAH-B-1	0.4FLA	208/1	NFDS	30A	2	--	1	2#12, 1#12G	FMC	1/2"	◇1
4	MSAH-C-1	0.8FLA	208/1	NFDS	30A	2	--	1	2#12, 1#12G	FMC	1/2"	◇1
5	MSAH-D-1,2,3	0.7FLA	208/1	NFDS	30A	2	--	1	2#12, 1#12G	FMC	1/2"	
6	MSAC-A-2	0.5FLA, 7.0RLA	208/1	NFDS	30A	2	--	3R	2#12, 1#10G	LFMC	1/2"	
7	MSHP-A-1	36.0MCA	208/1	NFDS	60A	2	--	3R	2#8, 1#10G	LFMC	3/4"	
8	MSHP-B-1	0.5FLA, 7.0RLA	208/1	NFDS	30A	2	--	3R	2#12, 1#10G	LFMC	1/2"	
9	MSHP-C-1	0.5FLA, 6.6RLA	208/1	NFDS	30A	2	--	3R	2#12, 1#10G	LFMC	1/2"	
10	MSHP-D-1	36.0MCA	208/1	NFDS	60A	2	--	3R	2#8, 1#10G	LFMC	3/4"	
11	WH #1	2@4.5KW (NON-SIM)	208/1	NFDS	30A	2	--	1	2#10, 1#10G	FMC	1/2"	
12	WH #2	6@6KW	480/3	NFDS	60A	3	--	1	3#6, 1#10G	FMC	1"	
13	INSTANTANEOUS WATER HEATER	4.1KW	208/1	NFDS	30A	2	--	1	2#10, 1#10G	FMC	1/2"	

LEGEND

DISCONNECT TYPES
- ETCB = ELECTRONIC-TRIP CIRCUIT BREAKER
- FDS = FUSIBLE DISCONNECT SWITCH
- MCP = MOTOR CIRCUIT PROTECTOR
- NFDS = NON-FUSIBLE DISCONNECT SWITCH
- ST/DS = COMBINATION STARTER/DISCONNECT SWITCH
- TMCB = THERMAL-MAGNETIC CIRCUIT BREAKER
- TOG = HP RATED TOGGLE SWITCH

DISCONNECT ENCLOSURE TYPES
- 1 = NEMA 1 ENCLOSURE
- 3R = NEMA 3R ENCLOSURE
- 4 = NEMA 4 ENCLOSURE
- 4X = NEMA 4X ENCLOSURE

FPN = FUSE PER NAMEPLATE

RACEWAY TYPES
- EMT = ELECTRIC METALLIC TUBING
- FMC = FLEXIBLE METAL CONDUIT
- IMC = INTERMEDIATE METAL CONDUIT
- LFMC = LIQUID-TIGHT FLEXIBLE METAL CONDUIT
- PVC = NON-METALLIC PVC CONDUIT
- RMC = RIGID METAL CONDUIT

STARTER TYPES
- CFVNR = COMBINATION FULL VOLTAGE, NONREVERSING

CONTROL DEVICES
- HOA = HAND-OFF-AUTO
- RPL = RED PILOT LIGHT
- AUX = AUXILIARY CONTACTS (2 N.O., 1 N.C.)
- CT50 = 50 VA CONTROL TRANSFORMER

NOTES

ALL ELECTRICAL CHARACTERISTICS SCHEDULED ABOVE ARE BASED ON INFORMATION AVAILABLE AT THE TIME OF DESIGN. ELECTRICAL CONTRACTOR SHALL VERIFY ELECTRICAL CHARACTERISTICS OF ALL EQUIPMENT WITH EQUIPMENT SUPPLIER(S) PRIOR TO ROUGHING, AND SHALL VERIFY EXACT LOCATION AND EXACT TYPE OF CONNECTION. ALL EQUIPMENT SHALL BE PROPERLY AND SECURELY GROUNDED. ANY SIGNIFICANT CHANGES IN LOCATION, ELECTRICAL REQUIREMENTS, OR TYPE OF CONNECTION REQUIRED FOR ANY EQUIPMENT SCHEDULED ABOVE SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER IN WRITING PRIOR TO PROCEEDING.

CONDUCTORS AND RACEWAY SPECIFIED IN THE ABOVE SCHEDULE ARE FOR FINAL CONNECTION TO UNIT AND SHALL BE EXTENDED FROM THE DISCONNECT SHOWN ON THE FLOOR PLANS TO THE EQUIPMENT TERMINATION BOX.

CONDUIT AND BOXES REQUIRED FOR EQUIPMENT CONNECTIONS SHALL BE INSTALLED IN SUCH A WAY AS TO NOT COVER UP EQUIPMENT NAMEPLATES, SERVICE AREAS, AIR FLOW AREAS, ETC.

◇1 ASSOCIATED INDOOR AIR HANDLING UNIT IS POWERED THROUGH EXTERIOR HEAT PUMP UNIT. PROVIDE 2#12, 1#12G, 1/2"C FROM HEAT PUMP TO ASSOCIATED AIR HANDLING UNIT.

PANELBOARD: DPC — GROUND BUS — **SC RATING:** 10 KAMPS RMS SYMM.
SERVICE: 208Y/120V 3PH 4W — **MOUNTING:** SURFACE
MAINS: 225 AMP MCB — **TYPE:** BRANCH — **ENCLOSURE:** NEMA 1

LOAD DESCRIPTION	WIRE	BKR	CKT	NEUT	A	B	C	CKT	BKR	WIRE	LOAD DESCRIPTION
SPLASH PAD PUMP		/3	1A	2.3	2.0 2.3			2A	100/3	3	PANEL PC
		/	3B	2.4		2.0 2.4		4B	/	3	
		/	5C	0.8			2.0 0.8	6C	/	3	
SPLASH PAD PUMP		/3	7A	0.8	2.0 0.8			8A	15/2	12	MSAH-C-1 / MSHP-C-1
		/	9B	0.8		2.0 0.8		10B	/	12	
		/	11C	0.4			2.0 0.4	12C	20/2	6	SHELTER 3
SPLASH PAD PUMP		/3	13A	0.2	2.0 0.2			14A	/	6	
		/	15B			2.0 0.0		16B	/2		SPACE ONLY
		/	17C				2.0 0.0	18C	/		
SPLASH PAD PUMP		/3	19A		2.0 0.0			20A	/3		SPACE ONLY
		/	21B			2.0 0.0		22B	/		
		/	23C				2.0 0.0	24C	/		
SPACE ONLY		/3	25A		0.0 0.0			26A	/3		SPACE ONLY
		/	27B			0.0 0.0		28B	/		
		/	29C				0.0 0.0	30C	/		
SPACE ONLY		/3	31A		0.0 0.0			32A	/3		SPACE ONLY
		/	33B			0.0 0.0		34B	/		
		/	35C				0.0 0.0	36C	/		
SPACE ONLY		/3	37A		0.0 0.0			38A	/3		SPACE ONLY
		/	39B			0.0 0.0		40B	/		
		/	41C				0.0 0.0	42C	/		
				7.7	11.3	11.2	9.1				

NOTES:

LIGHTS	1.1	KVA
RECEPTS	2.5	KVA
MOTORS	26.0	KVA
HEAT	1.8	KVA
KITCHEN	0.0	KVA
CMPTR	0.0	KVA
OTHER	0.3	KVA
TOTAL	31.7	KVA

PANELBOARD: PC — GROUND BUS — **SC RATING:** 10 KAMPS RMS SYMM.
SERVICE: 208Y/120V 3PH 4W — **MOUNTING:** SURFACE
MAINS: 100 AMP MLO — **TYPE:** BRANCH — **ENCLOSURE:** NEMA 1

LOAD DESCRIPTION	WIRE	BKR	CKT	NEUT	A	B	C	CKT	BKR	WIRE	LOAD DESCRIPTION
RP-C-1	12	20/1	1A	0.3 1.1	0.3 1.1			2A	20/1	12	RP-C-3, EF-C-2
RP-C-2, EF-C-1	12	20/1	3B	0.9 0.5		0.9 0.5		4B	20/1	12	REC: STORAGE
REC: EXTERIOR	12	20/1	5C	0.4 0.4			0.4 0.4	6C	20/1	12	LTG: TICKETS / SNACKS
REC: TICKETS / SNACKS	12	20/1	7A	0.7 0.3	0.7 0.3			8A	20/1	12	ELCC
REC: TICKETS / SNACKS	12	20/1	9B	0.5 0.5		0.5 0.5		10B	20/1	12	LTG: EXTERIOR
SPARE		20/1	11C	0.0 0.0			0.0 0.0	12C	20/1		SPARE
SPARE		20/1	13A	0.0 0.0	0.0 0.0			14A	20/1		SPARE
SPARE		20/1	15B	0.0 0.0		0.0 0.0		16B	20/1		SPARE
SPARE		20/1	17C	0.0 0.0			0.0 0.0	18C	20/1		SPARE
SPACE ONLY		/1	19A	0.0 0.0	0.0 0.0			20A	/1		SPACE ONLY
SPACE ONLY		/1	21B	0.0 0.0		0.0 0.0		22B	/1		SPACE ONLY
SPACE ONLY		/1	23C	0.0 0.0			0.0 0.0	24C	/1		SPACE ONLY
SPACE ONLY		/1	25A	0.0 0.0	0.0 0.0			26A	/1		SPACE ONLY
SPACE ONLY		/1	27B	0.0 0.0		0.0 0.0		28B	/1		SPACE ONLY
SPACE ONLY		/1	29C	0.0 0.0			0.0 0.0	30C	/1		SPACE ONLY
SPACE ONLY		/1	31A	0.0 0.0	0.0 0.0			32A	/1		SPACE ONLY
SPACE ONLY		/1	33B	0.0 0.0		0.0 0.0		34B	/1		SPACE ONLY
SPACE ONLY		/1	35C	0.0 0.0			0.0 0.0	36C	/1		SPACE ONLY
SPACE ONLY		/1	37A	0.0 0.0	0.0 0.0			38A	/1		SPACE ONLY
SPACE ONLY		/1	39B	0.0 0.0		0.0 0.0		40B	/1		SPACE ONLY
SPACE ONLY		/1	41C	0.0 0.0			0.0 0.0	42C	/1		SPACE ONLY
				5.5	2.3	2.4	0.8				

NOTES:

LIGHTS	0.9	KVA
RECEPTS	2.2	KVA
MOTORS	0.4	KVA
HEAT	1.8	KVA
KITCHEN	0.0	KVA
CMPTR	0.0	KVA
OTHER	0.3	KVA
TOTAL	5.5	KVA

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Revisions:

PANEL SCHEDULES

Electrical

E302

YCH Commission Number
18030.00

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PANELBOARD: DPD GROUND BUS SC RATING: 25 KAMPS RMS SYMM.
SERVICE: 208Y/120V 3PH 4W MOUNTING: SURFACE
MAINS: 500 AMP MCB TYPE: BRANCH ENCLOSURE: NEMA 1

LOAD DESCRIPTION	WIRE	BKR	CKT	NEUT	A	B	C	CKT	BKR	WIRE	LOAD DESCRIPTION
					CONNECTED LOAD (KVA)						
PANEL PD	3	100/3	1A	7.5	7.5 0.1			2A	15/2		MSAH-D-1
	3	/	3B	7.4		7.4 0.1		4B	/		
	3	/	5C	6.5			6.5 0.1	6C	15/2		MSAH-D-2
PANEL AVD	3	100/3	7A	7.5	7.5 0.1			8A	/		
	3	/	9B	7.4		7.4 0.1		10B	15/2		MSAH-D-3
	3	/	11C	6.5			6.5 0.1	12C	/		
PANEL AVDS	3/0	200/3	13A		15.0 3.0			14A	40/2		MSHP-D-1
	3/0	/	15B			15.0 3.0		16B	/		
	3/0	/	17C				15.0 2.1	18C	30/2		INSTANT. WATER HEATER
SHELTER 4	4	20/2	19A	0.4	0.4 2.1			20A	/		
	4	/	21B	0.2		0.2 2.1		22B	30/2		INSTANT. WATER HEATER
		/	23C				0.0 2.1	24C	/		
SPACE ONLY		/3	25A		0.0 0.0			26A	/3		SPACE ONLY
		/	27B			0.0 0.0		28B	/		
		/	29C				0.0 0.0	30C	/		
SPACE ONLY		/3	31A		0.0 0.0			32A	/3		SPACE ONLY
		/	33B			0.0 0.0		34B	/		
		/	35C				0.0 0.0	36C	/		
SPACE ONLY		/3	37A		0.0 0.0			38A	60/3	6	SPD
		/	39B			0.0 0.0		40B	/	6	
		/	41C				0.0 0.0	42C	/	6	
				43.4	35.7	35.2	32.4				

NOTES:
1. PROVIDE WITH SERVICE ENTRANCE LABEL.

LIGHTS	28.2	KVA
RECEPTS	3.2	KVA
MOTORS	6.6	KVA
HEAT	8.2	KVA
KITCHEN	0.0	KVA
CMPTR	57.0	KVA
OTHER	0.0	KVA
TOTAL	103.2	KVA

PANELBOARD: PD GROUND BUS SC RATING: 22 KAMPS RMS SYMM.
SERVICE: 208Y/120V 3PH 4W MOUNTING: SURFACE
MAINS: 100 AMP MLO TYPE: BRANCH ENCLOSURE: NEMA 1

LOAD DESCRIPTION	WIRE	BKR	CKT	NEUT	A	B	C	CKT	BKR	WIRE	LOAD DESCRIPTION
					CONNECTED LOAD (KVA)						
EF-D-1	12	20/1	1A	0.1 1.0	0.1 1.0			2A	20/1	12	REC: MULTIPURPOSE
REC: RESTROOM	12	20/1	3B	0.2 1.0		0.2 1.0		4B	20/1	12	REC: MULTIPURPOSE
REC: STORAGE	12	20/1	5C	0.5 1.0			0.5 1.0	6C	20/1	12	REC: MULTIPURPOSE
LTG: MULTIPURPOSE	12	20/1	7A	0.4 1.2	0.4 1.2			8A	20/1	12	REFRIGERATOR
ELCD	12	20/1	9B	0.3 0.8		0.3 0.8		10B	20/1	12	REC: MULTIPURPOSE
LTG: EXTERIOR	12	20/1	11C	0.2 0.0			0.2 0.0	12C	20/1		SPARE
LTG: STAGE GENERAL	10	20/1	13A	0.8 0.0	0.8 0.0			14A	20/1		SPARE
LTG: STAGE FRONT	10	20/1	15B	0.5 0.0		0.5 0.0		16B	20/1		SPARE
SPARE		20/1	17C	0.0 0.0			0.0 0.0	18C	20/1		SPARE
SPARE		20/1	19A	0.0 0.0	0.0 0.0			20A	20/1		SPARE
SPARE		20/1	21B	0.0 0.0		0.0 0.0		22B	20/1		SPARE
SPARE		20/1	23C	0.0 0.0			0.0 0.0	24C	20/1		SPARE
SPACE ONLY		/3	25A		0.0 0.0			26A	/3		SPACE ONLY
		/	27B			0.0 0.0		28B	/		
		/	29C				0.0 0.0	30C	/		
SPACE ONLY		/3	31A		0.0 0.0			32A	/3		SPACE ONLY
		/	33B			0.0 0.0		34B	/		
		/	35C				0.0 0.0	36C	/		
SPACE ONLY		/3	37A		0.0 0.0			38A	/3		SPACE ONLY
		/	39B			0.0 0.0		40B	/		
		/	41C				0.0 0.0	42C	/		
				8.1	3.5	2.8	1.7				

NOTES:

LIGHTS	1.9	KVA
RECEPTS	1.3	KVA
MOTORS	1.3	KVA
HEAT	0.0	KVA
KITCHEN	0.0	KVA
CMPTR	0.3	KVA
OTHER	3.3	KVA
TOTAL	8.1	KVA

PANELBOARD: AVD GROUND BUS SC RATING: 22 KAMPS RMS SYMM.
SERVICE: 208Y/120V 3PH 4W MOUNTING: SURFACE
MAINS: 100 AMP MLO TYPE: BRANCH ENCLOSURE: NEMA 1

LOAD DESCRIPTION	WIRE	BKR	CKT	NEUT	A	B	C	CKT	BKR	WIRE	LOAD DESCRIPTION
					CONNECTED LOAD (KVA)						
LIGHTING PIPE	10	20/1	1A	1.0 1.0	1.0 1.0			2A	20/1	12	EQUIPMENT RACK
LIGHTING PIPE	10	20/1	3B	1.0 1.0		1.0 1.0		4B	20/1	12	EQUIPMENT RACK
LIGHTING PIPE	10	20/1	5C	1.0 1.0			1.0 1.0	6C	20/1	12	EQUIPMENT RACK
LIGHTING PIPE	10	20/1	7A	1.0 1.0	1.0 1.0			8A	20/1	12	EQUIPMENT RACK
LIGHTING PIPE	10	20/1	9B	1.0 1.0		1.0 1.0		10B	20/1	12	EQUIPMENT RACK
LIGHTING PIPE	10	20/1	11C	1.0 1.0			1.0 1.0	12C	20/1	12	EQUIPMENT RACK
LIGHTING PIPE	10	20/1	13A	1.0 0.5	1.0 0.5			14A	20/1	10	REC: STAGE
LIGHTING PIPE	10	20/1	15B	1.0 0.4		1.0 0.4		16B	*20/1	10	REC: STAGE
LIGHTING PIPE	10	20/1	17C	1.0 0.5			1.0 0.5	18C	20/1	10	REC: STAGE
LIGHTING PIPE	10	20/1	19A	1.0 0.0	1.0 0.0			20A	20/1		SPARE
LIGHTING PIPE	10	20/1	21B	1.0 0.0		1.0 0.0		22B	20/1		SPARE
LIGHTING PIPE	10	20/1	23C	1.0 0.0			1.0 0.0	24C	20/1		SPARE
LIGHTING PIPE	10	20/1	25A	1.0 0.0	1.0 0.0			26A	20/1		SPARE
LIGHTING PIPE	10	20/1	27B	1.0 0.0		1.0 0.0		28B	20/1		SPARE
SPARE		20/1	29C	0.0 0.0			0.0 0.0	30C	20/1		SPARE
SPACE ONLY		/1	31A	0.0 0.0	0.0 0.0			32A	/1		SPACE ONLY
SPACE ONLY		/1	33B	0.0 0.0		0.0 0.0		34B	/1		SPACE ONLY
SPACE ONLY		/1	35C	0.0 0.0			0.0 0.0	36C	/1		SPACE ONLY
SPACE ONLY		/1	37A	0.0 0.0	0.0 0.0			38A	/1		SPACE ONLY
SPACE ONLY		/1	39B	0.0 0.0		0.0 0.0		40B	/1		SPACE ONLY
SPACE ONLY		/1	41C	0.0 0.0			0.0 0.0	42C	/1		SPACE ONLY
				21.4	7.5	7.4	6.5				

NOTES:

LIGHTS	14.0	KVA
RECEPTS	1.4	KVA
MOTORS	0.0	KVA
HEAT	0.0	KVA
KITCHEN	0.0	KVA
CMPTR	6.0	KVA
OTHER	0.0	KVA
TOTAL	21.4	KVA

PANELBOARD: PE GROUND BUS SC RATING: 22 KAMPS RMS SYMM.
SERVICE: 208Y/120V 3PH 4W MOUNTING: SURFACE
MAINS: 100 AMP MLO TYPE: BRANCH ENCLOSURE: NEMA 3R

LOAD DESCRIPTION	WIRE	BKR	CKT	NEUT	A	B	C	CKT	BKR	WIRE	LOAD DESCRIPTION
					CONNECTED LOAD (KVA)						
HAND DRYER	12	20/1	1A	1.5 0.5	1.5 0.5			2A	20/1	12	RP-E-1, EF-E-1
REC: RESTROOMS	12	20/1	3B	0.4 0.5		0.4 0.5		4B	20/1	12	RP-E-2, EF-E-2
INSTANT. WATER HEATER	10	30/2	5C	0.2			2.1 0.2	6C	20/1	12	REC: EXTERIOR
	10	/	7A	0.1	2.1 0.1			8A	20/1	12	LTG: RESTROOMS
INSTANT. WATER HEATER	10	30/2	9B	0.2		2.1 0.2		10B	20/1	12	LTG: EXTERIOR
	10	/	11C	0.0			2.1 0.0	12C	20/1		SPARE
HAND DRYER	12	20/1	13A	1.5 0.0	1.5 0.0			14A	20/1		SPARE
SPARE		20/1	15B	0.0 0.0		0.0 0.0		16B	20/1		SPARE
SPARE		20/1	17C	0.0 0.0			0.0 0.0	18C	20/1		SPARE
SPARE		20/1	19A	0.0 0.0	0.0 0.0			20A	20/1		SPARE
SPARE		20/1	21B	0.0 0.0		0.0 0.0		22B	20/1		SPARE
SPARE		20/1	23C	0.0 0.0			0.0 0.0	24C	20/1		SPARE
SPACE ONLY		/3	25A		0.0 0.0			26A	/3		SPACE ONLY
		/	27B			0.0 0.0		28B	/		
		/	29C				0.0 0.0	30C	/		
SPACE ONLY		/3	31A		0.0 0.0			32A	/3		SPACE ONLY
		/	33B			0.0 0.0		34B	/		
		/	35C				0.0 0.0	36C	/		
SPACE ONLY		/3	37A		0.0 0.0			38A	/3		SPACE ONLY
		/	39B			0.0 0.0		40B	/		
		/	41C				0.0 0.0	42C	/		
				4.8	5.7	3.1	4.3				

NOTES:

LIGHTS	0.3	KVA
RECEPTS	0.5	KVA
MOTORS	0.4	KVA
HEAT	11.8	KVA
KITCHEN	0.0	KVA
CMPTR	0.0	KVA
OTHER	0.0	KVA
TOTAL	13.0	KVA

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