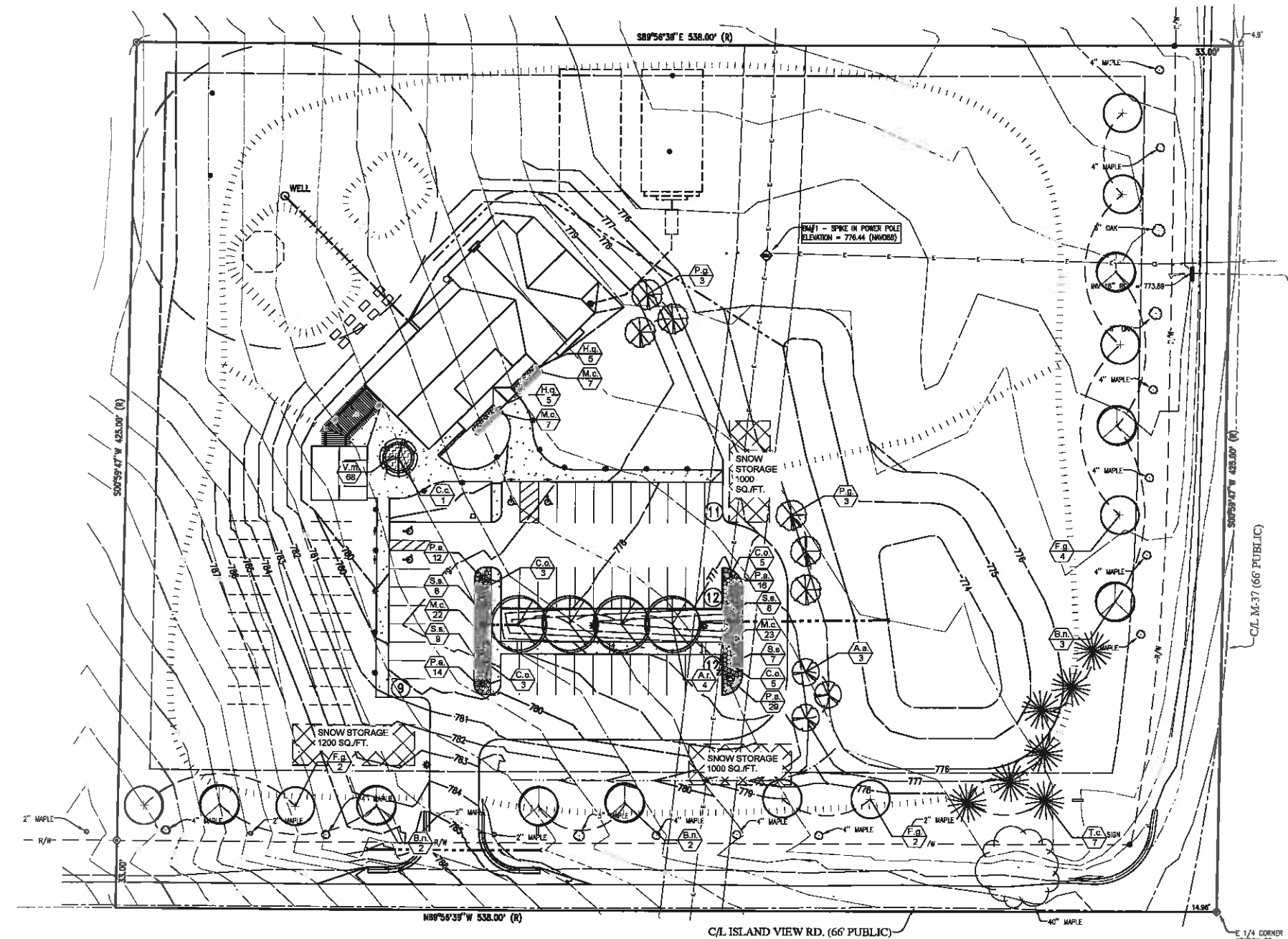


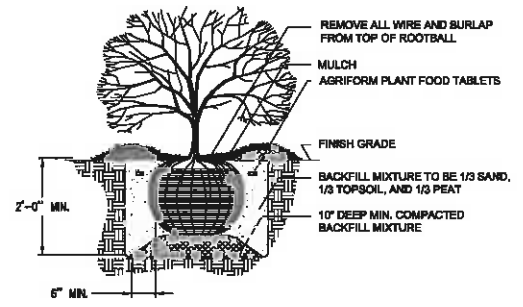


PLANT SCHEDULE

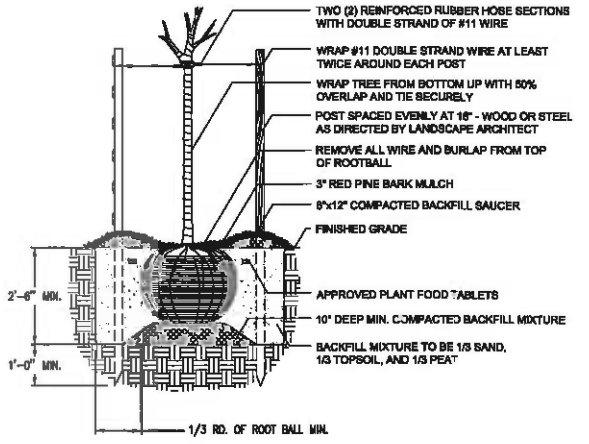
KEY	BOTANICAL NAME COMMON NAME	MIN. REQ'D SIZE	QTY.	NOTES
<b>DECIDUOUS TREES</b>				
A.a.	<i>Amelanchier arborea</i> Shadow Serviceberry	8'-10' Clump	3	Provide variety
A.r.	<i>Acer rubrum</i> Red Maple	2.5'-3" cal. B&B	4	
B.n.	<i>Betula nigra 'Heritage'</i> River Birch	10' Ht. B&B Multi-Stem	7	
C.c.	<i>Carpinus caroliniana</i> Musclewood	10' Clump Multi-Stem	1	
F.g.	<i>Fagus grandifolia</i> American Beech	12' Ht. B&B Multi-Stem Clump, (Min 3-Stem)	11	
<b>EVERGREEN TREES</b>				
T.c.	<i>Taxus canadensis</i> Eastern Hemlock	2.5' cal. B&B	7	
P.g.	<i>Picea glauca 'Venusta'</i> White Spruce	2.5' cal. B&B	6	
<b>EVERGREEN &amp; DECIDUOUS SHRUBS</b>				
C.o.	<i>Capelanthus Occidentalis</i> Buttonbush	3 Gal.	16	Provide variety
H.q.	<i>Hydrangea quercifolia 'Pee Wee'</i> 'Pee Wee' Cask. of Hydrangea	3 Gal.	10	Provide variety
<b>GRASSES</b>				
M.c.	<i>Molinia caerulea ssp. caerulea 'Moorlanne'</i> Purple Moor Grass	1 Gal.	45	
P.a.	<i>Pennisetum alopecuroides 'Hameln'</i> Dwarf Fountain Grass	1 Gal.	71	
S.s.	<i>Schizachyrium scoparium 'The Blues'</i> 'The Blues' Little Bluestem	1 Gal.	32	
<b>GROUNDCOVERS</b>				
V.m.	<i>Vinca minor 'Variegata'</i> Variegated Common Periwinkle	#1 Pot (8/16ft)	65	



LANDSCAPE PLAN  
SCALE: 1"=30'



SHRUB INSTALLATION DETAIL  
NOT TO SCALE



TREE INSTALLATION DETAIL  
NOT TO SCALE

REV	DATE	BY	CHKD
1	11-14-2017	RMV	RMV
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LANDSCAPE PLAN  
PENINSULA COMMUNITY LIBRARY

Date Issued: 11-14-2017  
Date Surveyed: 2-27-2017  
Designed By: RMV  
Drawn By: RMV  
Checked By: RMV  
Scale: AS NOTED  
Original sheet size is 24x36

Location:  
PART OF THE NE 1/4 SEC. 33  
T29N R10W  
PENINSULA TOWNSHIP  
GRAND TRAVERSE COUNTY  
MICHIGAN

Project Number:  
2017197001.03

NO.	DATE	BY	REVISION
1	11-14-2017	RHM	ISSUED FOR SUP. PERMIT

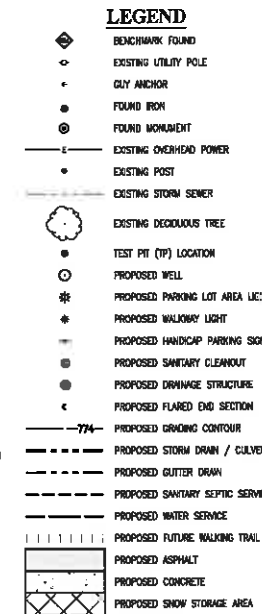
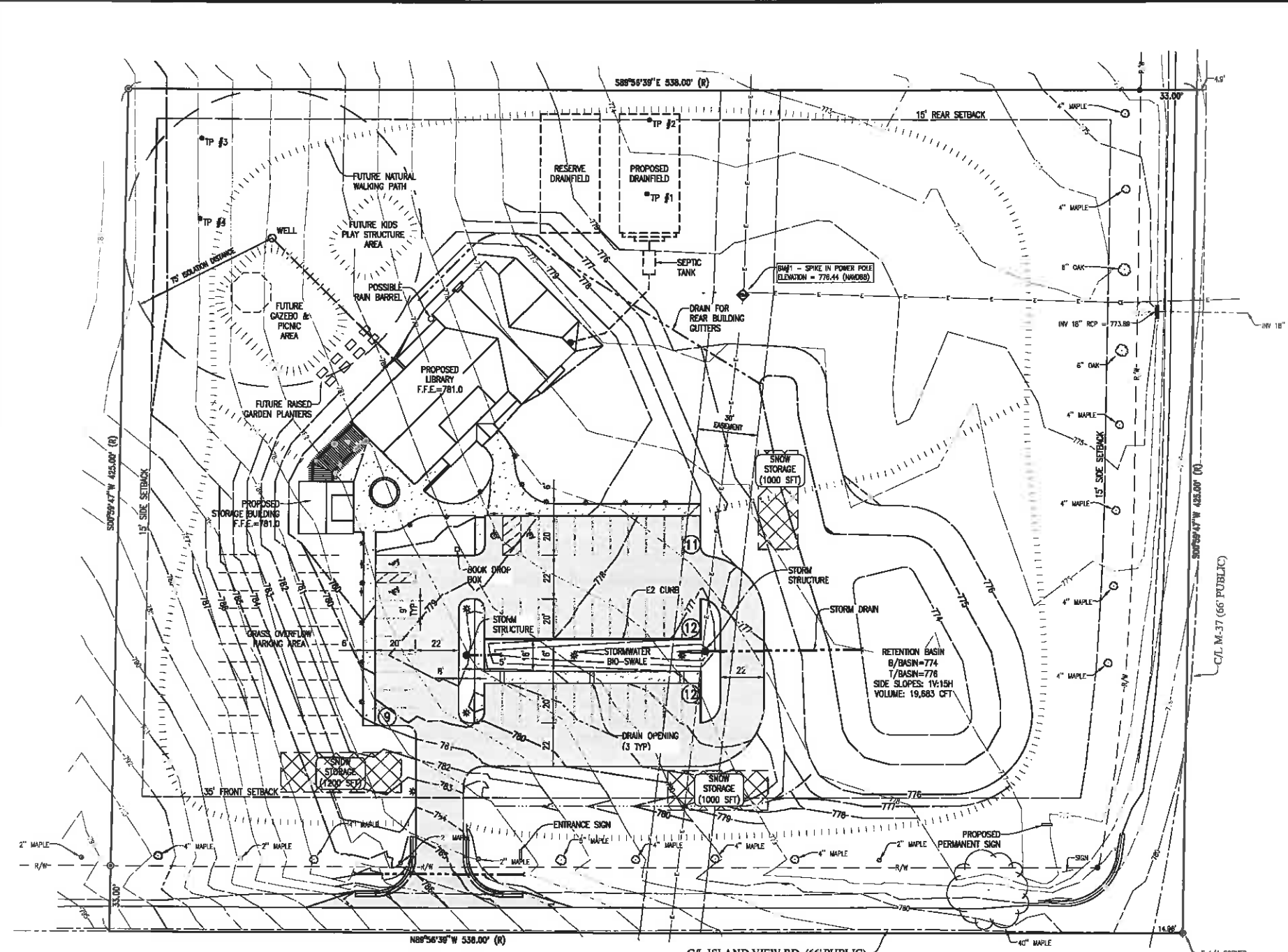
NO.	DATE	BY	REVISION
1	11-14-2017	RHM	ISSUED FOR SUP. PERMIT

NO.	DATE	BY	REVISION
1	11-14-2017	RHM	ISSUED FOR SUP. PERMIT

NO.	DATE	BY	REVISION
1	11-14-2017	RHM	ISSUED FOR SUP. PERMIT

NO.	DATE	BY	REVISION
1	11-14-2017	RHM	ISSUED FOR SUP. PERMIT

NO.	DATE	BY	REVISION
1	11-14-2017	RHM	ISSUED FOR SUP. PERMIT



**SITE DATA**

Applicant: Peninsula Community Library  
2699 Island View Road  
Traverse City, MI 49686

Parcel ID: 28-11-133-004-10

Zoning District: A-1, Agricultural

Proposed Use: Library

Min. Lot Size: 5 Acres  
Lot Size: 5.25 Acres

Min. Lot Width: 330 ft  
Lot Width: 538 ft (Frontage along Island View Rd.)

Max Structure Height: 35 ft  
Structure Height: 34 ft (Finish grade to peak)

Setbacks: Front - 35 ft (along Island View Rd.)  
Side - 15 ft (Non-Residential structure)  
Rear - 15 ft (Non-Residential structure)

Parking Calculations: 44 spaces provided  
4670 sq ft useable space

4670 sq ft / 44 = 106 sq ft / space

20 additional spaces of overflow parking provided for special programs

**STORMWATER RUNOFF CALCULATION SUMMARY**

**PARKING LOT AREA**

Area Description	Area (Sf)	Curve No.
Storage Building Roof	725	98
Sidewalks	4,219	98
Paved Parking Area	20,734	98
Total District Area	25,678	
Weighted Avg. CN		98

**BUILDING & LAWN AREA**

Area Description	Area (Sf)	Curve No.
Front 1/2 Roof	3,391	98
Sidewalks	400	98
Front Open Lawn Area	28,000	62
Total District Area	32,791	
Weighted Avg. CN		65

**REAR BUILDING AREA**

Area Description	Area (Sf)	Curve No.
Back 1/2 Roof	3,167	98
Total District Area	3,167	
Weighted Avg. CN		98

**DRAINAGE TARGETS**

Location	Volume (cft)
Parking Lot Swale	956
Retention Basin	19,683

**Library Site**  
Prepared by Gosling Czubak Engineering Sciences, Inc.  
HydroCAD 10.10.14 11/14/2017 11:13:20 AM Printed 11/13/2017 Page 1

**Summary for Pond 2P: Retention Basin**

Inflow Area = 61,038 sf, 52.99% Impervious, Inflow Depth = 1.92" for 25 yr event  
Inflow = 3.84 cfs @ 12.08 hrs, Volume = 13,214 cft  
Outflow = 0.11 cfs @ 18.11 hrs, Volume = 10,214 cft, Allow 97%, L<sub>25</sub> = 183.0 min  
Discarded = 0.11 cfs @ 13.11 hrs, Volume = 10,214 cft

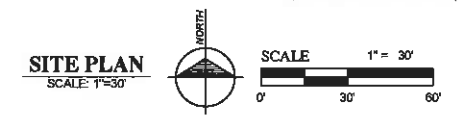
Routing by SCS-2 method, Time Span = 0.00-72.00 hrs, @ 0.05 hrs  
Peak Elev = 774.94 @ 18.11 hrs, Surf Area = 0.511 sf, Storage = 0.959 cft  
Outflow at 18.11 hrs = 0.11 cfs @ 13.11 hrs (1,484.5 - 888.3)

Plug-Flow detention time = 828.4 min calculated for 10,214 cft (100% of inflow)  
Coeff. of Mass det. time = 828.2 min (1,484.5 - 888.3)

Elevation (feet)	Surf Area (sq-ft)	In. Storm (inches)	Cum. Storm (cfs-hrs)	Wet Area (sq-ft)
774.00	3,836	0	0	3,836
775.00	0,972	0.543	0.543	0,972
776.00	10,687	14,648	21,091	10,687

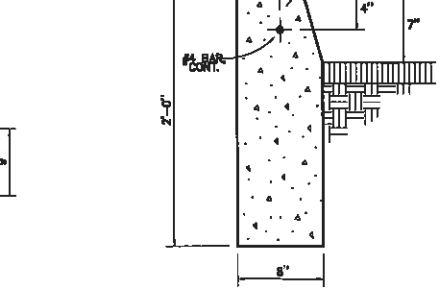
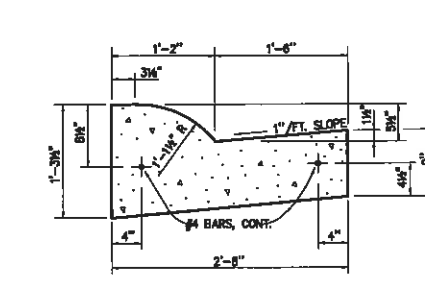
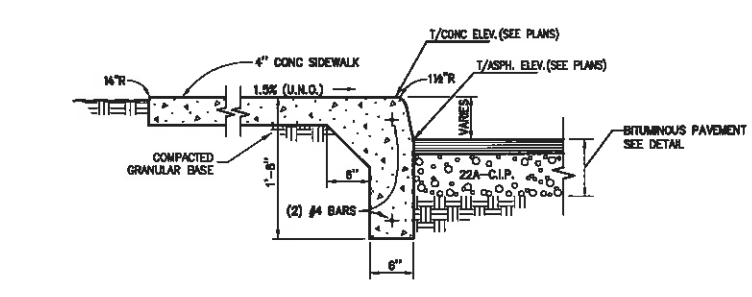
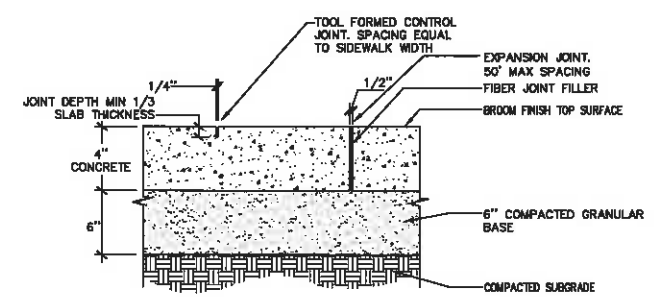
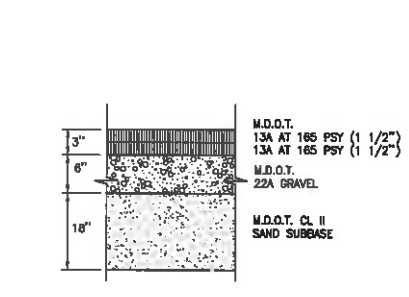
Device: Retention  
#1 Discarded 774.00 0.880 Inflow Exfiltration over Wetted area

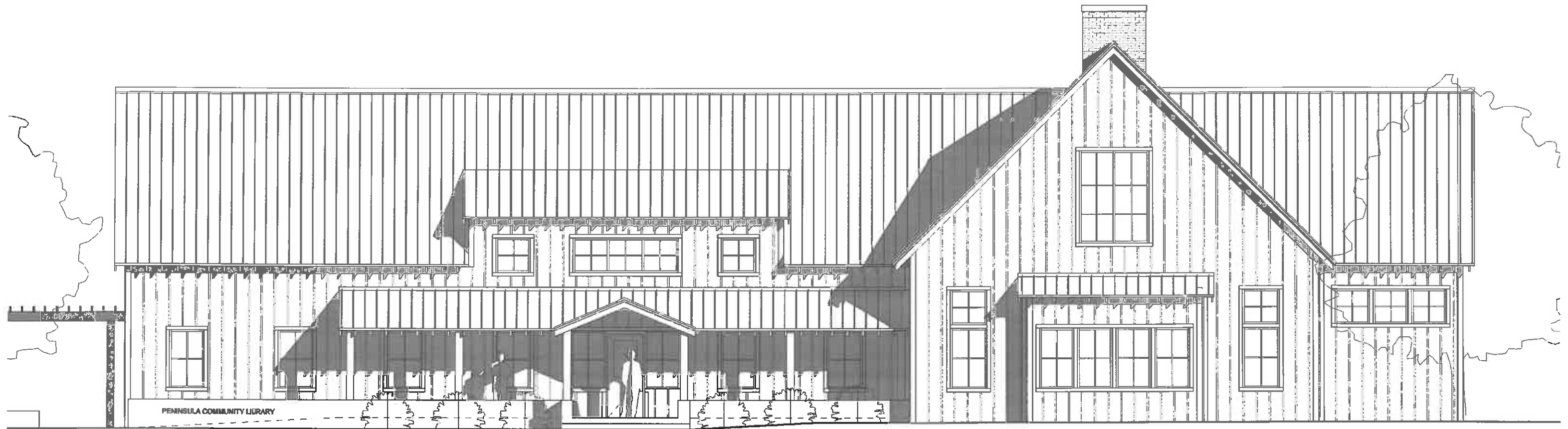
Discarded Outflow Max=0.21 cfs @ 18.11 hrs HW=774.94' (Free Discharge)  
2-1=Exfiltration (Exfiltration Controls 0.21 cfs)



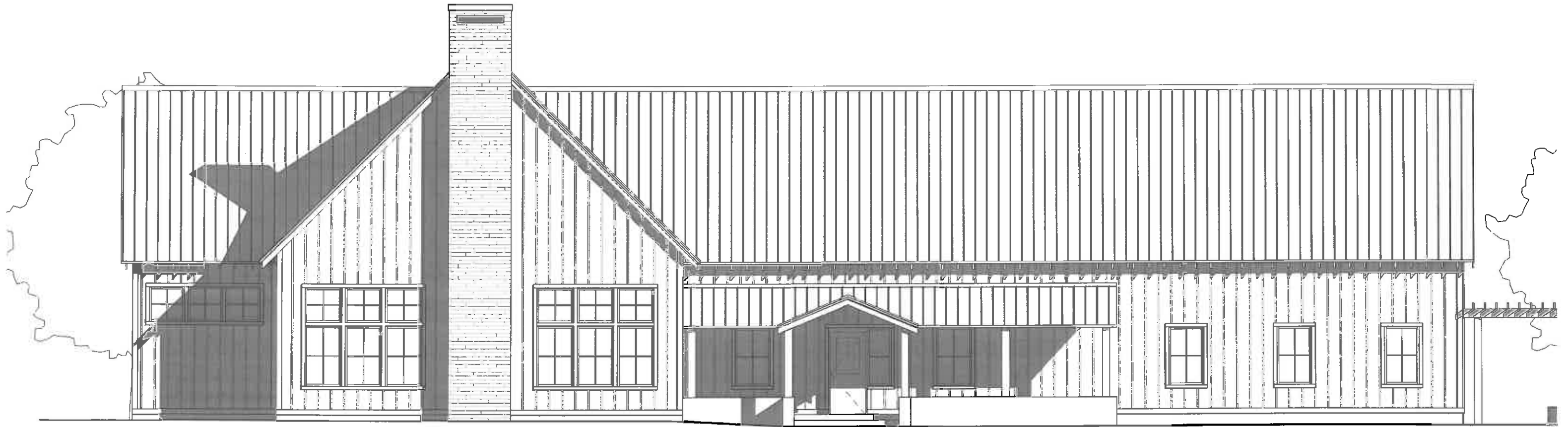
**EXISTING SITE USDA SOIL SERIES IDENTIFIED**

EyA Emmet sandy loam, 0 to 2% slopes  
EyB Emmet sandy loam, 2 to 6% slopes  
RcA Richter Loams, 0-2% slopes, overwash

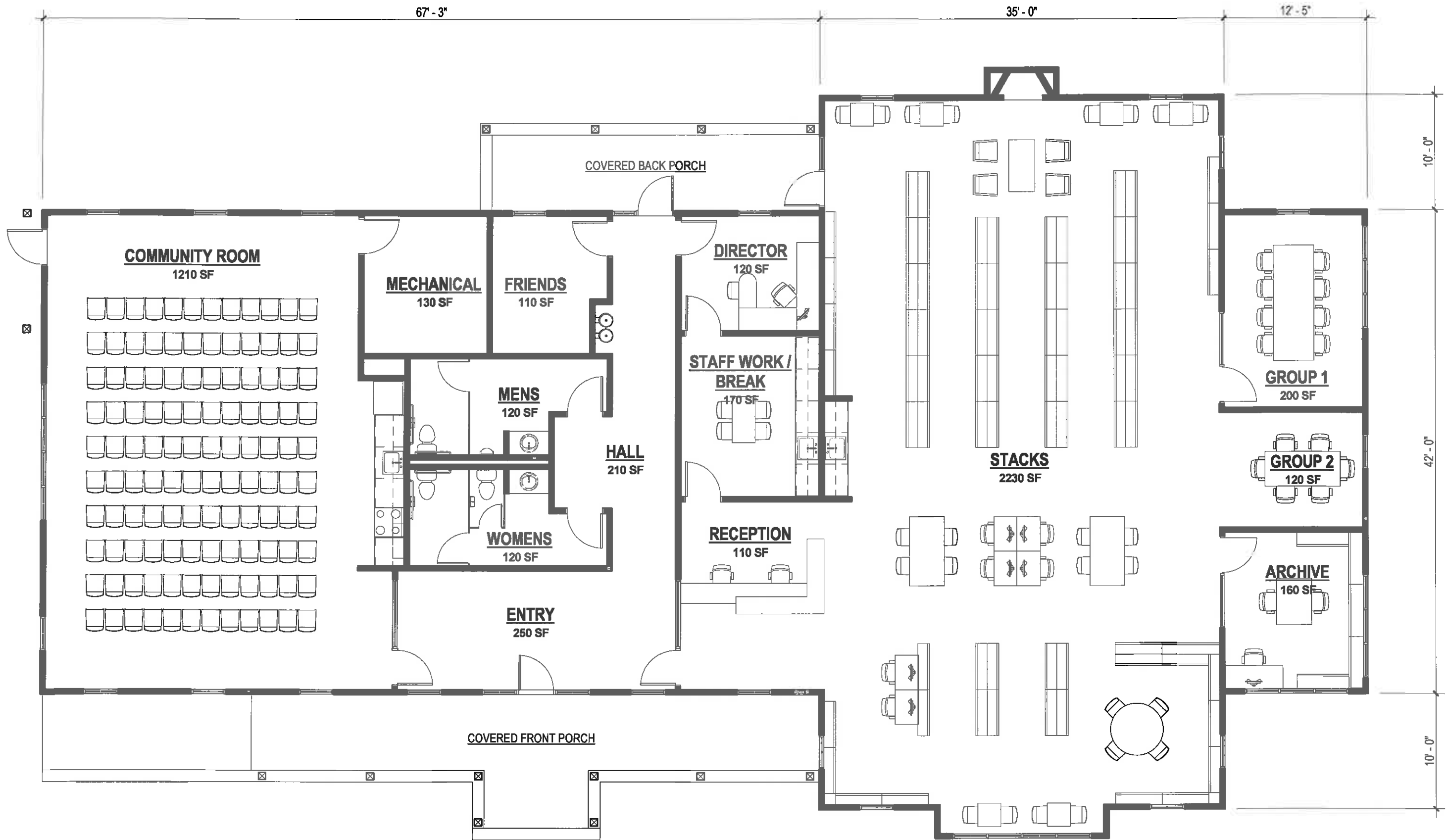




**FRONT ELEVATION**



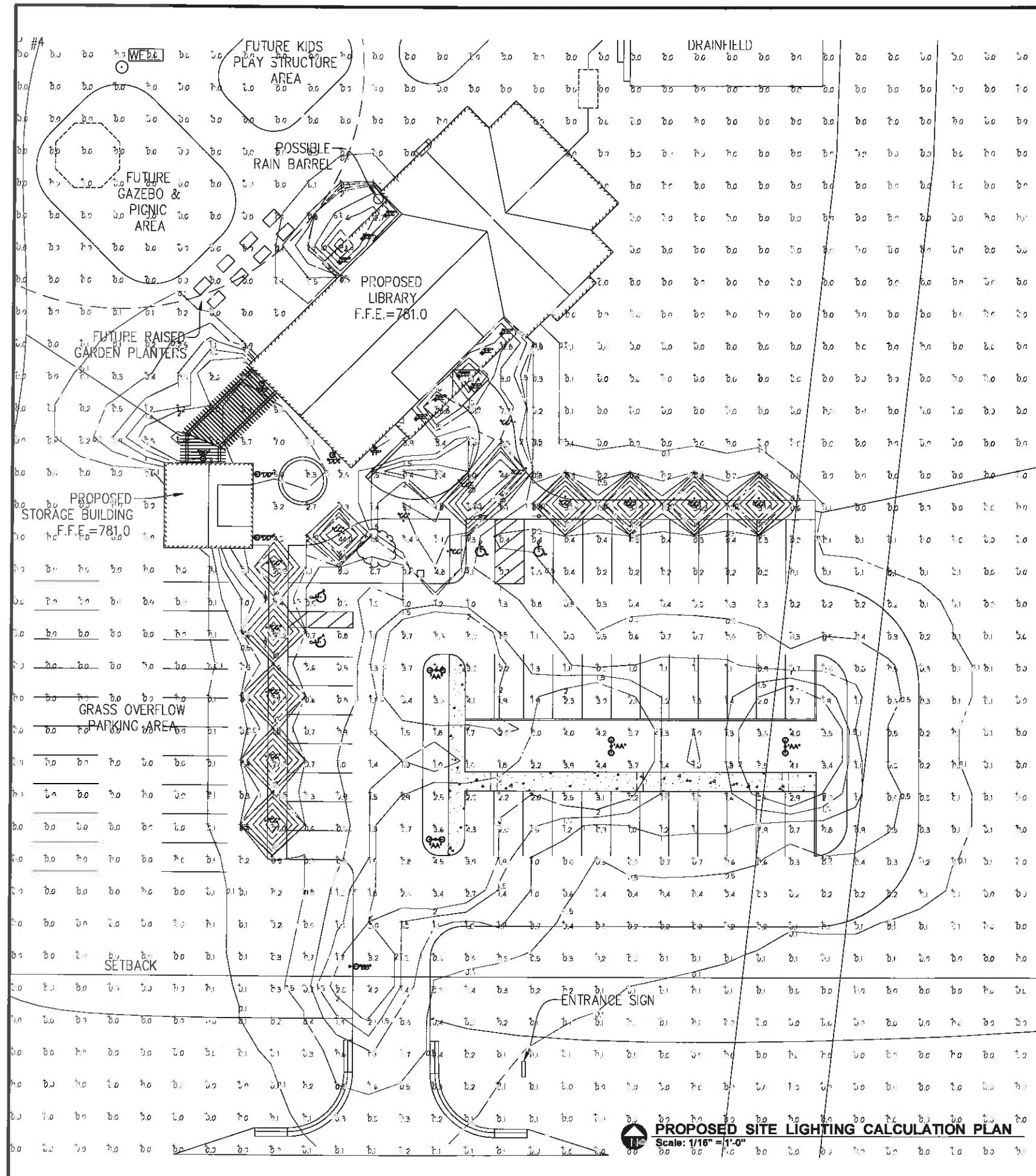
**BACK ELEVATION**



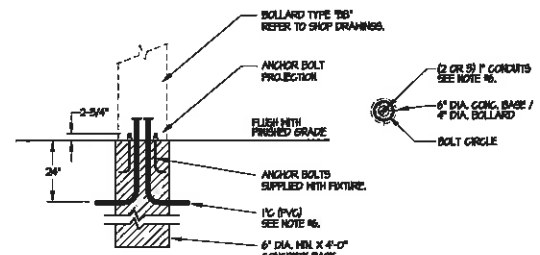
# FLOOR PLAN

Scale: 1/8" = 1'-0"

AREA SUMMARY	5,550 SF +/-
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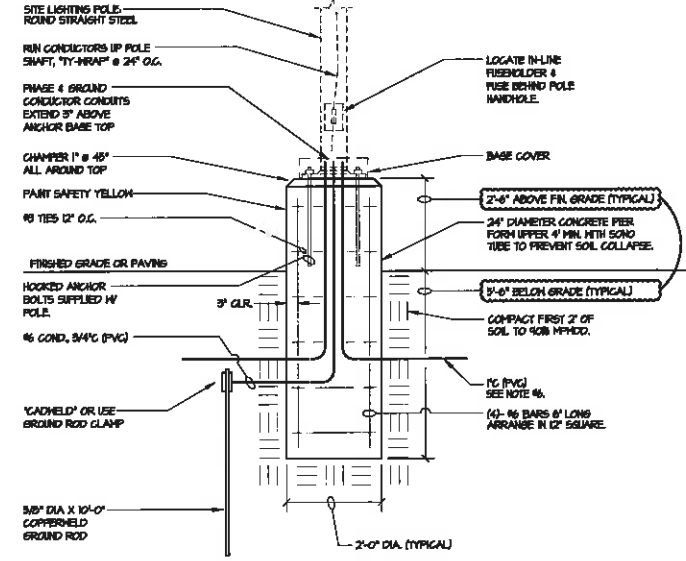


PHOTOMETRIC SUMMARY	
1.	CALCULATION RESULTS SHOWN ON PLAN ARE IN FOOT CANDLES (FC) AND MEASURED AT GROUND LEVEL.
2.	CALCULATION GRID POINTS ARE 10' X 10' SPACING.
3.	ALL PROPOSED SITE LIGHTING IS OF FULL CUTOFF WITH FLAT LENS ANCHOR RECEIVED WITH LED SOURCE. REFER TO PROJECT PICTURE SCHEDULE AND MANUFACTURER SPECIFICATION CUT SHEETS FOR DESCRIPTION.
4.	MAXIMUM SITE LIGHTING MOUNTING HEIGHT SHALL NOT EXCEED 5'-0\"/>



**1 BOLLARD BASE DETAIL (TYPE "CC")**

- NOTES:**
1. CONCRETE TO HAVE 5000 PSI MIN. COMPRESSIVE STRENGTH.
  2. REBAR TO BE 6000 HELDING OF BAR IS NOT PERMITTED.
  3. AIR-ENTRAINED CONCRETE PER ACI.
  4. USE OF CHLORIDE ACCELERATORS IS NOT PERMITTED.
  5. REFER TO MANUFACTURER INSTALLATION GUIDELINES FOR BASE DETAIL AND BOLT PATTERN REQUIREMENTS.
  6. REFER TO ELECTRICAL SITE PLAN FOR QUANTITY OF RACEWAYS REQUIRED PER LOCATION.



**2 POLE BASE DETAIL (TYPES "AA" & "BB")**

- NOTES:**
1. CONCRETE TO HAVE 5000 PSI MIN. COMPRESSIVE STRENGTH.
  2. REBAR TO BE 6000 HELDING OF BAR IS NOT PERMITTED.
  3. AIR-ENTRAINED CONCRETE PER ACI.
  4. USE OF CHLORIDE ACCELERATORS IS NOT PERMITTED.
  5. REFER TO MANUFACTURER INSTALLATION GUIDELINES FOR BASE DETAIL AND BOLT PATTERN REQUIREMENTS.
  6. REFER TO ELECTRICAL SITE PLAN FOR QUANTITY OF RACEWAYS REQUIRED PER LOCATION.
  7. TOP OF LIGHT POLE SHALL NOT EXCEED 5'.

**Gosling Czubak**  
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 1280 Business Park Dr.  
 Traverse City, Michigan  
 231-948-9191 phone  
 info@goslingczubak.com  
 www.goslingczubak.com

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 206-461-1300 Fax: 206-461-1307  
 206-461-1307  
 REC #4316

**PRELIMINARY**  
**NOT FOR CONSTRUCTION**

**SITE PLAN**  
**PENINSULA COMMUNITY LIBRARY**  
**SITE LIGHTING CALCULATION PLAN**

Date Issued: 9-1-2017  
 Date Surveyed: 2-27-2017  
 Designed By: R.E.C.  
 Drawn By: R.E.C.  
 Checked By: R.E.C.  
 Scale: AS NOTED  
 Original sheet size is 24x36  
 Location: PART OF THE NE 1/4 SEC. 35  
 T38N R10W  
 PENINSULA TOWNSHIP  
 GRAND TRAVERSE COUNTY  
 MICHIGAN  
 Project Number:  
 2017197001.03

**SLCP**