

Site Plan Review for City Council - SP16-075

New Farmers Market Enclosure

at Ann Arbor Farmers Market

315 Detroit Street, Section 29, City of Ann Arbor, Washtenaw County, MI

owner | petitioner
ann arbor parks & recreation services
 301 east huron street, ann arbor, mi 48107
contact: amy kuras, park planner | project manager
ph: 734-845-0643 email: akuras@a2gov.org
property is owned by the city.

architect:
koehler architecture inc.
 1118 w.front street, monroe, mi 48161
contact: keith kohler, architect | project manager
ph: 734-242-6880 email: kkohler@koehlerarchitect.net

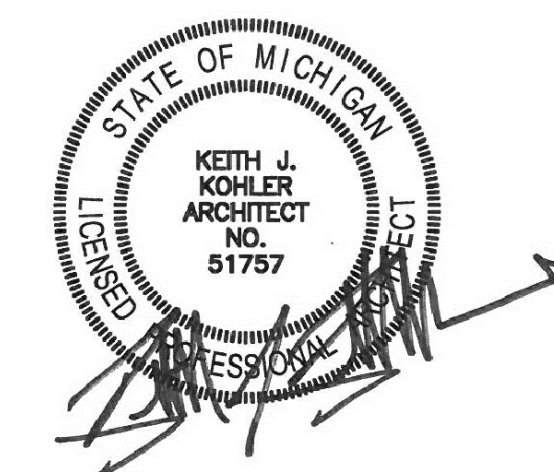
civil engineer:
zeimet woźniak & associates
 55800 grand river ave., suite 100, new hudson, mi 48165
contact: julian wargo, engineer | project manager
ph: 248-437.5099 email: jwargo@zeimetwoźniak.com



exterior perspective - view at looking fourth street entry



SHEET	DESCRIPTION
T1	COVER SHEET
SP-1	DIMENSIONAL PLAN
SP-2	LANDSCAPE PLAN
CIVIL	
CE-1	TOPOGRAPHIC SURVEY
CE-2	CONSTRUCTION NOTES AND DETAILS
CE-3	REMOVALS PLAN
CE-4	PAVING PLAN
CE-4A	PAVING PLAN
CE-5	GRADING PLAN
CE-6	UTILITY PLAN
CE-7	EROSION CONTROL PLAN
CE-8	EROSION CONTROL DETAILS
CE-9	RAIN GARDEN
ARCHITECTURAL	
A1	FLOOR PLAN
A2	EXTERIOR ELEVATIONS
A3	EXTERIOR ELEVATIONS
A4	EXTERIOR PERSPECTIVES PLAN
A5	SITE SECTIONS PLAN
A6	BUILDING SECTIONS
A7	BUILDING SECTIONS, CLEARSTORY PLAN, ROOF PLAN
A8	RAMP & STAIR PLAN, SECTIONS
A9	RAMP & STAIR SECTIONS
A10	BUILDING DETAILS
A11	ENLARGED SECTIONS / DETAILS
A12	METAL BUILDING CANOPY
STRUCTURAL	
S1	BUILDING FOUNDATION PLAN
S2	DETAILS, FOUNDATION SCHEDULE
S3	DETAILS, MATERIAL STRENGTHS
PLUMBING	
P-1	PLUMBING PLAN, PLUMBING FIXTURE SCHEDULE, PLUMBING SPECIFICATIONS
ELECTRICAL	
E-PM1	SITE PHOTOMETRIC PLAN
E-PM2	FIXTURE CUTS
E-PM3	FIXTURE CUTS
E1.1	ELECTRICAL LIGHTING PLAN
E1.2	ELECTRICAL POWER & SYSTEMS PLAN
E2.1	ELECTRICAL SITE PLAN
E3.1	ELECTRICAL SPECIFICATIONS, ELECTRICAL LEGEND



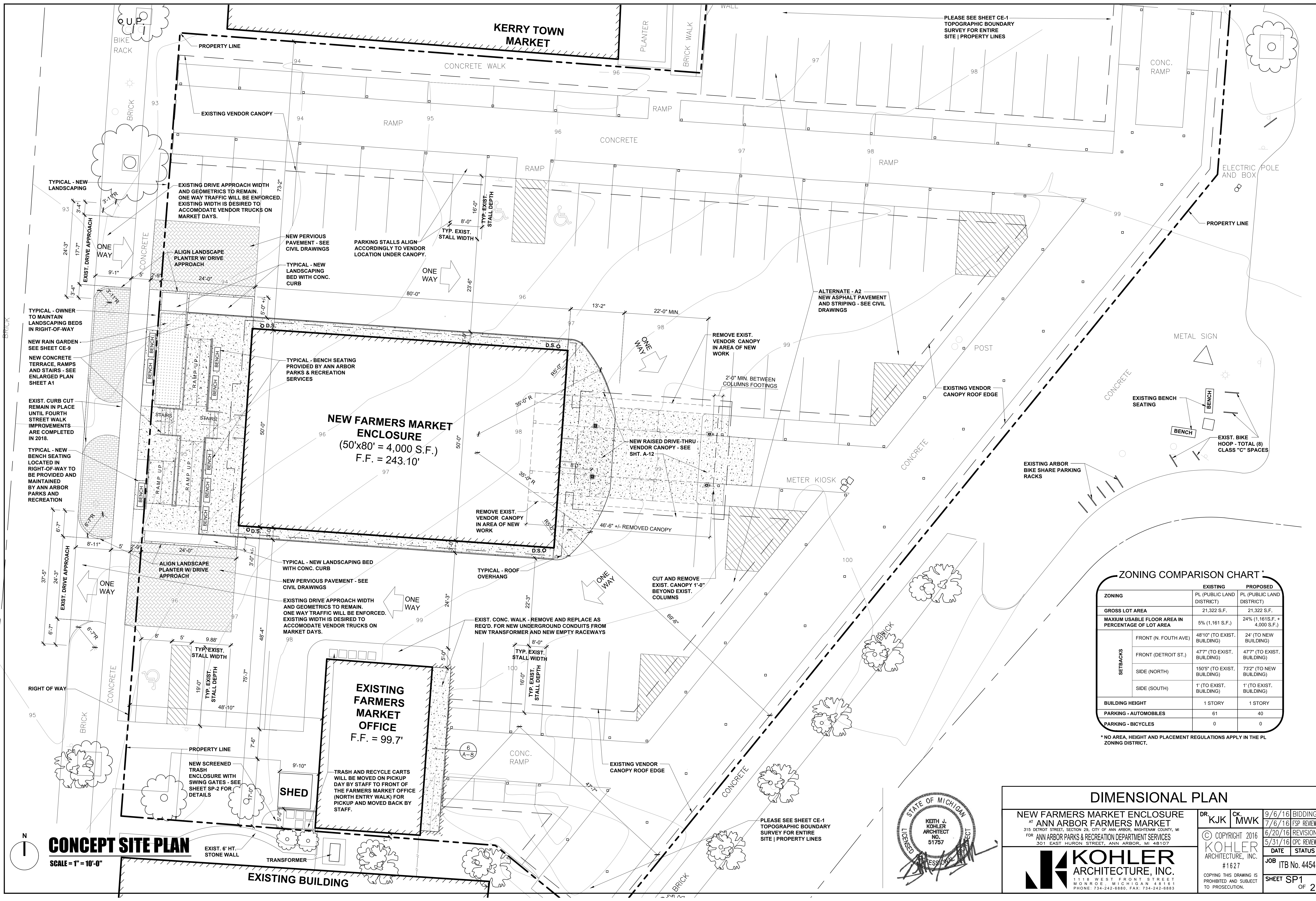
- GENERAL NOTES**
- ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH APPLICABLE SECTIONS OF THE FEDERAL, STATE AND LOCAL BUILDING CODES, ZONING ORDINANCES, HEALTH AND FIRE REGULATIONS AS ADOPTED BY THE LOCAL GOVERNING BUILDING AUTHORITY.
 - CONTRACTOR SHALL OBTAIN AND PAY FOR ALL NECESSARY BUILDING PERMITS FROM ALL GOVERNING AGENCIES INCLUDING THE CITY / TOWNSHIP AND SUBMIT FOR THEIR USE ANY CERTIFICATES OF INSURANCE, BONDS, ESCROW ACCOUNTS, LICENSES, PAY ALL FEES OBTAIN ALL APPROVALS, ETC. ALL AS MAY BE REQUIRED TO COMPLETE THIS PROJECT.
 - CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS BEFORE PROCEEDING WITH THE WORK.
 - DETAIL SYMBOL SHEET REFERRED TO OR FROM
 - THESE DOCUMENTS ARE DEVELOPED TO PROVIDE THE CONTRACTOR WITH A WORKING KNOWLEDGE OF THE SYSTEMS TO BE INSTALLED AND SCOPE OF WORK. WHERE THESE DETAILS ARE IN CONFLICT WITH THE STANDARD DETAILS OR SPECIFICATIONS OF THE MANUFACTURED COMPONENT, OR AFFECT THE GUARANTEE, THEY SHALL BE MODIFIED AS REQUIRED BY THE CONTRACTOR AND APPROVED BY THE ARCHITECT.
 - PROVIDE AND MAINTAIN SUITABLE TEMPORARY FENCES, BARRICADES, LIGHTS, WARNINGS, ETC. FOR PROTECTION OF PUBLIC AND OTHERS HAVING ACCESS TO THE SITE. CONTRACTOR SHALL KEEP CLEAN AND ADEQUATELY PROTECT ALL STREETS, DRIVES, WALKS, BLDGS, ETC., FROM DAMAGE DUE TO ANY ITEM INVOLVED WITH THIS WORK. ANY DAMAGED WORK SHALL BE REPLACED / REPAIRED AT CONTRACTORS EXPENSE.
 - CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES BY CONTACTING "MISS DIG", RESPONSIBLE UTILITY COMPANY. REVIEW ALL SURVEYS, AS BUILT DRAWINGS, AND SEEK ANY OTHER INFORMATION FROM THE OWNER, PRIOR TO BEGINNING EXCAVATIONS.

COVER SHEET

NEW FARMERS MARKET ENCLOSURE
 AT ANN ARBOR FARMERS MARKET
 315 DETROIT STREET, SECTION 29, CITY OF ANN ARBOR, WASHTENAW COUNTY, MI
 FOR ANN ARBOR PARKS & RECREATION DEPARTMENT SERVICES
 301 EAST HURON STREET, ANN ARBOR, MI 48107

DR. KJK CK MWK
 © COPYRIGHT 2016 KOHLER ARCHITECTURE, INC. #1627
 COPIING THIS DRAWING IS PROHIBITED AND SUBJECT TO PROSECUTION.

9/6/16	BIDDING
7/6/16	FSP REVIEW
6/20/16	REVISION
5/31/16	CPC REVIEW
DATE	STATUS
JOB	ITB No. 4454
SHEET	T1 of 1



PLEASE SEE SHEET CE-1
TOPOGRAPHIC BOUNDARY
SURVEY FOR ENTIRE
SITE | PROPERTY LINES

ALTERNATE - A2
NEW ASPHALT PAVEMENT
AND STRIPING - SEE CIVIL
DRAWINGS

ZONING COMPARISON CHART

ZONING	EXISTING PL (PUBLIC LAND DISTRICT)	PROPOSED PL (PUBLIC LAND DISTRICT)
GROSS LOT AREA	21,322 S.F.	21,322 S.F.
MAXIMUM USABLE FLOOR AREA IN PERCENTAGE OF LOT AREA	5% (1,161 S.F.)	24% (1,161 S.F. + 4,000 S.F.)
SETBACKS	FRONT (N. FOURTH AVE)	48'10" (TO EXIST. BUILDING) 24' (TO NEW BUILDING)
	FRONT (DETROIT ST.)	47'7" (TO EXIST. BUILDING) 47'7" (TO EXIST. BUILDING)
	SIDE (NORTH)	150'5" (TO EXIST. BUILDING) 73'2" (TO NEW BUILDING)
	SIDE (SOUTH)	1' (TO EXIST. BUILDING) 1' (TO EXIST. BUILDING)
BUILDING HEIGHT	1 STORY	1 STORY
PARKING - AUTOMOBILES	61	40
PARKING - BICYCLES	0	0

* NO AREA, HEIGHT AND PLACEMENT REGULATIONS APPLY IN THE PL ZONING DISTRICT.

DIMENSIONAL PLAN

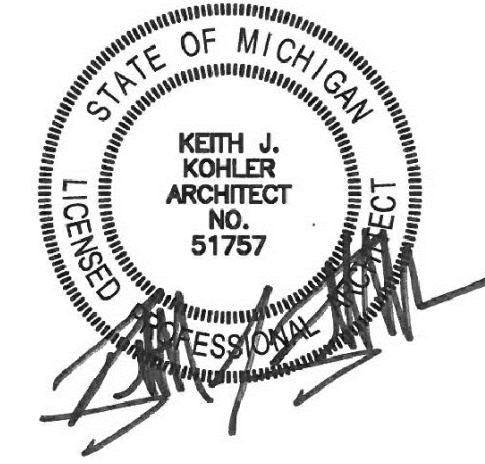
NEW FARMERS MARKET ENCLOSURE
 4TH ANN ARBOR FARMERS MARKET
 315 DETROIT STREET, SECTION 29, CITY OF ANN ARBOR, WASHTENAW COUNTY, MI
 FOR ANN ARBOR PARKS & RECREATION DEPARTMENT SERVICES
 301 EAST HURON STREET, ANN ARBOR, MI 48107

DR. **KJK** CK. **MWK** 9/6/16 BIDDING
 7/6/16 FSP REVIEW
 6/20/16 REVISION
 5/31/16 CPC REVIEW

© COPYRIGHT 2016
KOHLER
 ARCHITECTURE, INC.
 #1627

DATE STATUS
 JOB ITB No. 4454
 SHEET SP1 OF 2

1118 WEST FRONT STREET
 MONROE, MICHIGAN 48161
 PHONE: 734-242-6880, FAX: 734-242-6883



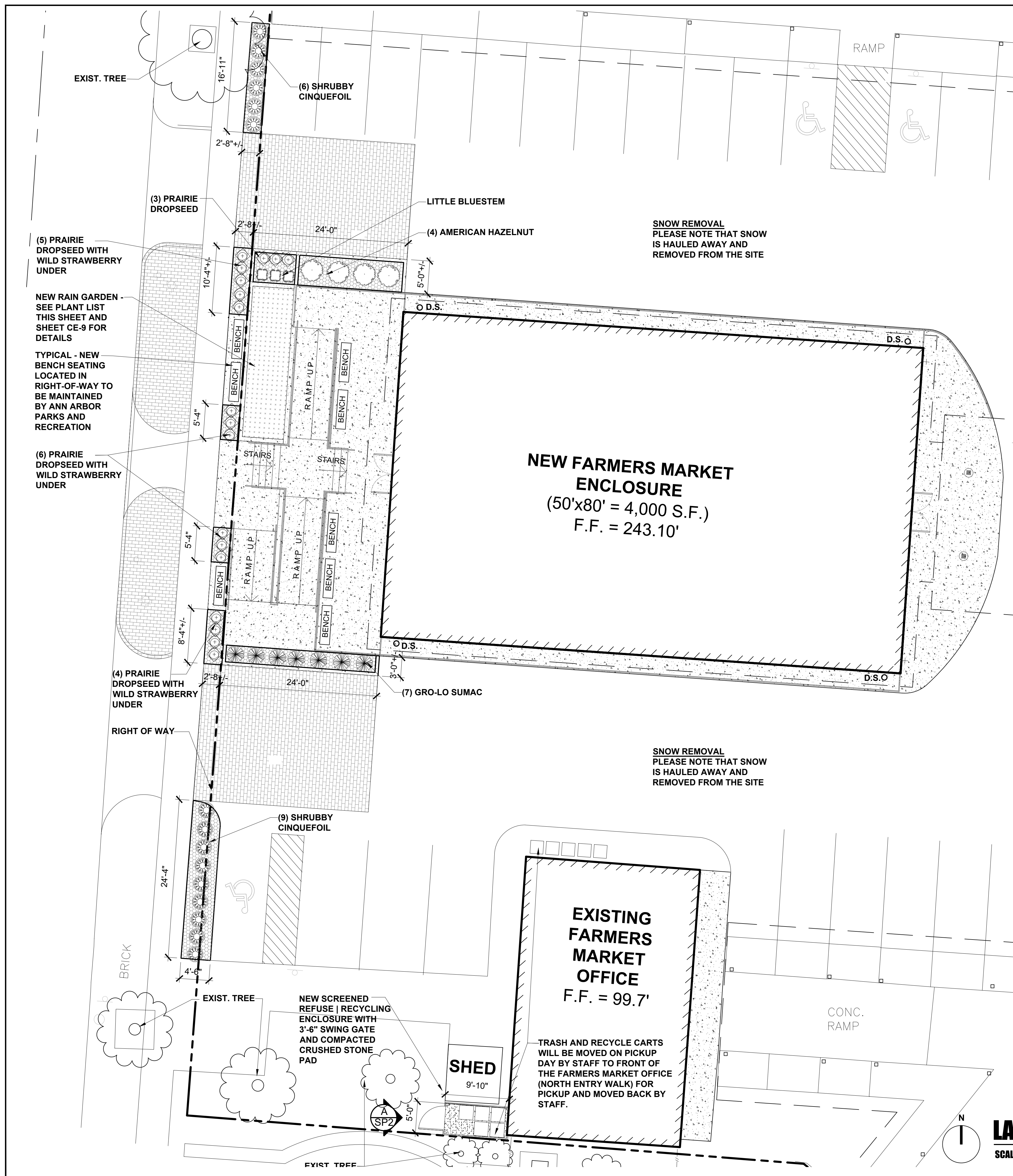
CONCEPT SITE PLAN
 SCALE = 1" = 10'-0"

EXISTING FARMERS MARKET OFFICE
 F.F. = 99.7'

SHED

TRASH AND RECYCLE CARTS
 WILL BE MOVED ON PICKUP
 DAY BY STAFF TO FRONT OF
 THE FARMERS MARKET OFFICE
 (NORTH ENTRY WALK) FOR
 PICKUP AND MOVED BACK BY
 STAFF.





LANDSCAPING LEGEND

QUANTITY	COMMON NAME	LATIN NAME	SPACING
15	SHRUBBY CINQUEFOIL	POTENTILLA FRUTICOSA	30" ON CENTER
15	PRAIRIE DROPSEED	SPOROBOLUS HETEROLEPSIS	18" ON CENTER
7	GRO-LO SUMAC	RHUS AROMATIC 'GRO-LOW'	4' ON CENTER
4	AMERICAN HAZELNUT	CORYLUS AMERICANA	6' ON CENTER
40	WILD STRAWBERRY	FRAGARIA VIRGINIANA	18" ON CENTER
114	LITTLE BLUESTEM	SCHIZACHYRIUM SCOPARIUM	SEEDS AND PLUGS

NOTES:

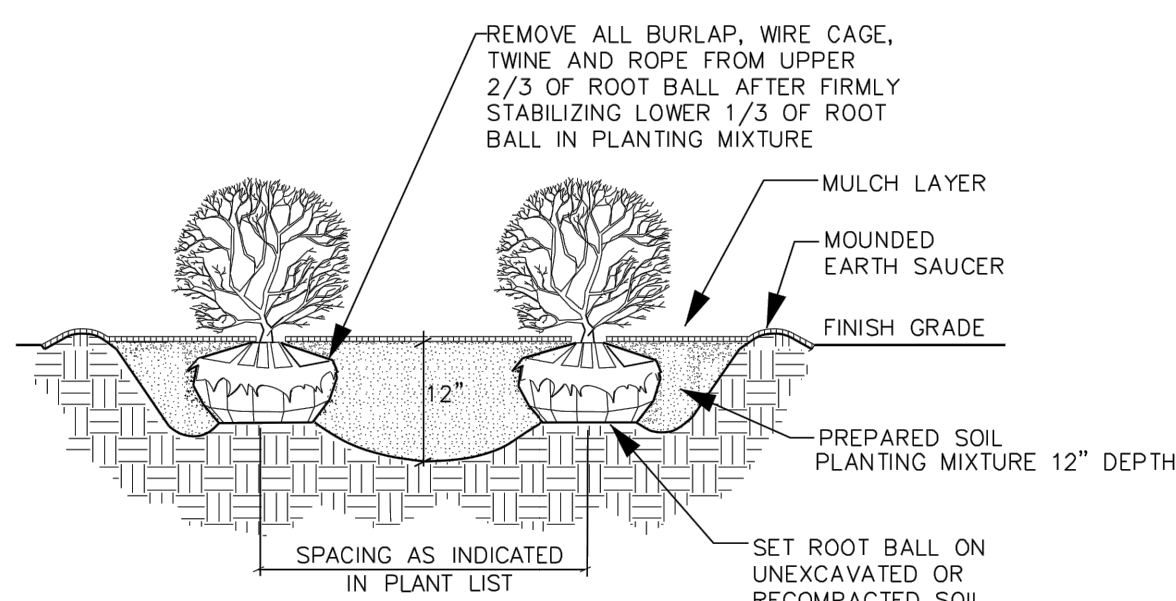
1. ALL DISTURBED AREAS SHALL BE SEEDED OR PLANTED AS SHOWN.
2. ON-SITE TOPSOIL SHALL BE STRIPPED, STOCKPILED, SCREENED AND RE-USED.
3. PLANTING BEDS SHALL INCLUDE 15' OF PLANT MIX, COMPOSED OF 1/3' SCREENED TOPSOIL, 1/3 CERTIFIED COMPOST AND 1/3 SAND.
4. ALL PLANTINGS OF TREES, PERENNIALS AND BOULDERS SHALL BE FIELD LOCATED AND VERIFIED WITH OWNER AND ARCHITECT PRIOR TO INSTALLING.

QUANTITY	COMMON NAME	LATIN NAME
114	LITTLE BLUESTEM	SCHIZACHYRIUM SCOPARIUM

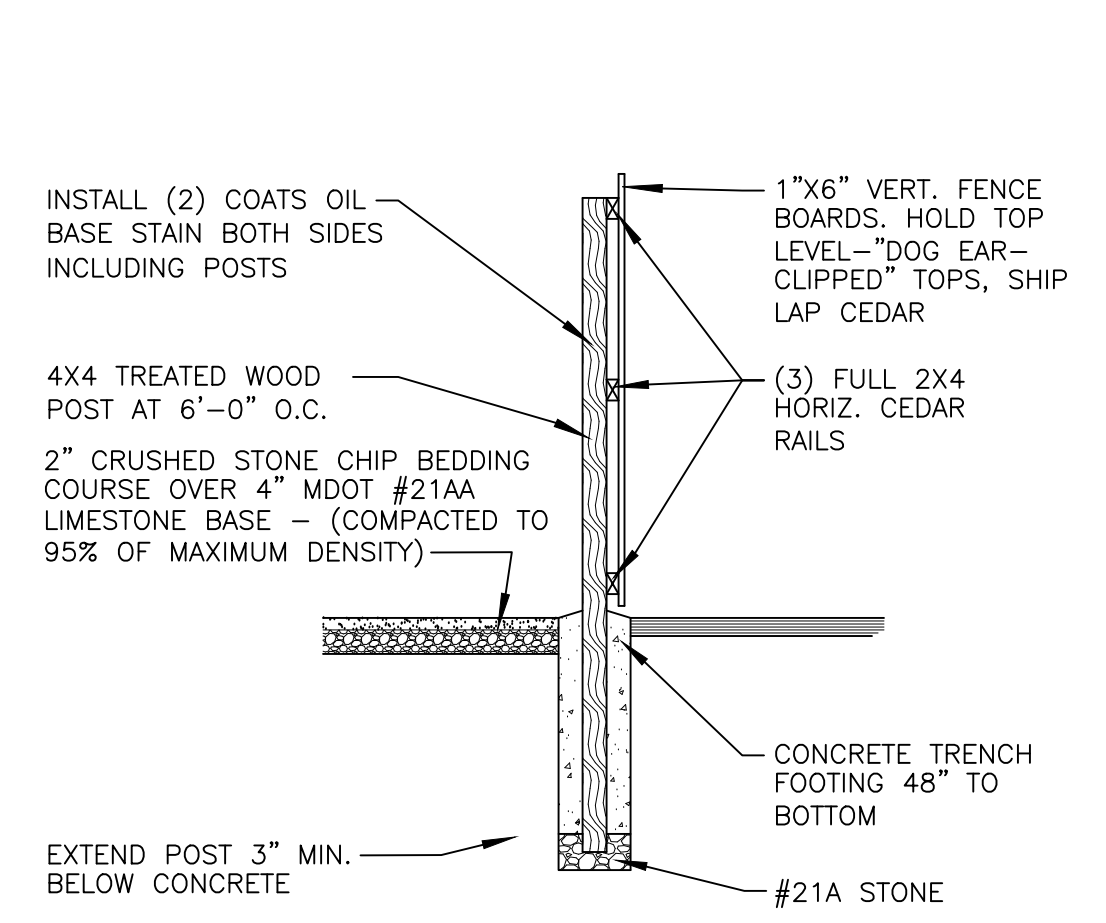
(THE REST OF THE PLANTS INTERSPERSED IN THE RAIN GARDEN)

38	WILD STRAWBERRY	FRAGARIA VIRGINIANA
38	WILD ONION	ALLIUM CERUUM
38	SKY-BLUE ASTER	ASTER OOLENTANGIENSIS

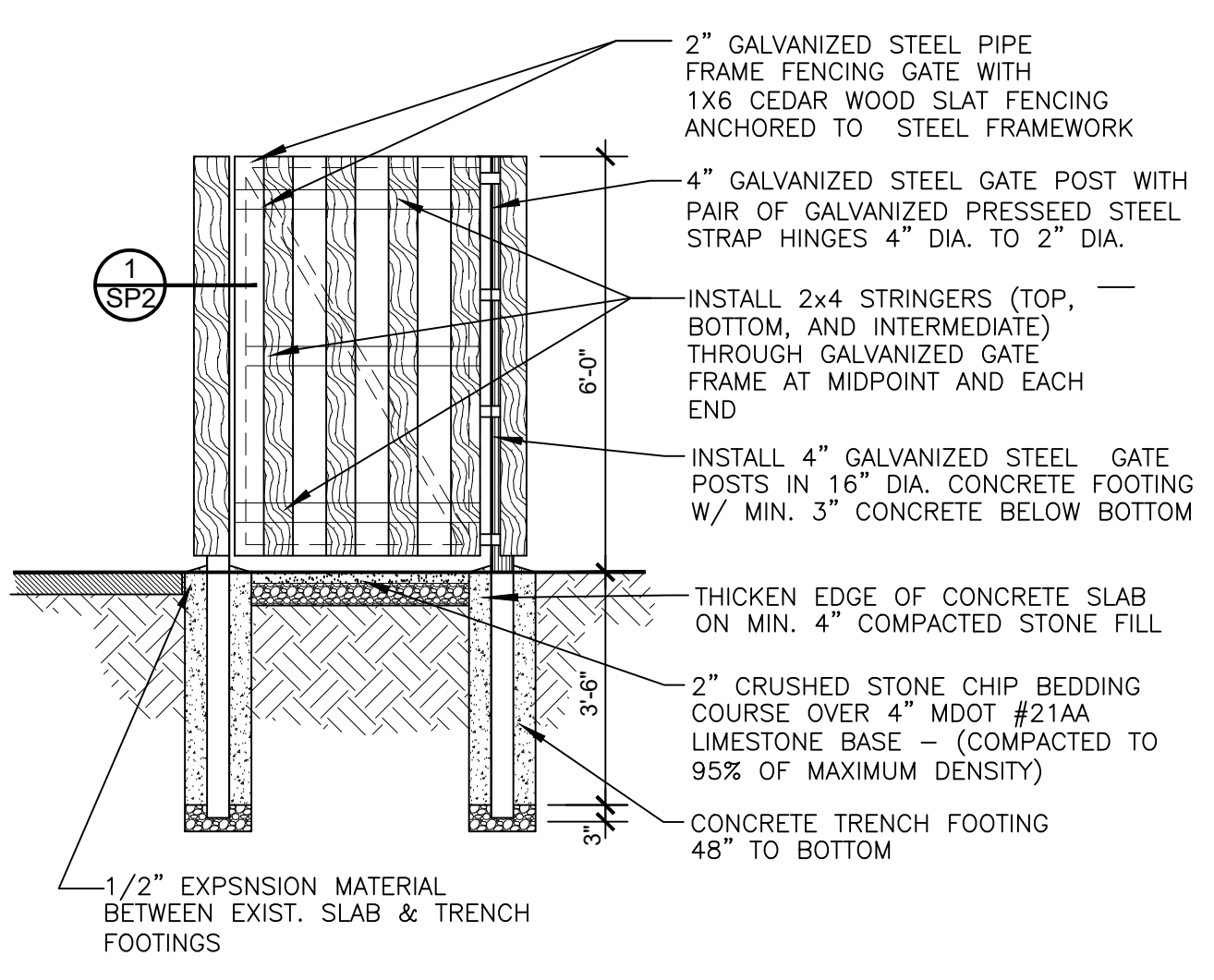
- ### LANDSCAPING NOTES
1. ALL PLANTING SIZES SHOWN SHALL BE AT TIME OF PLANTING
 2. ALL PLANT MATERIAL SHALL BE FREE OF DISEASE AND INSECTS AND SHALL CONFORM TO THE AMERICAN STANDARD FOR NURSERY STOCK OF THE AMERICAN ASSOCIATION OF NURSERYMEN.
 3. ALL LANDSCAPING SHALL BE MAINTAINED A HEALTHY CONDITION, ANY DEAD OR DISEASED PLANTINGS SHALL BE REMOVED AND REPLACED WITHIN 1 YEAR.
 4. ALL LANDSCAPE BEDS SHALL USE MULCH BEDS WITH CYPRUS MULCH - COLOR PER OWNER. INSTALL WEED BARRIER IN ALL BEDS EXCEPT RAIN GARDEN.
 5. LANDSCAPE PLAN SHALL BE MINIMUM REQUIRED PLANTINGS. CONTRACTOR / OWNER MAY INSTALL MORE PLANTINGS AS DESIRED.
 6. ALL DISEASED, DAMAGED OR DEAD MATERIALS SHALL BE REPLACED IN ACCORDANCE WITH CITY REQUIREMENTS.
 7. ALL PLANTINGS SHALL BE COMPLETED WITHIN A THREE (3) MONTH TIME PERIOD AND SHALL NOT BE PLANTED LATER THAN NOVEMBER 30TH. NOR EARLIER THAN THE FIRST DAY OF APRIL.



2 MASS SHRUB PLANTING
SP2 B&B OR CONTAINER



1 FENCE DETAIL
SP2 SCALE: 3/8" = 1'-0"



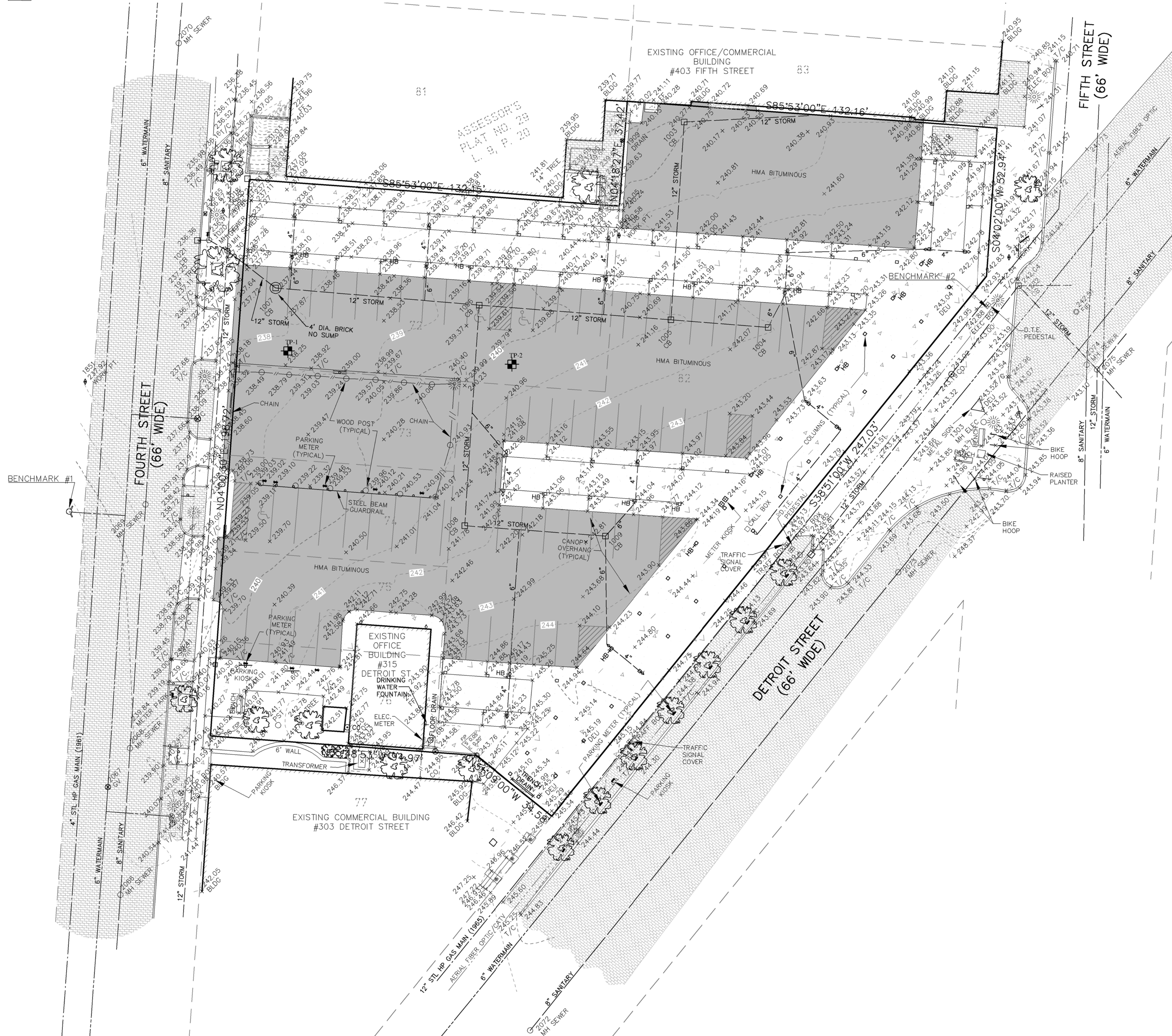
A REFUSE | RECYCLING
CONTAINER SCREENING
SCALE: 3/8" = 1'-0"



LANDSCAPE PLAN

SCALE = 1/8" = 1'-0"

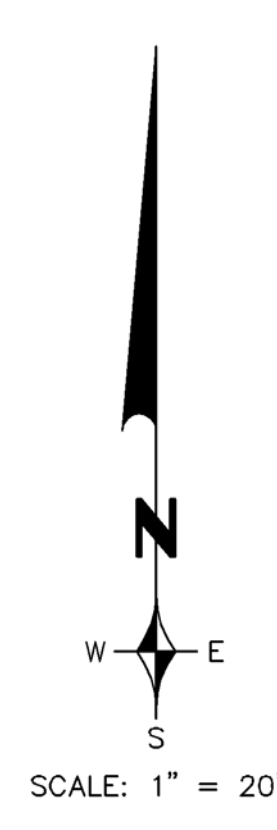
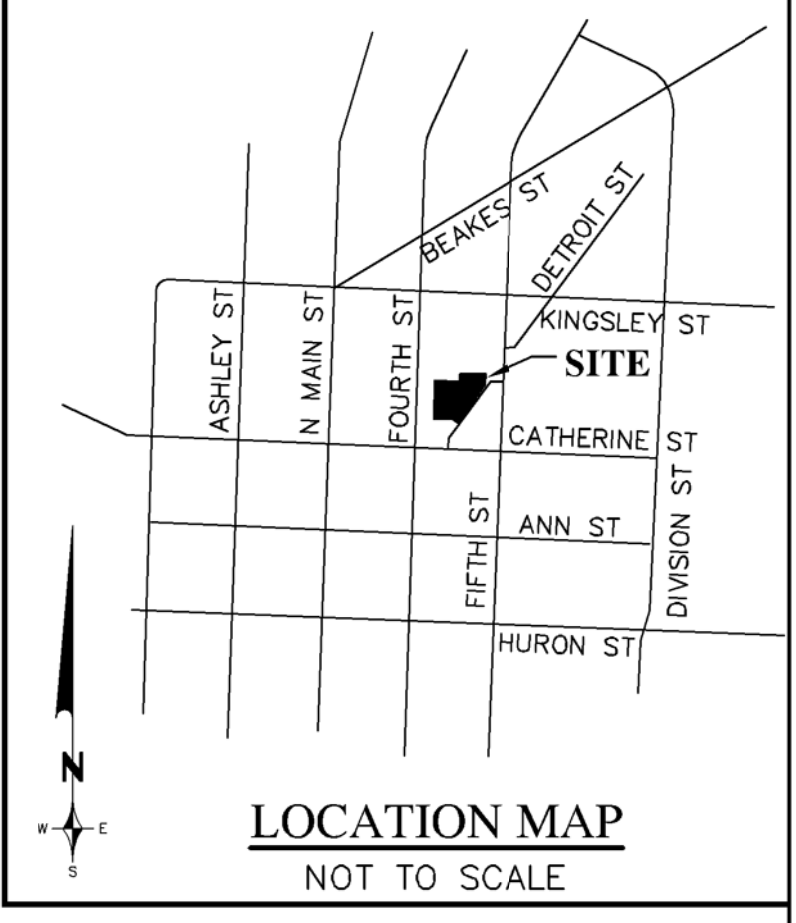
LANDSCAPE PLAN		NEW FARMERS MARKET ENCLOSURE		DR. KJK	CK. MWK	9/6/16	BIDDING
4 th ANN ARBOR FARMERS MARKET		315 DETROIT STREET, SECTION 29, CITY OF ANN ARBOR, WASHTENAW COUNTY, MI				7/6/16	FSP REVIEW
FOR ANN ARBOR PARKS & RECREATION DEPARTMENT SERVICES		301 EAST HURON STREET, ANN ARBOR, MI 48107				6/20/16	REVISION
© COPYRIGHT 2016 KOHLER ARCHITECTURE, INC.		#1627				5/31/16	CPC REVIEW
JOB ITB No. 4454		SHEET SP2 OF 2					



LEGEND

- BOUNDARY LINE
- - - - - PARCEL LINE
- - - - - FENCE LINE
- - - - - OVERHEAD WIRE
- - - - - GAS MAIN
- - - - - FIBER OPTIC
- - - - - SANITARY SEWER
- - - - - WATERMAIN
- - - - - STORM SEWER
- - - - - FIB, FCI, SCI
- - - - - FOUND IRON PIPE
- - - - - FOUND CAPPED PIPE
- - - - - SET CAPPED IRON
- - - - - MANHOLE
- - - - - CATCH BASIN

- GATE VALVE
- HYDRANT
- WATER SHUT-OFF
- UTILITY POLE
- GUY ANCHOR
- LIGHT POLE
- SIGN AND POST
- GROUND SIGN
- DOWNSPOUT
- DECIDUOUS TREE
- CONCRETE PAVEMENT
- ASPHALT PAVEMENT
- TEST PIT



LEGAL DESCRIPTION:
LOTS 72, 73, 74, 75, 76 AND 82, ASSESSOR'S PLAT NO. 29, A REPLAT OF BLOCKS 3 AND 4 NORTH, RANGES 4, 5 AND 6 EAST ON THE PLAT OF THE VILLAGE OF ANN ARBOR, CITY OF ANN ARBOR, WASHTENAW COUNTY, MICHIGAN, ACCORDING TO THE PLAT THEREOF AS RECORDED IN LIBER 9 OF PLATS, PAGE 20, WASHTENAW COUNTY RECORDS.

BENCHMARKS:
1. STEAMER VALVE ON HYDRANT WEST SIDE OF FOURTH STREET, IN FRONT OF HOUSE #347. ELEV. 241.31 NAVD 88.
2. P.K. NAIL IN CONCRETE BASE FOR A TRAFFIC CONTROL BOX. ELEV. 243.36 NAVD 88.

SURVEY NOTES:
DUE TO ADVERSE WEATHER CONDITIONS, AT TIME OF FIELD SURVEY ANY UTILITIES THAT ARE NOT OF PUBLIC RECORD, MAY NOT HAVE BEEN LOCATED.

SOIL CONDITIONS:
ACCORDING TO THE "USDA-SCS SURVEY FOR WASHTENAW COUNTY, MICHIGAN", AS ISSUED JUNE, 1977; THE SITE IS CLASSIFIED AS:
FOB - FOX SANDY LOAM, 2 TO 6 PERCENT SLOPES.

NATURAL FEATURES DESCRIPTION:
THERE ARE NO WOODLANDS, WETLANDS, WATERCOURSES, STEEP SLOPES, FLOODPLAINS AND/OR INDIGENOUS SPECIES HABITAT ON THIS PROPERTY. THERE ARE NO EXISTING LANDMARK TREES PRESENT.

STRUCTURE TABLE:

POINT	DESCRIPTION	RIM	PIPESIZE	DIRECTION	INVERT
1003	CATCH BASIN	239.91	12"	S	236.31
1004	CATCH BASIN	241.88	12"	W	236.88
1005	CATCH BASIN	240.82	12"	N	236.23
			12"	W	235.83
			12"	E	235.83
1006	CATCH BASIN	239.10	12"	S	234.80
			12"	W	234.10
			12"	E	234.00
			12"	E	232.40
1007	CATCH BASIN	237.10	12"	NW	232.60
1008	CATCH BASIN	241.56	12"	N	236.36
			12"	E	236.36
1009	CATCH BASIN	242.97	12"	W	238.07
1019	STORM MH	237.18	12"	W	231.88
			12"	SE	231.98
			12"	NW	231.78
1020	STORM MH	237.04	12"	SE	231.74
			12"	N	231.84
			12"	W	232.44
			12"	E	232.66
			12"	SW	231.96
1282	CATCH BASIN	241.85	12"	E	239.45
			12"	SW	239.55
2066	SANITARY MH	241.54	8"	N	
			8"	S	
2067	WM GATE VALVE	240.52	6"	N	
			6"	S	
2068	SANITARY MH	240.11	8"	N	230.81
			8"	S	230.81
2069	SANITARY MH	238.47	8"	N	229.57
			8"	S	229.57
2070	SANITARY MH	236.07	8"	N	227.17
			8"	E	227.17
2072	SANITARY MH	245.55	8"	NE	
2073	SANITARY MH	243.61	8"	SW	236.21
			8"	NE	236.21
			8"	N	233.86
2074	SANITARY MH	242.96	8"	S	233.86
			8"	S	238.64
2075	STORM MH	242.94	12"	SE	238.44
			12"	NW	238.64
			12"	SW	238.60
			12"	S	238.84

NOTE:
THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AS DISCLOSED BY AVAILABLE UTILITY COMPANY RECORDS AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE COMPANY. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES. THE CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER IMMEDIATELY IF A CONFLICT IS APPARENT.

TOPOGRAPHIC SURVEY Civil Engineers & Land Surveyors 5580 GRAND RIVER AVE., SUITE 100 NEW HUDSON, MICHIGAN 48165 P: (248) 437-5099 F: (248) 437-5222 www.zeimetwozniak.com ZWA JOB NO. 16104	NEW FARMERS MARKET ENCLOSURE AT ANN ARBOR FARMERS MARKET 315 DETROIT STREET, SECTION 29, CITY OF ANN ARBOR, WASHTENAW COUNTY, MI FOR ANN ARBOR PARKS & RECREATION DEPARTMENT 301 EAST HURON STREET, ANN ARBOR, MI 48107		DR. PTG CK. JWW	9/6/16 BIDDING 7/6/16 FSP REVIEW 6/20/16 REVISION 5/31/16 OPC REVIEW
	 KOHLER ARCHITECTURE, INC. #1627 1118 WEST FRONT STREET MORROE, MICHIGAN 48161 PHONE: 734-242-8880, FAX: 734-242-8883		© COPYRIGHT 2016 KOHLER ARCHITECTURE, INC. #1627 COPING THIS DRAWING IS PROHIBITED AND SUBJECT TO PROSECUTION.	DATE STATUS JOB # ITB No. 4454 SHEET CE-1

Z:\Projects\16104\dwg\16104 TOPO.dwg, CE-1 TOPOGRAPHIC SURVEY, 9/11/2016 12:47:28 PM, LIT

COMMUNITY ANALYSIS:

PROPOSED INFRASTRUCTURE IMPROVEMENTS FOR THE ANN ARBOR FARMERS MARKET FOCUS ON A NEW MARKET STRUCTURE TO EXPAND VENDOR STALL CAPACITY YEAR-ROUND. THE PROJECT IS INTENDED TO IMPROVE THE EXPERIENCE FOR ALL USERS AS THE MARKET EVOLVES, CONTINUES TO PROVIDE A CRITICAL OUTLET FOR LOCAL FOOD AND SERVES AS A CENTRAL COMMUNITY GATHERING SPACE THROUGHOUT THE YEAR. THE MARKET PROJECT FIRST IDENTIFIED IN THE CITY'S CAPITAL IMPROVEMENT PLAN HIGHLIGHTED THE NEED TO IMPROVE WINTER CAPACITY AT THE FARMERS MARKET. THIS PROJECT IS INTENDED TO REALIZE IMPROVED STALL SPACE FOR THE MARKET'S VENDORS IN ALL SEASONS. THE PROJECT REFLECTS THE PRIORITIES OF THE PUBLIC MARKET ADVISORY COMMISSION, WHICH HAS ADVOCATED FOR THE EXPANSION AND IMPROVEMENT OF MARKET INFRASTRUCTURE FOR WINTER PURPOSES.

- A. IMPACT PROPOSED DEVELOPMENT ON PUBLIC SCHOOLS - NO CHANGE
- B. RELATIONSHIP OF INTENDED USE ON NEIGHBORING USES - NO CHANGE
- C. IMPACT OF ADJACENT USES ON PROPOSED DEVELOPMENT - NO CHANGE
- D. IMPACT OF PROPOSED DEVELOPMENT ON AIR AND WATER QUALITY AND ON EXISTING NATURAL FEATURES ON THIS SITE AND NEIGHBORING SITES - NO CHANGE
- E. IMPACT OF PROPOSED DEVELOPMENT ON HISTORIC SITES AND STRUCTURES WITHIN A HISTORIC DISTRICT OR LISTED IN THE NATIONAL REGISTER OF HISTORIC PLACES - NO CHANGE

DEVELOPMENT PROGRAM / STATEMENT OF INTEREST:

THE CITY OF ANN ARBOR PARKS & RECREATION SERVICES IS COMMITTED TO IMPROVING THIS PARK SPACE WITHIN THE DOWNTOWN AREA OF THE CITY OF ANN ARBOR.

THE PHYSICAL LOCATION FOR THE PROPOSED STRUCTURE CURRENTLY FUNCTIONS AS AN UNSHELTERED, PAVED LOT THAT ACCOMMODATES UP TO 18 VENDORS DURING THE BUSIEST MONTHS OF THE MARKET SEASON. PRELIMINARY VENDOR LAYOUTS WITHIN THE NEW STRUCTURE WOULD PROVIDE 24 ADDITIONAL SPACES THROUGHOUT THESE BUSY MONTHS FOR A TOTAL OF 42 VENDOR SPACES. THE DESIGN INCORPORATES LARGE, BI-FOLD AND GARAGE-STYLE DOORS ON THE SIDES AND ENDS OF THE NEW MARKET STRUCTURE, WHICH WILL BE OPENED FOR MARKET DATES DURING THE MONTHS OF APRIL THROUGH DECEMBER TO MIRROR THE OPEN-AIR ENVIRONMENT OF THE EXISTING MARKET.

THE BUILDING WILL ALSO PROVIDE SUFFICIENT SHELTER DURING THE COLDEST MONTHS OF THE YEAR. ON AVERAGE, 30 VENDORS ATTEND THE MARKET DURING THE MONTHS OF JANUARY THROUGH MARCH. WITH THE PROPOSED INDOOR STALL LAYOUT, 28 ADDITIONAL VENDORS COULD BE ACCOMMODATED IN A HEATED, INDOOR SPACE, FOR A TOTAL OF 58 VENDOR SPACES DURING THESE WINTER MONTHS.

THE PROPOSED VENDOR STALL LAYOUTS MORE THAN DOUBLE THE NUMBER OF STALL SPACES CURRENTLY AVAILABLE IN THE PAVED LOT AREA. THIS INCREASED CAPACITY ACCOMMODATES ALL MARKET VENDORS MORE EQUITABLY BY PROVIDING COVERED STALL SPACES. IT ALSO HAS THE POTENTIAL TO ALLEVIATE SIDEWALK CONGESTION WHICH HAS INCREASED IN RECENT YEARS AS THE NUMBER OF VENDORS OPERATING AT MARKET HAS INCREASED IN AN EFFORT TO SATISFY THE GROWING CONSUMER DEMAND FOR LOCAL FOOD.

THE PROJECT HAS AN ESTIMATED COST OF \$850,000.00.

TRAFFIC IMPACT STATEMENT:

THE PROPOSED PROJECT DOES NOT MEET THE THRESHOLD REQUIRING TRAFFIC ANALYSIS. THE PROJECT WILL GENERATE 1 TRIP PER ADDITIONAL VENDOR. THE PEAK HOUR OF GENERATION FOR THE ADDITIONAL VENDORS WOULD BE A MAXIMUM OF 18.

SOLID WASTE DISPOSAL:

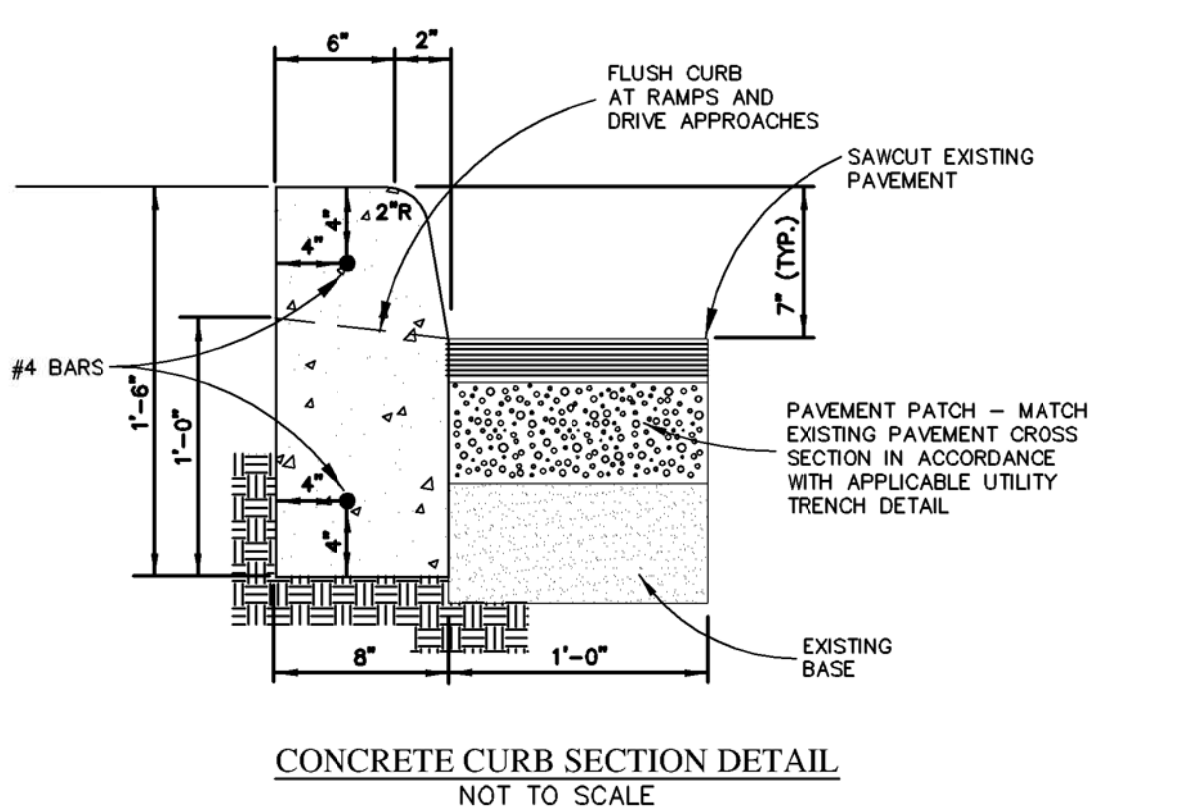
UPON VACATING THE PREMISES EACH MARKET DAY, STALLS AND PARKING SPACES ARE CLEANED AND SWEEPED BY THE VENDORS, AND ALL TRASH IS REMOVED BY THE VENDORS AND PROPERLY DISPOSED OF OR PLACED IN CONTAINERS DESIGNATED BY THE MARKET MANAGER. WHEN NOT IN USE, THE CONTAINERS SHALL BE STORED IN A SCREENED ENCLOSURE. THE CONTAINERS WILL BE PICKED UP AND EMPTIED BY A.A.P.R. PERSONAL.

NATURAL FEATURES IMPACT:

THERE ARE NO NATURAL FEATURES PRESENT ON THIS SITE TO BE IMPACTED BY THE PROPOSED PROJECT.

RACEWAY SPECIFICATIONS:

RACEWAYS: UNLESS NOTED OTHERWISE, ALL NEW LINE VOLTAGE WIRING SHALL BE INSTALLED IN SPECIFIED RACEWAYS. RACEWAYS INSTALLED EXPOSED OUTDOORS SHALL BE RIGID, METAL CONDUIT, SCHEDULE 40, HOT-DIPPED GALVANIZED, 1 INCH TRADE SIZE MINIMUM, INSTALLED PER NEC 344, COMPLETE WITH THREADED FITTINGS, DOUBLE LOCK-NUTS AND BUSHINGS AT BOXES AND CABINETS. FIELD CUT THREADS SHALL BE COATED WITH Z.R.C. COLD GALVANIZING SPRAY OR OTHER RUST-INHIBITING MATERIAL AFTER INSTALLATION. UNDERGROUND EXTERIOR RACEWAYS IN TRADE SIZES 3/4 INCH DIA. AND LARGER, MAY BE SCHEDULE 40 PVC PER NEC 352, WITH INSULATED GROUND WIRE, AND RGS ELBOWS AND RISERS. UTILIZE SCHEDULE 80 WHERE SUBJECT TO ABUSE. CONNECTIONS TO ITEMS SUBJECT TO VIBRATION OR OCCASIONAL MOTION, SHALL BE MADE WITH FLEXIBLE METAL, ZINC-COATED STEEL CONDUIT OR MC CABLE, COMPLETE WITH STEEL FITTINGS, IN LENGTHS NOT TO EXCEED 6 FEET, INSTALLED PER NEC. WHERE SUBJECT TO DAMPNESS OR OILY ENVIRONMENTS, FLEXIBLE CONDUIT SHALL BE NEOPRENE JACKETED, COMPLETE WITH APPROVED FITTINGS. RACEWAYS ENTERING REFRIGERATED SPACES, PENETRATING EXTERIOR WALLS, OR ENTERING BELOW GRADE SHALL BE SEALED TO PREVENT THE PASSAGE OF MOISTURE AND CONDENSATION.

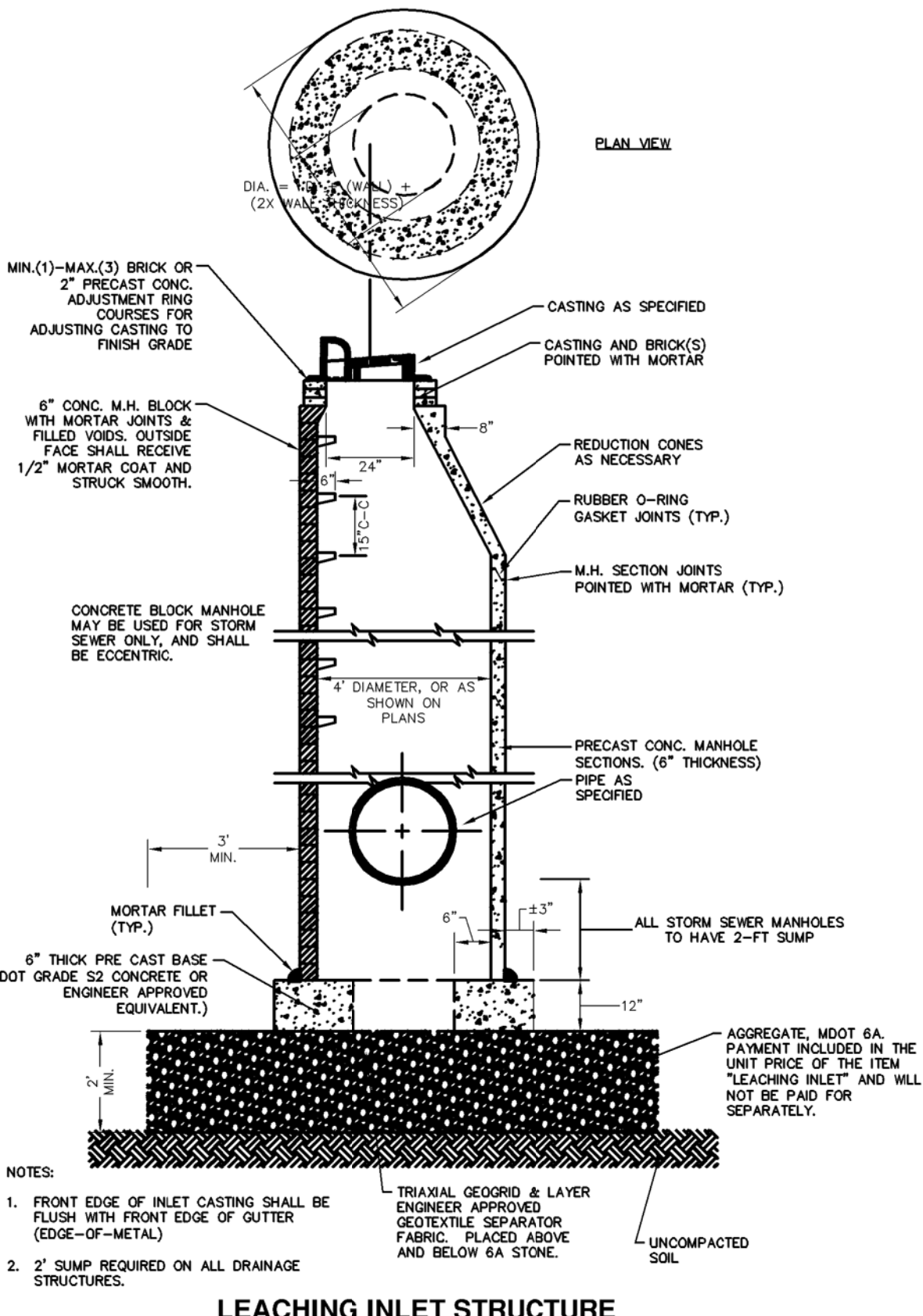
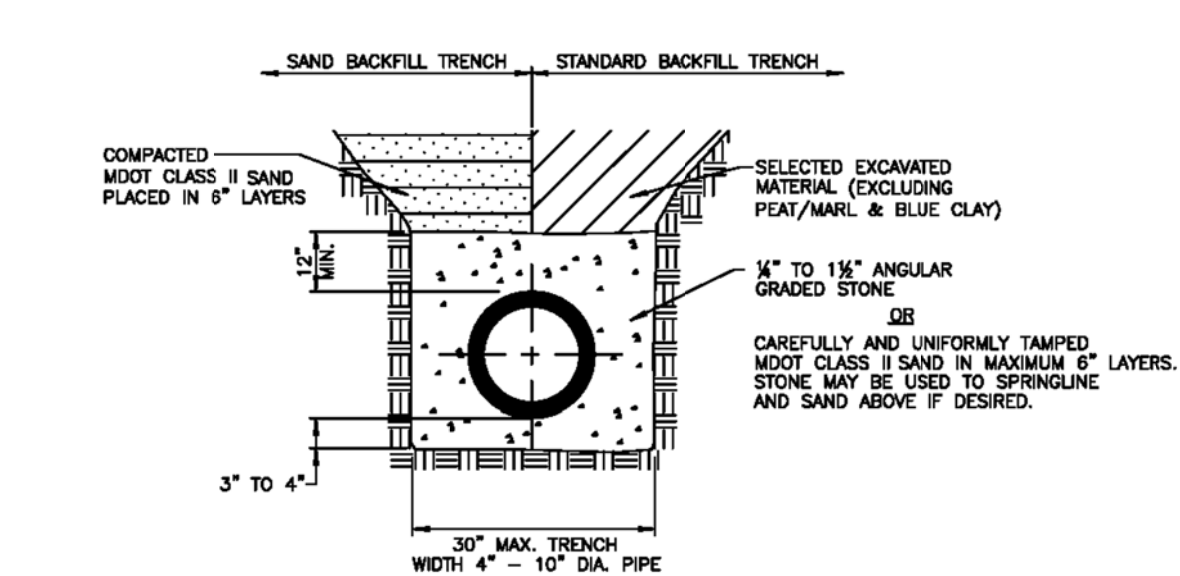


SIDEWALK REPAIR AND MAINTENANCE NOTE:

PER CHAPTER 49, SECTION 4:58 OF THE CITY CODE, ALL SIDEWALKS ARE TO BE KEPT AND MAINTAINED IN GOOD REPAIR BY THE OWNER OF THE LAND ADJACENT TO AND ABUTTING SAME. PRIOR TO THE ISSUANCE OF THE FINAL CERTIFICATE OF OCCUPANCY FOR THIS SITE, ALL EXISTING SIDEWALKS IN NEED OF REPAIR MUST BE REPAIRED IN ACCORDANCE WITH THE CITY STANDARDS.

GENERAL GRADING NOTES:

1. CONTRACTOR TO FIELD VERIFY ALL EXISTING TREES AND BRUSH AND REMOVE ALL THAT ARE NECESSARY TO GRADE THE SITE. REFER TO THE LANDSCAPE PLANS FOR DETAILS.
2. ALL PROPOSED GRADES ARE TOP OF PAVEMENT (T/P) UNLESS NOTED OTHERWISE.
3. THE STAGING OF CONSTRUCTION ACTIVITIES SHALL OCCUR ONLY WITHIN THE SITE'S BOUNDARIES. ANY CONSTRUCTION ACTIVITIES OUTSIDE OF THE SITE'S BOUNDARIES SHALL BE AT THE SOLE RISK AND RESPONSIBILITY OF THE CONTRACTOR.
4. ALL SOIL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL MEET THE CITY OF ANN ARBOR'S REQUIREMENTS. AN SESC PERMIT MUST BE SECURED FROM THE CITY PRIOR TO THE START OF CONSTRUCTION.
5. ALL EARTHWORK AND GRADING OPERATIONS SHALL BE PERFORMED IN ACCORDANCE WITH THE SOILS INVESTIGATION AND REPORT.
6. ALL DISTURBED AREAS SHALL BE STABILIZED WITH SEED AND MULCH. PROVIDE A MINIMUM OF 3 INCHES OF CLEAN TOPSOIL IN THESE AREAS UNLESS NOTED OTHERWISE.
7. THE CONTRACTOR SHALL BE AWARE OF ALL EXISTING UTILITIES AND ADJACENT TO THE SITE. BACKFILL FOR EXISTING UTILITY TRENCHES SHALL BE EXAMINED CRITICALLY. ANY TRENCHES FOUND TO HAVE SOFT, UNSTABLE, OR UNSUITABLE BACKFILL MATERIAL THAT ARE WITHIN THE ZONE OF INFLUENCE OF PROPOSED BUILDINGS OR PAVEMENT SHALL BE IMMEDIATELY EXCAVATED AND BACKFILLED WITH SUITABLE MATERIAL.



STORMWATER BMP ANALYSIS (REV 06-13-2016)

A. OVERVIEW

TOTAL SITE AREA = 46,265 SF OR 1.06 ACRES
 AREA TO BE REDEVELOPED/DISTURBED = 13,639 SF OR 0.31 ACRES
 % REDEVELOPMENT = 13,639 / 46,265 = 29.3%

BECAUSE LESS THAN 50% OF THE SITE IS SLATED FOR REDEVELOPMENT, THE ENTIRE SITE IS NOT SUBJECT TO ALL OF THE CITY'S REQUIREMENTS FOR STORM WATER MANAGEMENT UNDER PART 5:655 OF CHAPTER 63 OF THE CITY'S CODE OF ORDINANCES.

- FOR THE AREA TO BE REDEVELOPED, WE MUST:
- PROVIDE STORAGE FOR RUNOFF FROM THE 100-YEAR FLOOD EVENT
 - PROVIDE STORAGE FOR RUNOFF FROM THE BANKFULL STORM EVENT
 - INFILTRATE THE VOLUME FROM THE FIRST FLUSH STORM EVENT

THE SITE HAS BEEN TESTED AND FOUND TO HAVE HIGHLY PERMEABLE SOILS. WE SHALL USE 10"/HR FOR THIS ANALYSIS (THE MAXIMUM ALLOWABLE RATE). A PROGRAM OF BMP'S TO INFILTRATE THE ENTIRE 100-YEAR FLOOD VOLUME SHALL BE UNDERTAKEN TO TAKE ADVANTAGE OF THIS CONDITION.

B. REQUIREMENTS FOR SITE

RUNOFF SUMMARY FROM WORKSHEETS (FROM SHEET W9):

FIRST FLUSH VOLUME (V_{ff}) = 1,138 CF
 BANKFULL VOLUME (V_{bf}) = 2,542 CF
 100-YR VOLUME (V₁₀₀) = 5,823 CF

INFILTRATION VOLUME (V_{inf}) = 2,423 CF
 DETENTION VOLUME (V_{det}) = 3,352 CF

C. RAIN GARDEN

THE ROOF AREA SHALL DISCHARGE TO THE RAIN GARDEN:

ROOF AREA = 4,000 SF
 C = 0.95
 V_{ff} = 1" X 1/12 X 4,000 X 0.95 = 317 CF (FROM SHEET W2)
 V_{bf} = 2.13 X 1/12 X 4,000 = 710 CF (FROM SHEET W5)
 V₁₀₀ = 4.88 X 1/12 X 4,000 = 1,627 CF (FROM SHEET W7)

D. PERMEABLE PAVERS

THE PAVEMENT SHALL FLOW TO PERMEABLE PAVERS INSTALLED ALONG THE (2) FOURTH AVENUE ENTRANCES (ACTING AS MODIFIED TRENCH DRAINS).

V₁₀₀ = 5,823 - 1,627 = 4,196 CF

AT THE ENTRANCES:

1. TOTAL SURFACE AREA = 1013 SF
2. STORAGE VOLUME = 1013 SF X 2" DP X 0.30 = 607.8 CF
3. INFILTRATION VOLUME = 1013 SF X 10"/HR X 6 HR X 1/12 = 506.5 CF
4. TOTAL AVAILABLE VOLUME = 345 + 310.5 + 776.25 = 8418.0 CF

THE TOTAL AVAILABLE STORAGE VOLUME EXCEEDS THE REQUIREMENTS FOR THE 100-YR STORM.

D. PERMEABLE PAVERS

THE PAVEMENT SHALL FLOW TO PERMEABLE PAVERS INSTALLED ALONG THE (2) FOURTH AVENUE ENTRANCES (ACTING AS MODIFIED TRENCH DRAINS).

V₁₀₀ = 5,823 - 1,627 = 4,196 CF

D. PERMEABLE PAVERS

AT THE ENTRANCES:

1. TOTAL SURFACE AREA = 1013 SF
2. STORAGE VOLUME = 1013 SF X 2" DP X 0.30 = 607.8 CF
3. INFILTRATION VOLUME = 1013 SF X 10"/HR X 6 HR X 1/12 = 506.5 CF
4. TOTAL AVAILABLE VOLUME = 607.8 + 506.5 = 5,672.8 CF

THE TOTAL AVAILABE STORAGE VOLUME EXCEEDS THE REQUIREMENTS FOR THE 100-YR STORM.

STORMWATER MANAGEMENT SYSTEM COMPUTATIONS (REV 06-13-2016)

THE FOLLOWING ANALYSIS HAS BEEN PREPARED USING PART E OF THE WASHINGTON COUNTY WATER RESOURCES COMMISSIONERS' RULES AND GUIDELINES FOR STORMWATER MANAGEMENT SYSTEMS AS ISSUED ON AUGUST 6, 2014.

THE SOILS FOR THIS SITE HAVE BEEN CLASSIFIED AS "FOX SANDY LOAM" (THIS IS A TYPE B SOIL) AND HAVE BEEN TESTED. THE INFILTRATION RATE WAS FOUND TO BE APPROXIMATELY 105 INCHES PER HOUR. FOR THIS ANALYSIS, WE SHALL USE 10"/HR (THE MAXIMUM ALLOWABLE RATE PER WCRC STANDARDS).

W1 - DETERMINING COVER TYPES, AREAS, CURVE NUMBERS, AND RUNOFF COEFFICIENTS

A. TOTAL DISTURBED SITE AREA = 14,319 sf OR 0.33 ac.
 TOTAL SITE AREA EXCLUDING SELF-CREDITING BMP'S = 0.33 ac

B. RATIONAL METHOD VARIABLES:

COVER TYPE	SOIL TYPE	AREA (sf)	AREA (ac)	C	CXA
PAVT/ROOF	B	14,319	0.33	0.95	0.31

WEIGHTED RUNOFF COEFFICIENT C = 0.31 / 0.33 = 0.95

C. NRCS VARIABLES (FOR IMPERVIOUS ROOF AND PAVEMENT AREA):

THERE IS NO PERVIOUS COVER ON THIS SITE.

D. NRCS VARIABLES (FOR IMPERVIOUS ROOF AND PAVEMENT AREA):

IMPERVIOUS COVER TYPE	SOIL TYPE	AREA (sf)	AREA (ac)	CN	CN24
PAVT/ROOF	B	14,319	0.33	98	32.34

WEIGHTED IMPERVIOUS CURVE NUMBER CN = 32.34 / 0.33 = 98

W2 - FIRST FLUSH RUNOFF CALCULATIONS

A. V_{ff} = (1) (1/12) (43560 sf/1Ac) (0.33)(0.95) = 1,138 cf

W3 - PREDEVELOPMENT BANKFULL RUNOFF CALCULATIONS

A. 2 YEAR / 24 HOUR EVENT P = 2.35"
 B. IMPERVIOUS COVER CURVE NUMBER CN = 58 (FOR MEADOW)
 C. S = (1000 / 98) - 10 = 7.24"
 D. Q = (2.35 - (0.2)(7.24))^2 / ((2.35 + (0.8)(7.24)) = 0.10"
 E. TOTAL SITE AREA EXCLUDING SELF-CREDITING BMP'S A = 14,319 sf
 F. V_{bf-pre} = (0.10) (1/12) (14,319) = 119 cf

W4 - PERVIOUS COVER POSTDEVELOPMENT BANKFULL RUNOFF CALCULATIONS

THERE IS NO PERVIOUS COVER ON THIS SITE:
 V_{bf-per-post} = 0 cf

W5 - IMPERVIOUS COVER POSTDEVELOPMENT BANKFULL RUNOFF CALCULATIONS

A. 2 YEAR / 24 HOUR EVENT P = 2.35"
 B. IMPERVIOUS COVER CURVE NUMBER CN = 98
 C. S = (1000 / 98) - 10 = 0.20"
 D. Q = (2.35 - (0.2)(0.20))^2 / ((2.35 + (0.8)(0.20)) = 2.13"
 E. IMPERVIOUS COVER AREA A = 14,319 sf
 F. V_{bf-imp-post} = (2.13) (1/12) (14,319) = 2,542 cf

W6 - PERVIOUS COVER POSTDEVELOPMENT 100-YEAR STORM RUNOFF CALCULATIONS

THERE IS NO PERVIOUS COVER ON THIS SITE:
 V_{100-per-post} = 0 cf

W7 - IMPERVIOUS COVER POSTDEVELOPMENT 100-YEAR STORM RUNOFF CALCULATIONS

A. 100 YEAR / 24 HOUR EVENT P = 5.11"
 B. IMPERVIOUS COVER CURVE NUMBER CN = 98
 C. S = (1000 / 98) - 10 = 0.20"
 D. Q = (5.11 - (0.2)(0.20))^2 / ((5.11 + (0.8)(0.20)) = 4.88"
 E. IMPERVIOUS COVER AREA A = 14,319 sf
 F. V_{100-imp-post} = (4.88) (1/12) (14,319) = 5,823 cf

W8 - DETERMINE TIME OF CONCENTRATION FOR APPLICABLE FLOW TYPE

FLOW TYPE	K	CHANGE IN LENGTH ELEVATION	SLOPE	S^0.5	V	Tc
SHEET	0.48	7.91	210	3.77	1.94	0.93

TOTAL TIME OF CONCENTRATION T_c = 0.06 hrs

W9 - RUNOFF SUMMARY & ONSITE INFILTRATION REQUIREMENT

A. RUNOFF SUMMARY:

FIRST FLUSH VOLUME V_{ff} = 1,138 cf
 PREDEVELOPMENT BANKFULL RUNOFF VOLUME V_{bf-pre} = 119 cf
 PERVIOUS COVER POSTDEVELOPMENT BANKFULL VOLUME V_{bf-per-post} = 0 cf
 IMPERVIOUS COVER POSTDEVELOPMENT BANKFULL VOL. V_{bf-imp-post} = 2,542 cf
 TOTAL BF VOL. V_{bf-post} = 0 + 2,542 = 2,542 cf
 PERVIOUS COVER POSTDEVELOPMENT 100-YR VOL. V_{100-per-post} = 0 cf
 IMPERVIOUS COVER POSTDEVELOPMENT 100-YR VOL. V_{100-imp-post} = 5,823 cf
 TOTAL 100-YR VOL. V₁₀₀ = 0 + 5,823 = 5,823 cf

B. DETERMINE ONSITE INFILTRATION REQUIREMENT:

TOTAL BF VOL. V_{bf-post} = 2,542 cf
 PREDEVELOPMENT BANKFULL RUNOFF VOLUME V_{bf-pre} = 119 cf
 BANKFULL VOLUME DIFFERENCE = 2,542 - 119 = 2,423 cf

GREATER OF FIRST FLUSH VOL. AND BANKFULL VOLUME DIFFERENCE V_{inf} = 2,423 cf

W10 - DETENTION / RETENTION REQUIREMENT

DETENTION

A. Q_p = 238.4 (0.06)^0.82 = 2.397 cfs/in-mi^2
 B. TOTAL SITE AREA EXCLUDING SELF-CREDITING BMP'S A = 0.33 ac
 C. Q₁₀₀ = 0 + 4.88 = 4.88"
 D. PEAK FLOW PF = [(2.397)(4.88)(0.33)] / 640 = 6.03 cfs
 E. DELTA = 6.03 - 0.15(0.33) = 5.98 cfs
 F. V_{det} = (5.98/6.03) (5.823) - (2.423) = 3,352 cf

RETENTION

A. V_{ret} = 2 X 5,823 = 11,646 cf

RETENTION SHALL NOT BE PROVIDED SINCE THE SITE HAS AN ADEQUATE DRAINAGE OUTLET.

W11 - DETERMINE APPLICABLE BMP'S AND ASSOCIATED VOLUME CREDITS

TO TAKE ADVANTAGE OF THE SITE SOILS HIGH INFILTRATION RATE, A RAIN GARDEN AND PERMEABLE BRICK PAVEMENT SHALL BE EMPLOYED.

BMP	AREA	STORAGE VOLUME	AVE. DESIGN INFIL. RATE	INFIL. VOL. DURING STORM	TOTAL VOL. REDUCTION
PERM. PAVT	1,013 sf	607.8 cf	10 in/hr	5,065 cf	5,672.8 cf
RAIN GARDEN	517.5 sf	655.5 cf	10 in/hr	7,762.5 cf	8,418.0 cf

TOTAL VOL. REDUCTION CREDIT BY PROPOSED BMP'S V_{reduction} = 14,090.8 cf
 RUNOFF VOLUME INFILTRATION REQUIREMENT V_{inf} = 2,423 CF
 RUNOFF VOLUME CREDIT V_{credit} = 14,090.8 - 2,423 = 11,667.8 cf

THIS EXCEEDS THE DETENTION REQUIREMENTS; THEREFORE, NO ADDITIONAL STORAGE IS NEEDED.

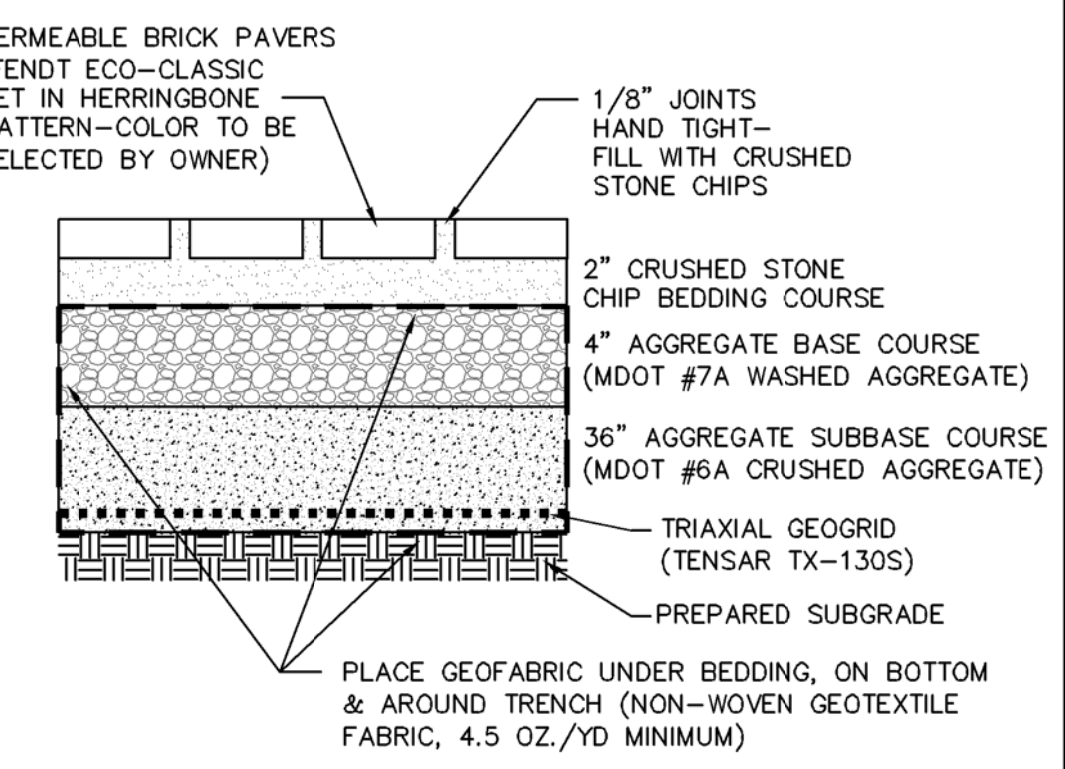
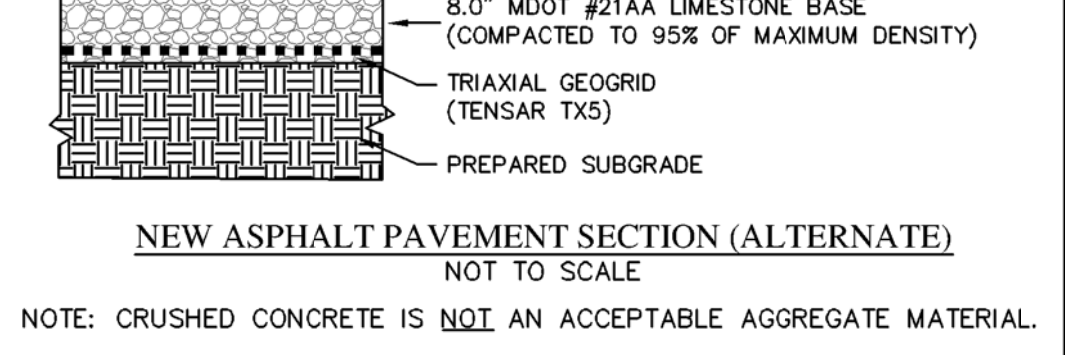
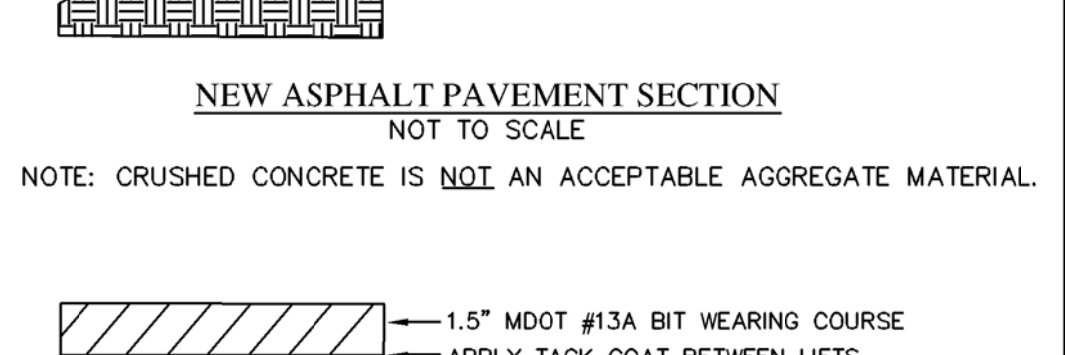
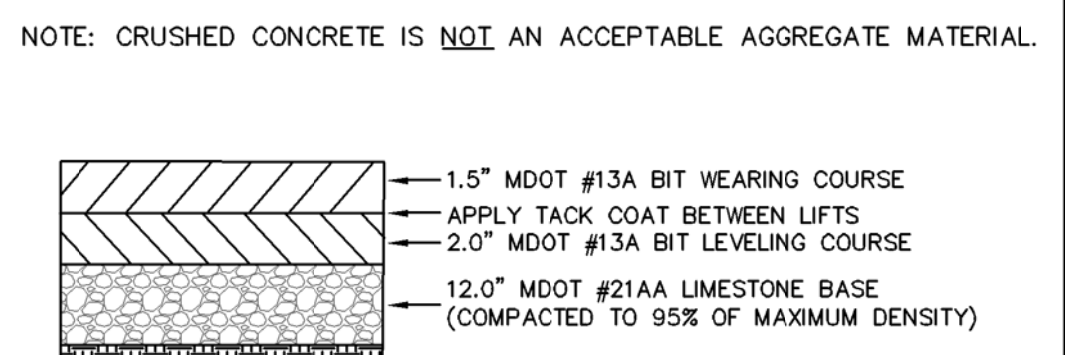
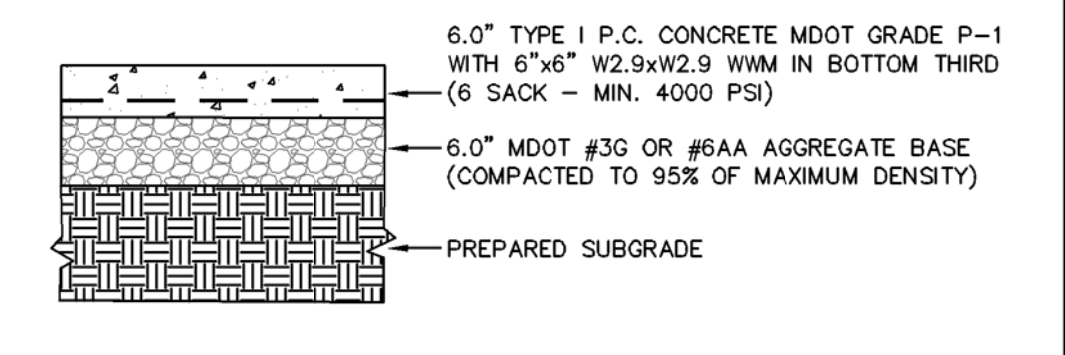
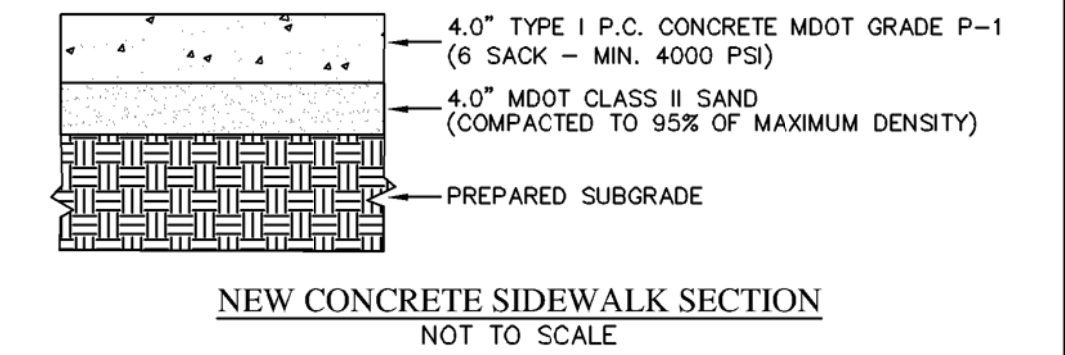
STORMWATER MANAGEMENT SYSTEM NARRATIVE

THE CITY OF ANN ARBOR PARKS & RECREATION SERVICES PROPOSES TO DEVELOP A NEW MARKET STRUCTURE AT THE EXISTING FARMERS MARKET

THE SITE HAS BEEN TESTED AND FOUND TO HAVE HIGHLY PERMEABLE SOILS. A PROGRAM OF BMP'S TO INFILTRATE THE ENTIRE 100-YEAR FLOOD VOLUME FROM THE RE-DEVELOPED AREA SHALL BE UNDERTAKEN TO TAKE ADVANTAGE OF THIS CONDITION.

THE ROOF AREA FROM THE NEW MARKET ENCLOSURE SHALL BE COLLECTED AND DISCHARGE TO A NEW RAIN GARDEN.

THE PARKING AND DRIVE AREAS SHALL FLOW TO NEW PERMEABLE PAVERS INSTALLED AT THE (2) FOURTH AVENUE ENTRANCES WHICH SHALL ACT AS MODIFIED TRENCH DRAINS.



CONSTRUCTION NOTES & DETAILS

ZEIMET WOZNIAK & ASSOCIATES
 Civil Engineers & Land Surveyors
 5580 GRAND RIVER AVE., SUITE 100
 NEW HUDON, MICHIGAN 48165
 P: (248) 437-5099 F: (248) 437-5222 www.zeimetwozniak.com
 ZWA JOB NO. 16104

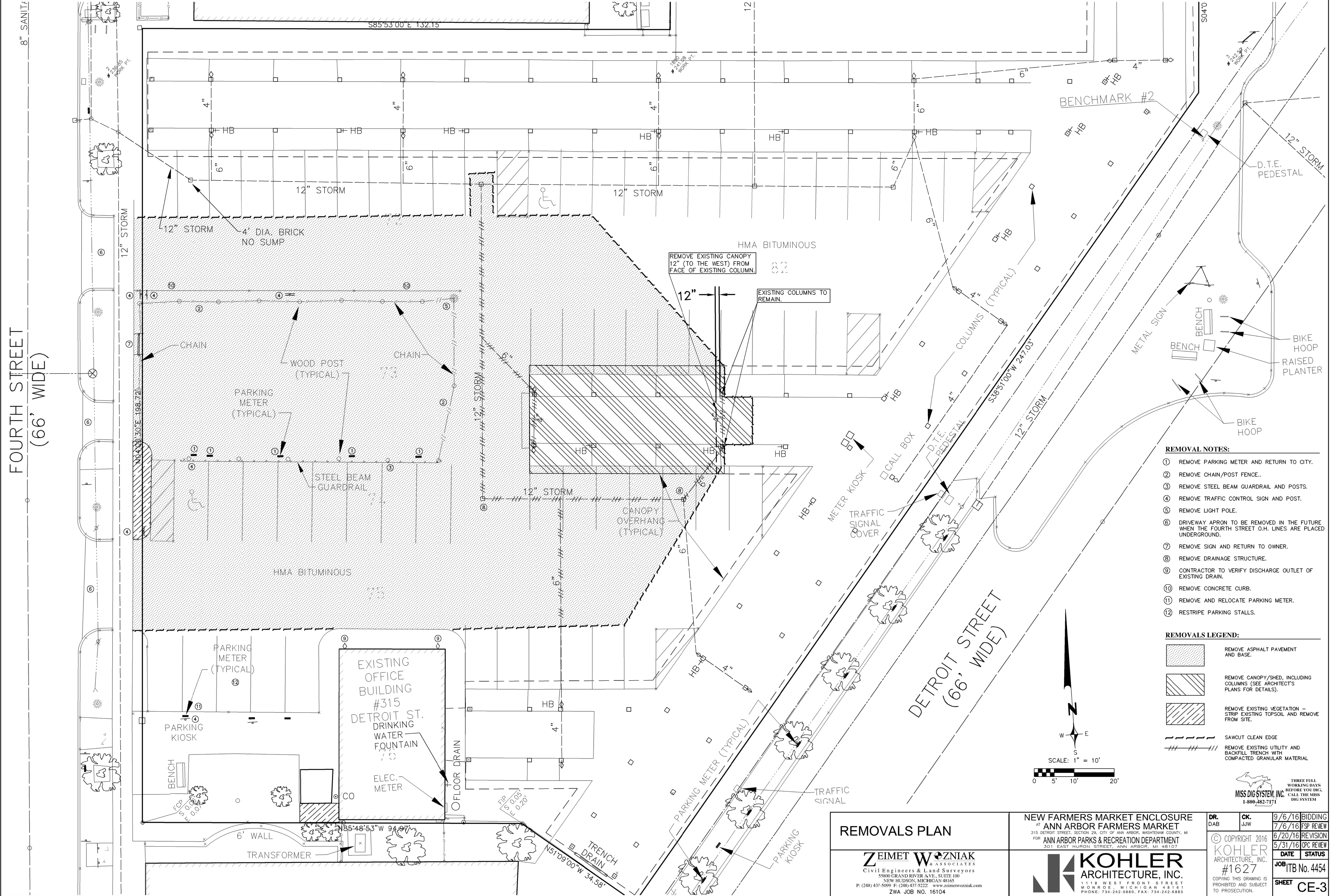
NEW FARMERS MARKET ENCLOSURE
 AT ANN ARBOR FARMERS MARKET
 315 DETROIT STREET, SECTION 29, CITY OF ANN ARBOR, WASHINGTON COUNTY, MI
 FOR ANN ARBOR PARKS & RECREATION DEPARTMENT
 301 EAST HURON STREET, ANN ARBOR, MI 48107

KOHLER ARCHITECTURE, INC.
 1118 WEST FRONT STREET
 MICHIGAN 48104
 PHONE: 734-242-8880, FAX: 734-242-8883

BIDDING 9/6/16
PRELIMINARY REVIEW 7/6/16
REVISION 6/20/16
FINAL REVIEW 5/31/16
DATE 5/31/16
STATUS BIDDING
JOB ITB No. 4454
SHEET CE-2

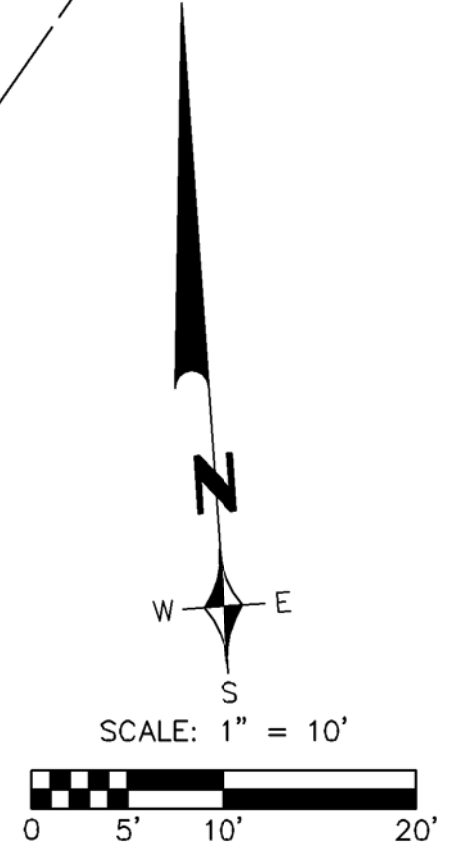
© COPYRIGHT 2016
KOHLER ARCHITECTURE, INC.
 #1627
 COPYING THIS DRAWING IS PROHIBITED AND SUBJECT TO PROSECUTION.

Z:\Projects\16104\dwg\16104 NOTES AND DETAILS.dwg, CE-2 CONSTRUCTION NOTES & DETAILS, 06/10/16 12:47:58 PM, ET



- REMOVAL NOTES:**
- REMOVE PARKING METER AND RETURN TO CITY.
 - REMOVE CHAIN/POST FENCE.
 - REMOVE STEEL BEAM GUARDRAIL AND POSTS.
 - REMOVE TRAFFIC CONTROL SIGN AND POST.
 - REMOVE LIGHT POLE.
 - DRIVEWAY APRON TO BE REMOVED IN THE FUTURE WHEN THE FOURTH STREET O.H. LINES ARE PLACED UNDERGROUND.
 - REMOVE SIGN AND RETURN TO OWNER.
 - REMOVE DRAINAGE STRUCTURE.
 - CONTRACTOR TO VERIFY DISCHARGE OUTLET OF EXISTING DRAIN.
 - REMOVE CONCRETE CURB.
 - REMOVE AND RELOCATE PARKING METER.
 - RESTRIP PARKING STALLS.

- REMOVALS LEGEND:**
- REMOVE ASPHALT PAVEMENT AND BASE.
 - REMOVE CANOPY/SHED, INCLUDING COLUMNS (SEE ARCHITECT'S PLANS FOR DETAILS).
 - REMOVE EXISTING VEGETATION - STRIP EXISTING TOPSOIL AND REMOVE FROM SITE.
 - SAWCUT CLEAN EDGE
 - REMOVE EXISTING UTILITY AND BACKFILL TRENCH WITH COMPACTED GRANULAR MATERIAL



REMOVALS PLAN

ZEMET WOZNAK & ASSOCIATES
 Civil Engineers & Land Surveyors
 5580 GRAND RIVER AVE., SUITE 100
 NEW HUDSON, MICHIGAN 48165
 P: (248) 437-5099 F: (248) 437-5222 www.zemetwozniak.com
 ZWA JOB NO. 16104

NEW FARMERS MARKET ENCLOSURE
 AT ANN ARBOR FARMERS MARKET
 315 DETROIT STREET, SECTION 29, CITY OF ANN ARBOR, WASHTENAW COUNTY, MI
 FOR ANN ARBOR PARKS & RECREATION DEPARTMENT
 301 EAST HURON STREET, ANN ARBOR, MI 48107

KOHLER ARCHITECTURE, INC.
 1118 WEST FRONT STREET
 MORROE, MICHIGAN 48161
 PHONE: 734-242-8880, FAX: 734-242-8883

DR. DAB	CK. JJW	9/6/16 BIDDING
		7/6/16 FSP REVIEW
		6/20/16 REVISION
		5/31/16 OPC REVIEW
		DATE STATUS
		JOB #17B No. 4454
		SHEET CE-3

© COPYRIGHT 2016 KOHLER ARCHITECTURE, INC. #1627
 COPING THIS DRAWING IS PROHIBITED AND SUBJECT TO PROSECUTION.

Z:\Projects\16104\dwg\16104 EX CONDITIONS.dwg, CE-3 REMOVALS PLAN, 9/1/2016 12:48:31 PM, LIT






FOURTH STREET
(66' WIDE)

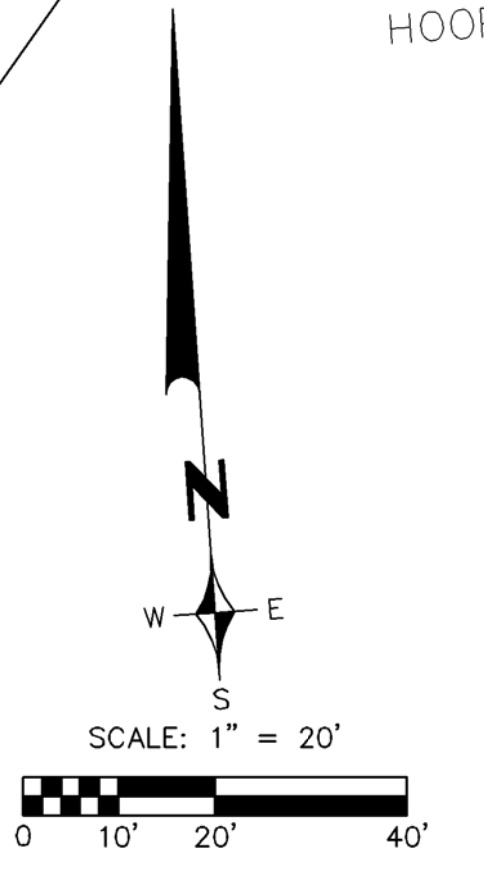
DETROIT STREET
(66' WIDE)

MATCHLINE (SEE SHEET CE-4A)

NEW FARMERS MARKET ENCLOSURE
(50'x80' = 4,000 S.F.)
F.F. = 243.10'

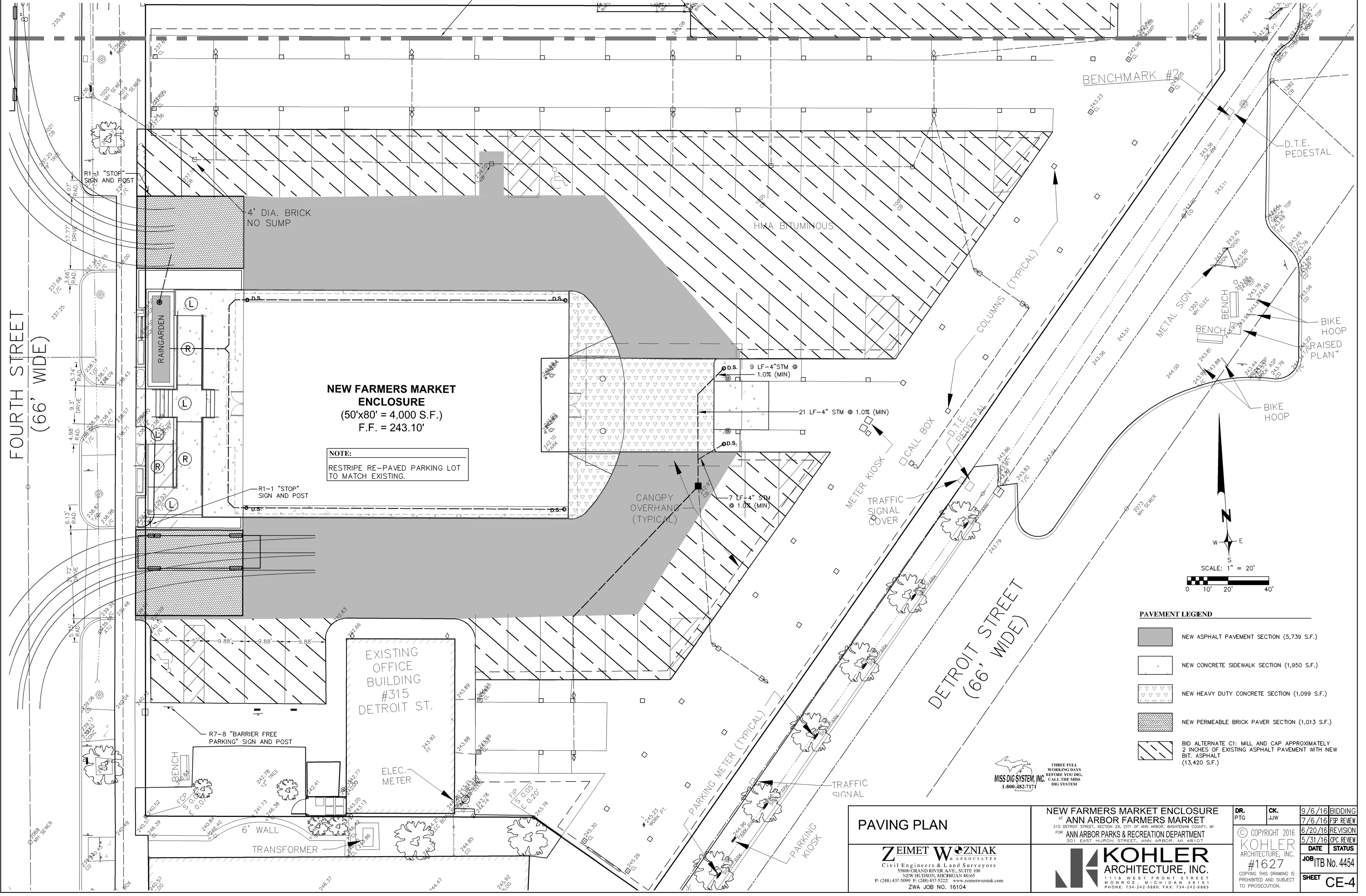
NOTE:
RESTRIPE RE-PAVED PARKING LOT
TO MATCH EXISTING.

- PAVEMENT LEGEND**
-  NEW ASPHALT PAVEMENT SECTION (5,739 S.F.)
 -  NEW CONCRETE SIDEWALK SECTION (1,950 S.F.)
 -  NEW HEAVY DUTY CONCRETE SECTION (1,099 S.F.)
 -  NEW PERMEABLE BRICK PAVER SECTION (1,013 S.F.)
 -  BID ALTERNATE C1: MILL AND CAP APPROXIMATELY 2 INCHES OF EXISTING ASPHALT PAVEMENT WITH NEW BIT. ASPHALT (13,420 S.F.)

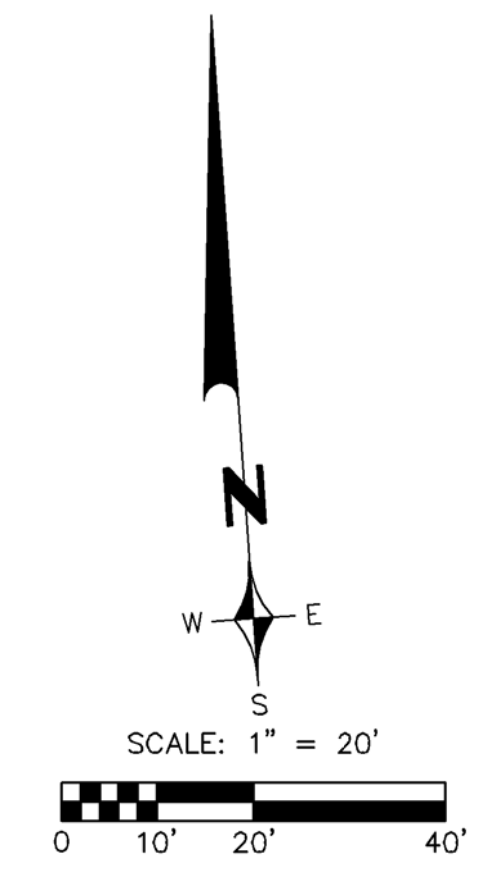
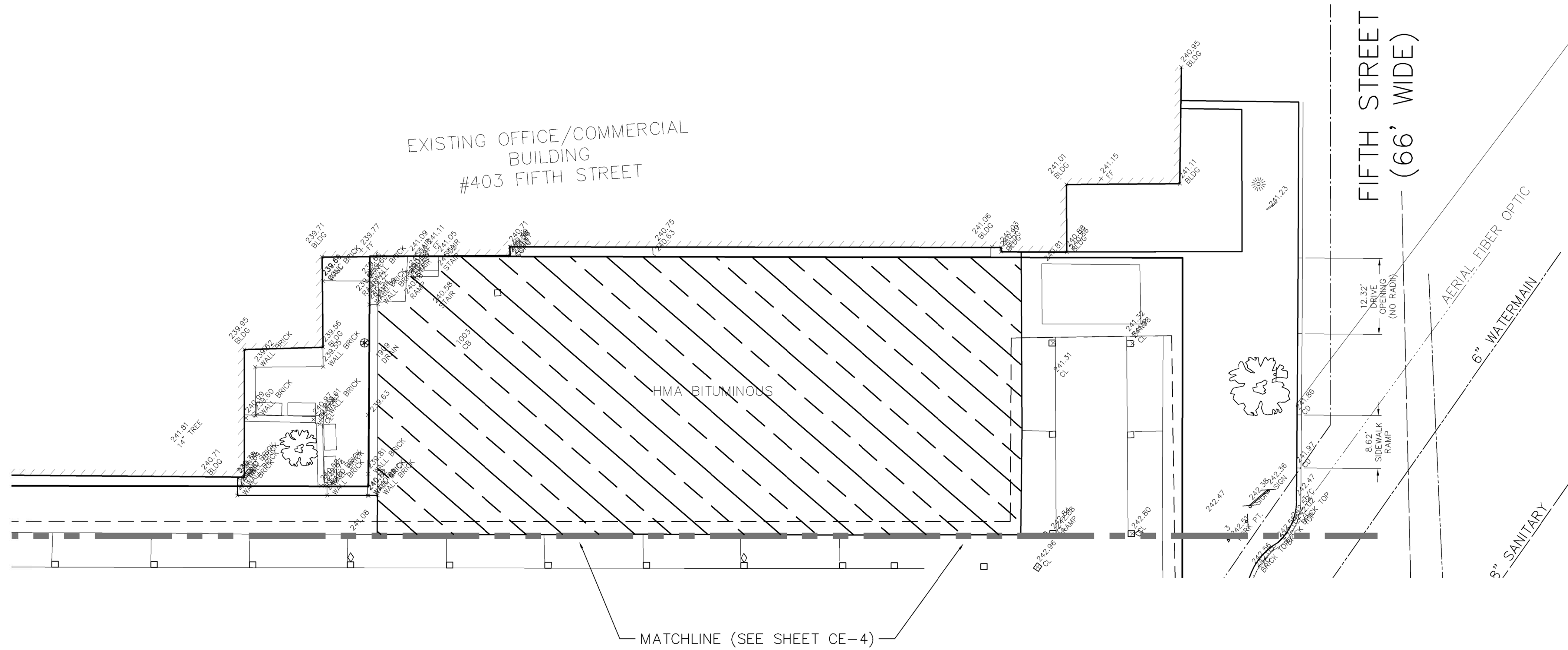


THREE FULL WORKING DAYS BEFORE YOU DIG. CALL THE MISS DIG SYSTEM 1-800-482-7171

<p>PAVING PLAN</p> <p>ZEMET WOZNAK & ASSOCIATES Civil Engineers & Land Surveyors 5580 GRAND RIVER AVE., SUITE 100 NEW HUDSON, MICHIGAN 48165 P: (248) 437-5099 F: (248) 437-5222 www.zemetwozniak.com ZWA JOB NO. 16104</p>	<p>NEW FARMERS MARKET ENCLOSURE AT ANN ARBOR FARMERS MARKET 315 DETROIT STREET, SECTION 29, CITY OF ANN ARBOR, WASHINGTON COUNTY, MI FOR ANN ARBOR PARKS & RECREATION DEPARTMENT 301 EAST HURON STREET, ANN ARBOR, MI 48107</p>		<p>DR. PTG CK. JWW</p>	<p>9/6/16 BIDDING 7/6/16 FSP REVIEW 6/20/16 REVISION 5/31/16 OPC REVIEW</p>
	<p>KOHLER ARCHITECTURE, INC. 118 WEST FRONT STREET MORROE, MICHIGAN 48161 PHONE: 734-242-8880, FAX: 734-242-8883</p>		<p>© COPYRIGHT 2016 KOHLER ARCHITECTURE, INC. #1627</p>	<p>DATE STATUS JOB ITB No. 4454 SHEET CE-4</p>



Z:\Projects\16104\dwg\16104_PAVING PLAN_CE-4_PAVING PLAN.dwg, 8/1/2016 12:48:24 PM, ETT



NOTE:
 RESTRIPE RE-PAVED PARKING LOT TO MATCH EXISTING.

PAVEMENT LEGEND

	NEW ASPHALT PAVEMENT SECTION (5,739 S.F.)
	NEW CONCRETE SIDEWALK SECTION (2,640 S.F.)
	NEW HEAVY DUTY CONCRETE SECTION (506 S.F.)
	NEW PERMEABLE BRICK PAVER SECTION (1,013 S.F.)
	BID ALTERNATE C1: MILL AND CAP APPROXIMATELY 2 INCHES OF EXISTING ASPHALT PAVEMENT. HAUL EXCESS MATERIAL OFF SITE. CAP WITH NEW BIT. ASPHALT.

Z:\Projects\1610\dwg\1610.dwg ENG.dwg, CE-4A PAVING PLAN, 8/1/2016 12:49:51 PM, LIT

THREE FULL WORKING DAYS BEFORE YOU DIG. CALL THE MISS DIG SYSTEM 1-800-482-7171

PAVING PLAN

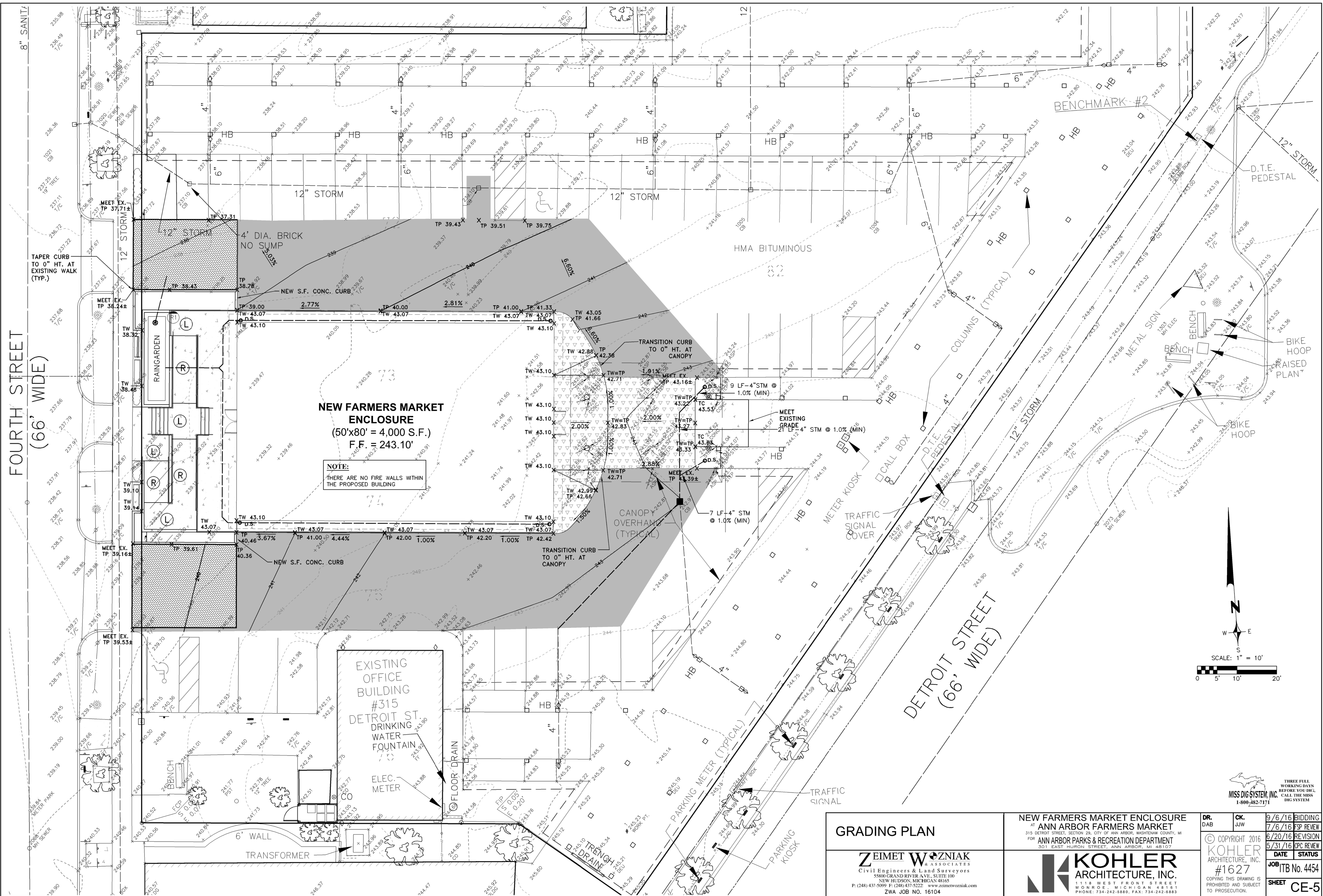
Z EIMET WOZNAK & ASSOCIATES
 Civil Engineers & Land Surveyors
 5580 GRAND RIVER AVE., SUITE 100
 NEW HUDSON, MICHIGAN 48165
 P: (248) 437-5099 F: (248) 437-5222 www.zeimetwozniak.com
 ZWA JOB NO. 16104

NEW FARMERS MARKET ENCLOSURE
 AT ANN ARBOR FARMERS MARKET
 315 DETROIT STREET, SECTION 29, CITY OF ANN ARBOR, WASHTENAW COUNTY, MI
 FOR ANN ARBOR PARKS & RECREATION DEPARTMENT
 301 EAST HURON STREET, ANN ARBOR, MI 48107

KOHLER ARCHITECTURE, INC.
 1118 WEST FRONT STREET
 MONROE, MICHIGAN 48161
 PHONE: 734-242-8880, FAX: 734-242-8883

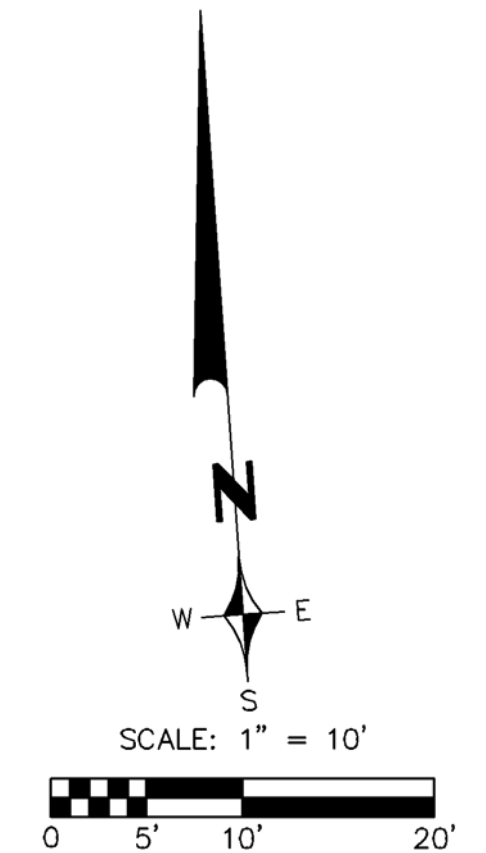
DR. PTG	CK. JJW	9/6/16	BIDDING
		7/6/16	FSP REVIEW
		6/20/16	REVISION
		5/31/16	OPC REVIEW
		DATE	STATUS
		JOB #	ITB No. 4454
		SHEET	CE-4A

© COPYRIGHT 2016 KOHLER ARCHITECTURE, INC. #1627
 COPING THIS DRAWING IS PROHIBITED AND SUBJECT TO PROSECUTION.



NEW FARMERS MARKET ENCLOSURE
 (50'x80' = 4,000 S.F.)
 F.F. = 243.10'

NOTE:
 THERE ARE NO FIRE WALLS WITHIN THE PROPOSED BUILDING



GRADING PLAN

ZEMET WOZNAK & ASSOCIATES
 Civil Engineers & Land Surveyors
 5580 GRAND RIVER AVE., SUITE 100
 NEW HUDSON, MICHIGAN 48165
 P: (248) 437-5099 F: (248) 437-5222 www.zemetwozniak.com
 ZWA JOB NO. 16104

NEW FARMERS MARKET ENCLOSURE
 AT
 ANN ARBOR FARMERS MARKET
 315 DETROIT STREET, SECTION 29, CITY OF ANN ARBOR, WASHTENAW COUNTY, MI
 FOR
 ANN ARBOR PARKS & RECREATION DEPARTMENT
 301 EAST HURON STREET, ANN ARBOR, MI 48107

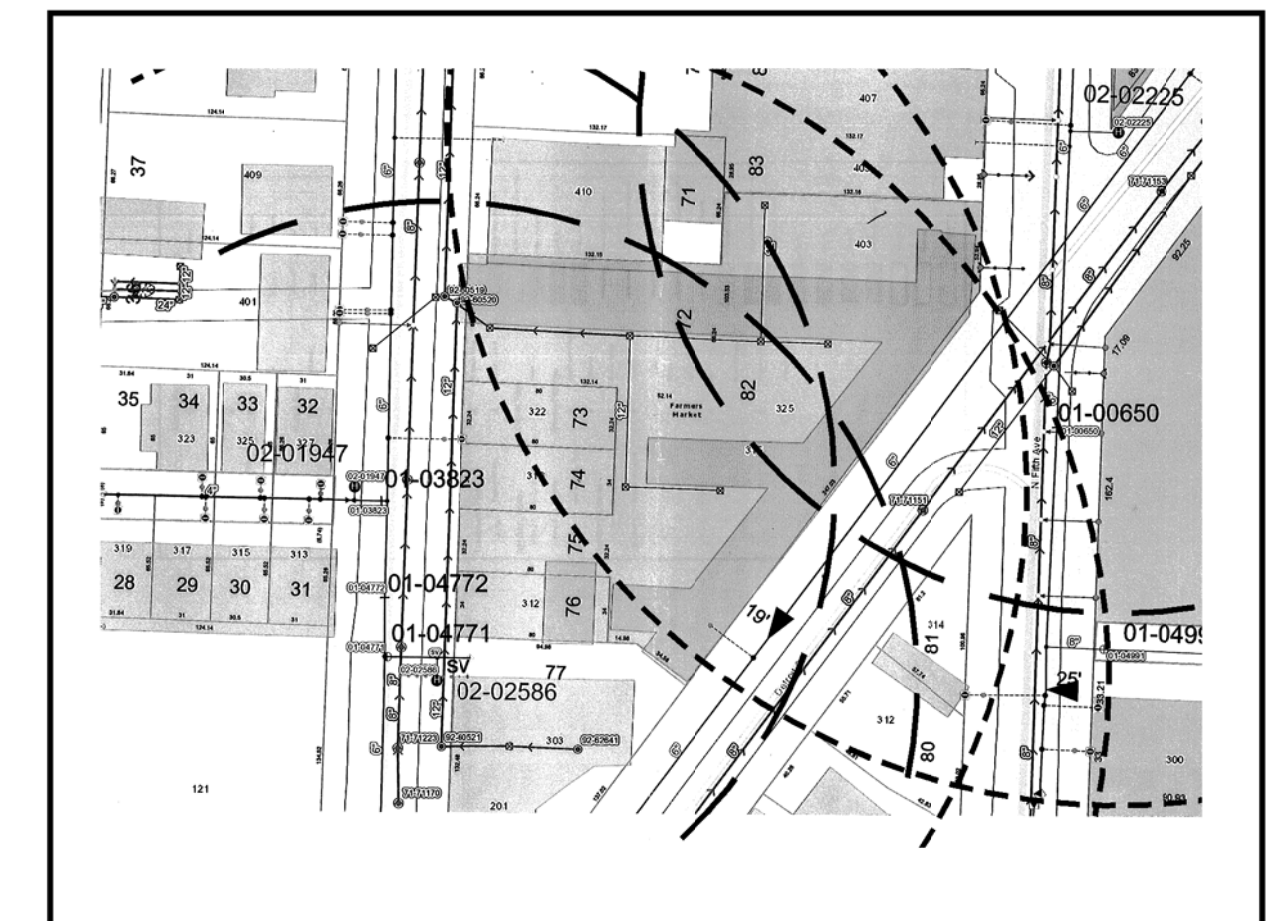
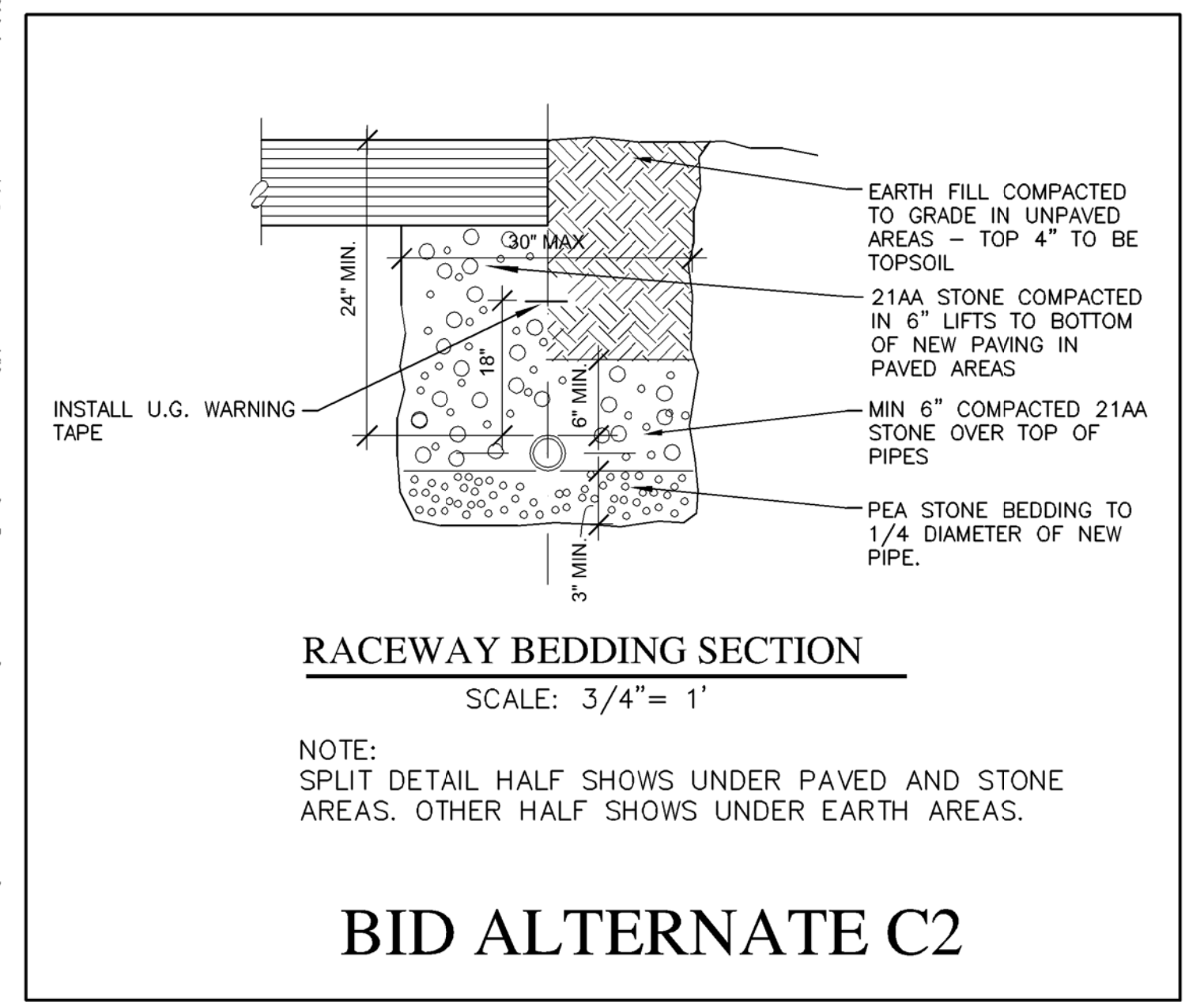
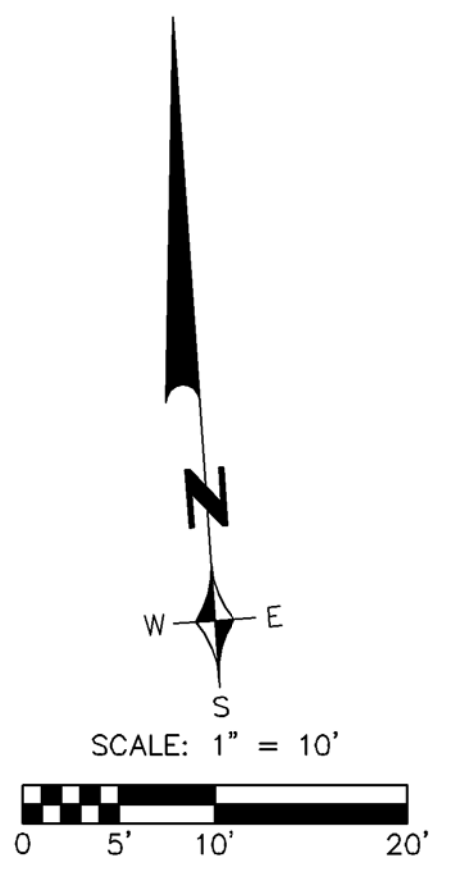
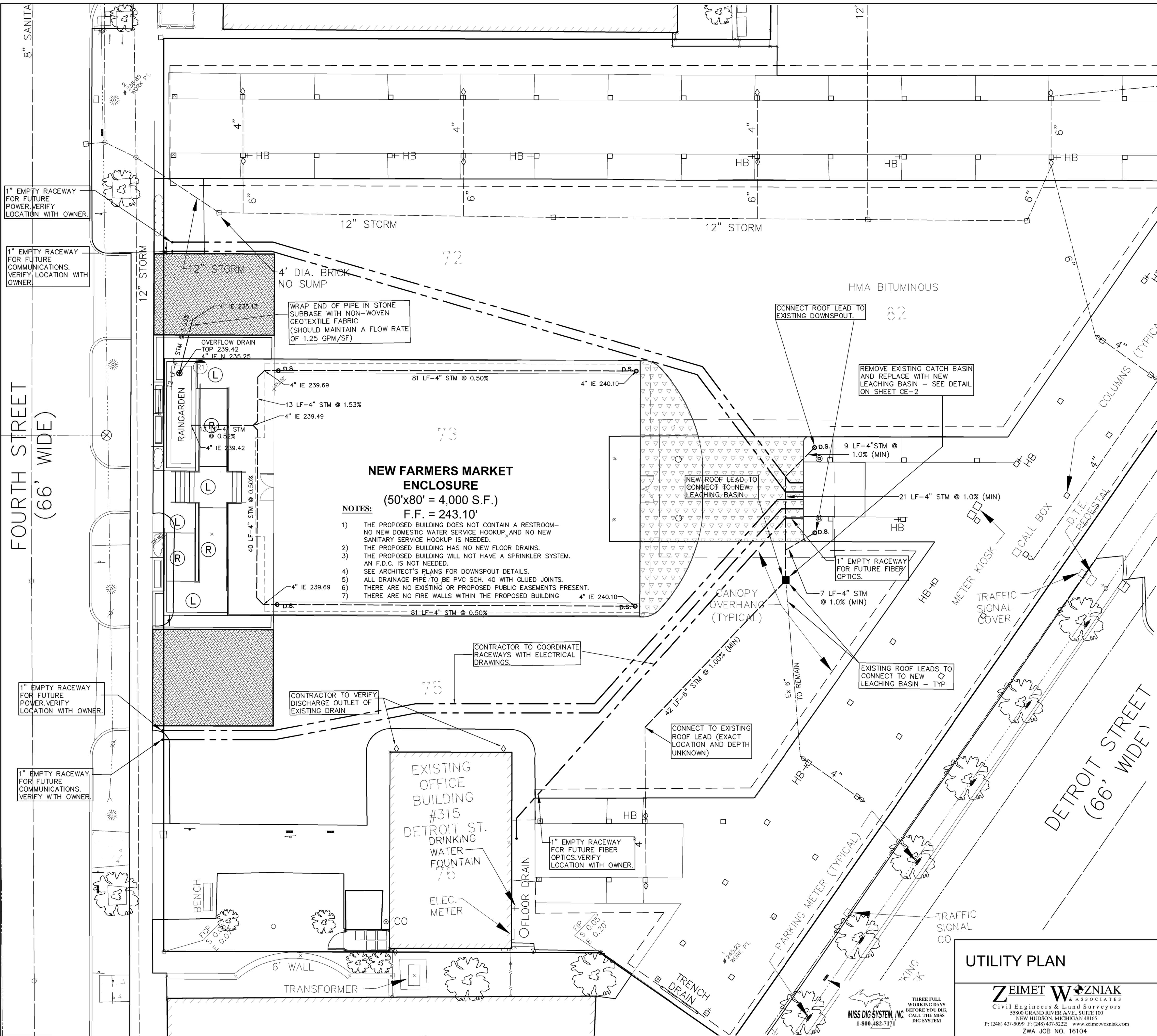
KOHLER ARCHITECTURE, INC.
 1118 WEST FRONT STREET
 MORROE, MICHIGAN 48161
 PHONE: 734-242-8880, FAX: 734-242-8883

DR. DAB	CK. JWW	9/6/16 BIDDING
		7/6/16 FSP REVIEW
		6/20/16 REVISION
		5/31/16 CPC REVIEW
		DATE STATUS
		JOB #17B No. 4454
		SHEET CE-5

© COPYRIGHT 2016 KOHLER ARCHITECTURE, INC. #1627
 COPYING THIS DRAWING IS PROHIBITED AND SUBJECT TO PROSECUTION.

MISS DIG SYSTEM, INC.
 1-800-482-7171
 THREE FULL WORKING DAYS BEFORE YOU DIG, CALL THE MISS DIG SYSTEM

Z:\Projects\16104\dwg\16104 GRDING PLAN_9/1/2016 12:50:10 PM.ET



NEW FARMERS MARKET ENCLOSURE
(50'x80' = 4,000 S.F.)
F.F. = 243.10'

- NOTES:**
- 1) THE PROPOSED BUILDING DOES NOT CONTAIN A RESTROOM- NO NEW DOMESTIC WATER SERVICE HOOKUP, AND NO NEW SANITARY SERVICE HOOKUP IS NEEDED.
 - 2) THE PROPOSED BUILDING HAS NO NEW FLOOR DRAINS.
 - 3) THE PROPOSED BUILDING WILL NOT HAVE A SPRINKLER SYSTEM. AN F.D.C. IS NOT NEEDED.
 - 4) SEE ARCHITECT'S PLANS FOR DOWNSPOUT DETAILS.
 - 5) ALL DRAINAGE PIPE TO BE PVC SCH. 40 WITH GLUED JOINTS.
 - 6) THERE ARE NO EXISTING OR PROPOSED PUBLIC EASEMENTS PRESENT.
 - 7) THERE ARE NO FIRE WALLS WITHIN THE PROPOSED BUILDING

UTILITY PLAN

ZEMET WOZNAK & ASSOCIATES
Civil Engineers & Land Surveyors
5580 GRAND RIVER AVE., SUITE 100
NEW HUDSON, MICHIGAN 48165
P: (248) 437-5099 F: (248) 437-5222 www.zemetwozniak.com
ZWA JOB NO. 16104

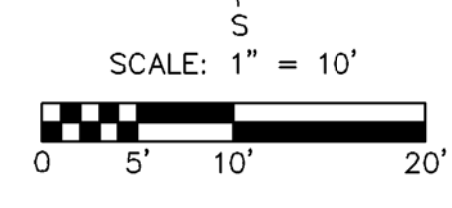
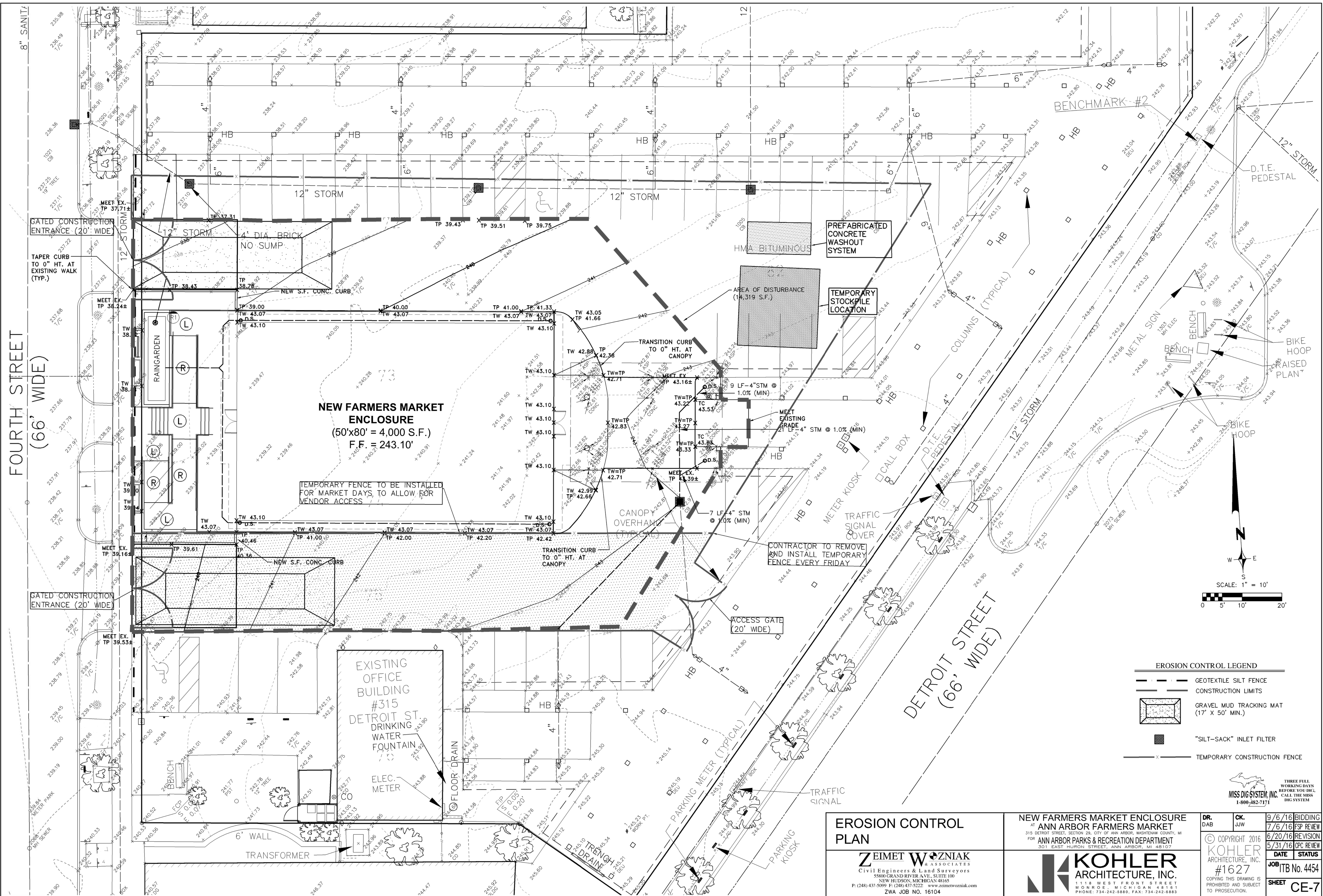
NEW FARMERS MARKET ENCLOSURE
AT ANN ARBOR FARMERS MARKET
315 DETROIT STREET, SECTION 29, CITY OF ANN ARBOR, WASHTENAW COUNTY, MI
FOR ANN ARBOR PARKS & RECREATION DEPARTMENT
301 EAST HURON STREET, ANN ARBOR, MI 48107

KOHLER ARCHITECTURE, INC.
1118 WEST FRONT STREET
MORROE, MICHIGAN 48161
PHONE: 734-242-8880, FAX: 734-242-8883

DR. DAB	CK. JWW	9/6/16 BIDDING
		7/6/16 FSP REVIEW
		6/20/16 REVISION
		5/31/16 CPC REVIEW
		DATE STATUS
		JOB #17B No. 4454
		SHEET CE-6

© COPYRIGHT 2016 KOHLER ARCHITECTURE, INC. #1627
COPING THIS DRAWING IS PROHIBITED AND SUBJECT TO PROSECUTION.

Z:\Projects\16104\dwg\16104_UTILITY PLAN_CE-6.dwg, CE-6, 12/20/16 12:50:38 PM, ET



- EROSION CONTROL LEGEND**
- GEOTEXTILE SILT FENCE
 - CONSTRUCTION LIMITS
 - GRAVEL MUD TRACKING MAT (17' X 50' MIN.)
 - "SILT-SACK" INLET FILTER
 - TEMPORARY CONSTRUCTION FENCE

MISS DIG SYSTEM, INC.
 1-800-482-7171
 THREE FULL WORKING DAYS BEFORE YOU DIG, CALL THE MISS DIG SYSTEM

EROSION CONTROL PLAN

ZEMET WOZNAK & ASSOCIATES
 Civil Engineers & Land Surveyors
 5580 GRAND RIVER AVE., SUITE 100
 NEW HUDSON, MICHIGAN 48165
 P: (248) 437-5099 F: (248) 437-5222 www.zemetwozniak.com
 ZWA JOB NO. 16104

NEW FARMERS MARKET ENCLOSURE
 AT ANN ARBOR FARMERS MARKET
 315 DETROIT STREET, SECTION 29, CITY OF ANN ARBOR, WASHTENAW COUNTY, MI
 FOR ANN ARBOR PARKS & RECREATION DEPARTMENT
 301 EAST HURON STREET, ANN ARBOR, MI 48107

KOHLER ARCHITECTURE, INC.
 118 WEST FRONT STREET
 MORROE, MICHIGAN 48161
 PHONE: 734-242-8880, FAX: 734-242-8883

DR. DAB	CK. JWW	9/6/16 BIDDING
		7/6/16 FSP REVIEW
		6/20/16 REVISION
		5/31/16 OPC REVIEW
		DATE STATUS
		JOB #TB No. 4454
		SHEET CE-7

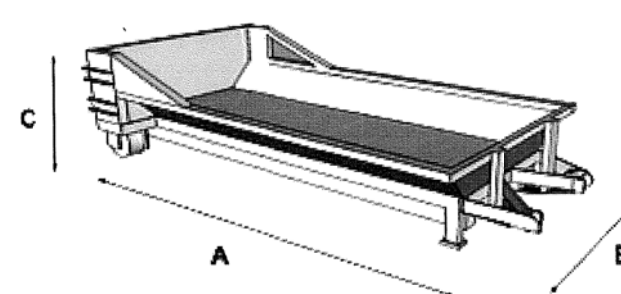
Z:\Projects\16104\dwg\16104_ERSI.ENG.dwg, CE-7 EROSION CONTROL PLAN, 9/12/2016 12:51:01 PM, ET

MAINTENANCE SCHEDULE (DURING CONSTRUCTION BY GC):

TASK	COMPONENT	STORM SEWER SYSTEM	CATCH BASIN SUMPS	CATCH BASIN INLET CASTINGS	RAINGARDENS	PERMEABLE PAVERS	SCHEDULE
INSPECT FOR SEDIMENT ACCUMULATION	X	X			X	X	WEEKLY
REMOVAL OF SEDIMENT ACCUMULATION	X	X			X	X	AS NEEDED AND PRIOR TO TURNOVER
INSPECT FOR FLOATABLES AND DEBRIS	X	X					QUARTERLY
REMOVAL OF FLOATABLES AND DEBRIS	X	X					QUARTERLY AND AT TURNOVER
INSPECT FOR EROSION					X		WEEKLY
RE-ESTABLISH VEGETATION ON ERODED SLOPES					X		AS NEEDED AND PRIOR TO TURNOVER
REPLACEMENT OF STONE						X	AS NEEDED*
MOWING							WEEKLY
INSPECT STRUCTURAL ELEMENTS DURING WET WEATHER AND COMPARE TO AS-BUILT PLANS (BY PROFESSIONAL ENGINEER)	X	X	X	X	X	X	ANNUALLY AND PRIOR TO TURNOVER
MAKE ADJUSTMENTS OR REPLACEMENTS AS DETERMINED BY PRE-TURNOVER INSPECTION	X	X	X	X	X	X	AS NEEDED

MAINTENANCE SCHEDULE (POST CONSTRUCTION BY OWNER):

TASK	COMPONENT	STORM SEWER SYSTEM	CATCH BASIN SUMPS	CATCH BASIN INLET CASTINGS	RAINGARDENS	PERMEABLE PAVERS	SCHEDULE
INSPECT FOR SEDIMENT ACCUMULATION	X	X			X	X	WEEKLY
REMOVAL OF SEDIMENT ACCUMULATION	X	X			X	X	AS NEEDED AND PRIOR TO TURNOVER
INSPECT FOR FLOATABLES AND DEBRIS	X	X					QUARTERLY
REMOVAL OF FLOATABLES AND DEBRIS	X	X					QUARTERLY AND AT TURNOVER
INSPECT FOR EROSION					X		WEEKLY
RE-ESTABLISH VEGETATION ON ERODED SLOPES					X		AS NEEDED AND PRIOR TO TURNOVER
REPLACEMENT OF STONE						X	AS NEEDED*
MOWING							WEEKLY
CLEAN STREETS, DRIVES AND PARKING AREAS						X	0 TO 2 TIMES PER YEAR
INSPECT STRUCTURAL ELEMENTS DURING WET WEATHER AND COMPARE TO AS-BUILT PLANS (BY PROFESSIONAL ENGINEER)	X	X	X	X	X	X	ANNUALLY AND PRIOR TO TURNOVER
MAKE ADJUSTMENTS OR REPLACEMENTS AS DETERMINED BY PRE-TURNOVER INSPECTION	X	X	X	X	X	X	AS NEEDED



*Container Size	A Length	B Width	C Inside Height	Overall Height
3-4 CY	16'	8'	12"	22"

*Measurements are approximations

PREFABRICATED CONCRETE WASHOUT SYSTEM DETAIL

NOTES:

- Concrete washout shall occur only within the designated area.
- Concrete washout shall be conducted in an entirely contained prefabricated system.
- The system shall be removed when full or upon completion of project. Hardened concrete is considered to be waste material and shall be disposed of in an appropriate manner.

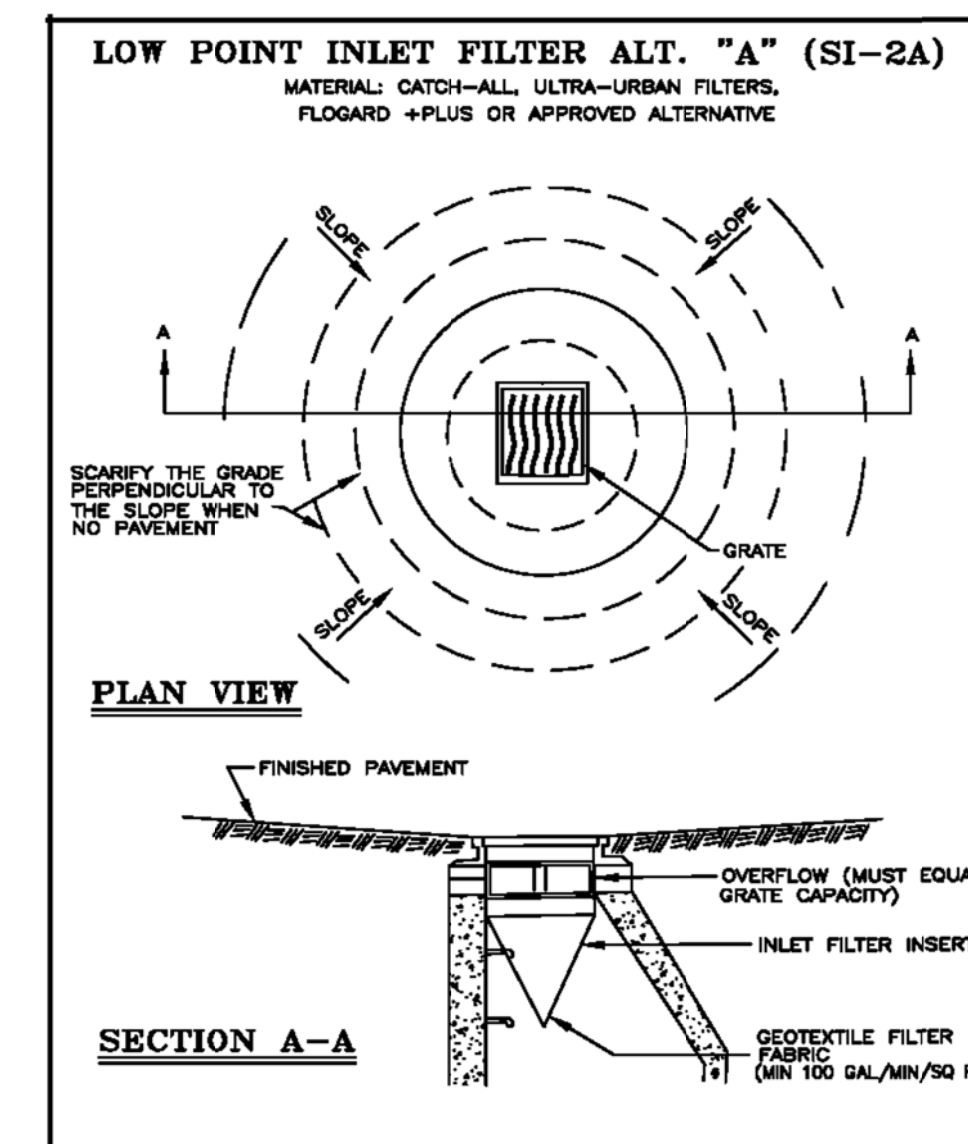
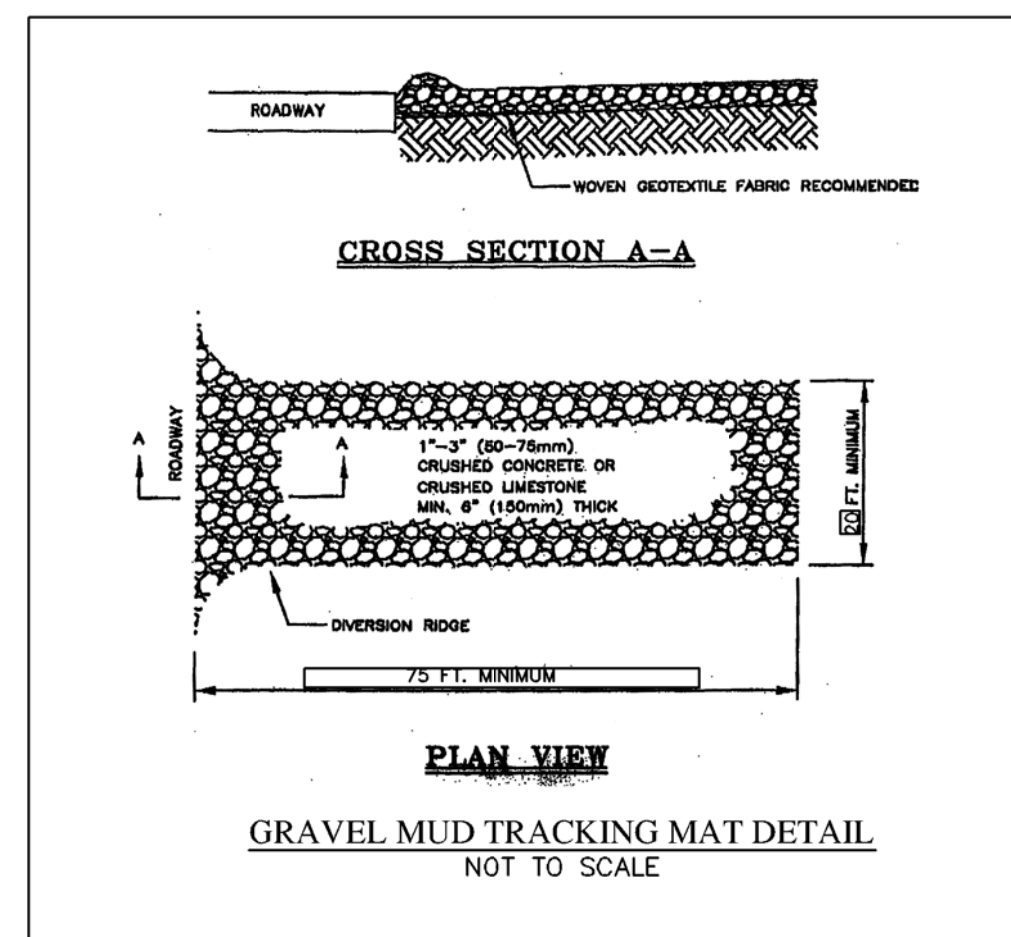
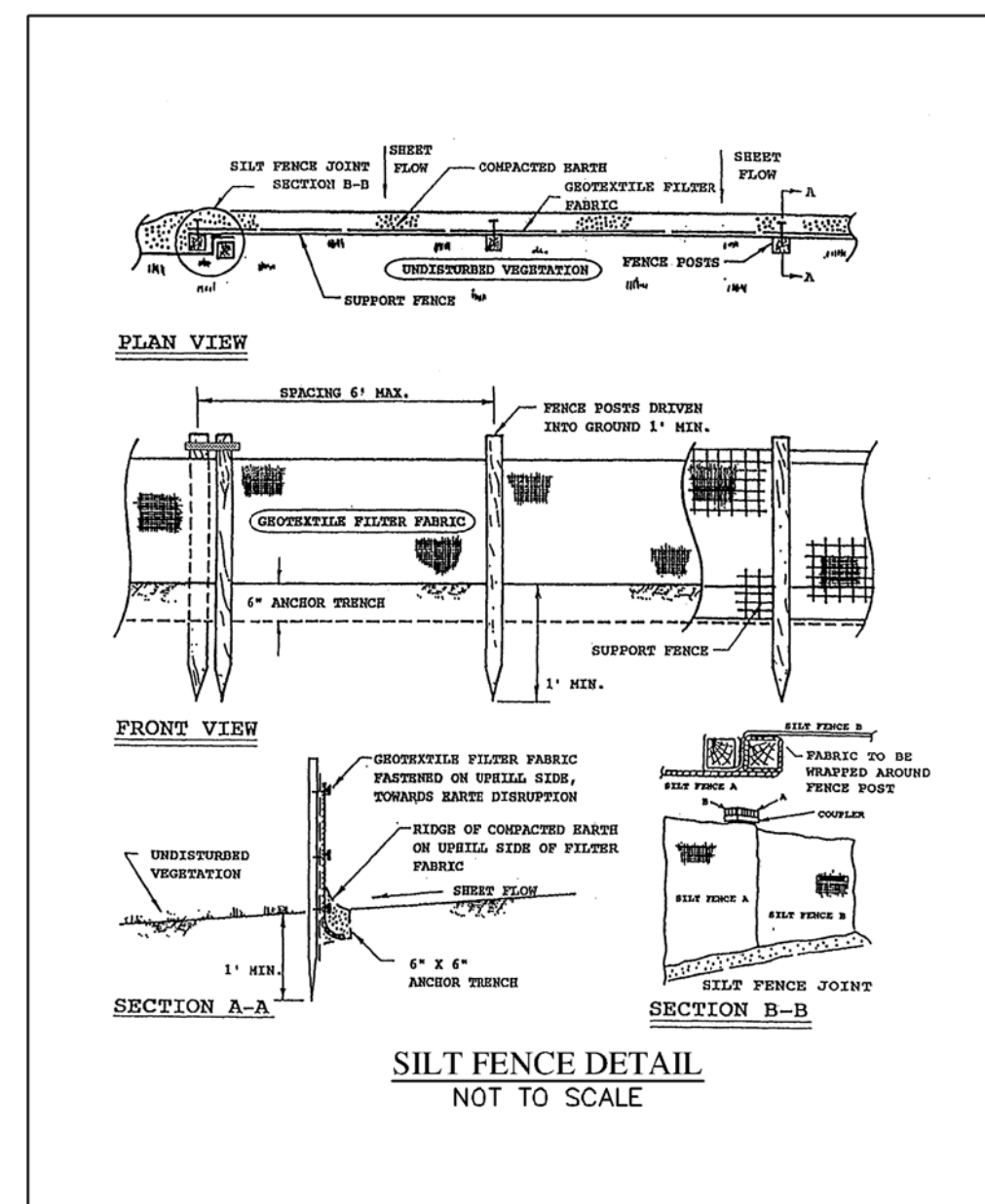
EROSION CONTROL NOTE:

ALL TEMPORARY AND PERMANENT SOIL EROSION AND SEDIMENTATION CONTROLS SHALL BE INSTALLED AND MAINTAINED IN COMPLIANCE WITH CHAPTER 63, SOIL EROSION AND SEDIMENTATION CONTROL, OF THE ANN ARBOR CODE OF ORDINANCES.

SESC QUANTITIES AND COST OPINION:

SILT FENCE	61 LF	@ \$2.00	= \$122
CATCH BASIN INLET FILTERS	4 EA	@ \$150.00	= \$600
GRAVEL MUD TRACKING MAT	1 EA	@ \$1,200.00	= \$1200
		TOTAL	= \$1922

THE TOTAL COST TO PROTECT THE ENTIRE SITE AND FULL RESTORATION IF CONSTRUCTION IS ABANDONED IS: \$1922.



SILT SACK INLET FILTER DETAIL
NOT TO SCALE

GENERAL SESC NOTES:

- DURING DRY PERIODS ALL DISTURBED AREAS SHALL BE WATERED FOR DUST CONTROL.
- ALL DIRT AND MUD TRACKED ONTO ROADWAYS SHALL BE REMOVED IMMEDIATELY.
- THIS PROJECT SHALL BE CONSTRUCTED IN COMPLIANCE WITH PART 91 OF ACT 451, OF 1994 AS AMENDED, THE SOIL EROSION AND SEDIMENT CONTROL ACT AND CHAPTER 63—THE CITY'S STORM WATER MANAGEMENT AND SOIL EROSION AND SEDIMENTATION CONTROL ORDINANCE.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE ALL SOIL EROSION CONTROL MEASURES ARE MAINTAINED AND IN PLACE UNTIL SITE IS COMPLETELY STABILIZED.
- DISTURBED AREA = **14,319 S.F.**
- PARCEL IDENTIFICATION NUMBERS: **09-09-29-123-004, 09-09-29-123-005, 09-09-29-123-006, 09-09-29-123-007.**
- THE ULTIMATE OUTLET FOR THIS PROJECT'S STORM DRAINAGE DISCHARGE IS **HURON RIVER (APPROX. 2,300 L.F. AWAY).**
- UPON COMPLETION OF THE BUILDING CONSTRUCTION, CLEAN PAVEMENT AND STORM SEWERS OF ANY ACCUMULATED SEDIMENT AND DEBRIS.
- NO STOCKPILING OF MATERIAL IS PERMITTED.
- THIS PLAN DESCRIBES THE MINIMUM EROSION CONTROL MEASURES NEED TO PREVENT SILT AND SEDIMENT FROM LEAVING THE SITE. ADDITIONAL SESC MEASURES MAY BE REQUIRED AS CONDITIONS IN THE FIELD WARRANT.
- IF DEWATERING IS ANTICIPATED OR ENCOUNTERED DURING CONSTRUCTION, A DEWATERING PLAN MUST BE SUBMITTED TO THE CITY'S ENGINEERING DIVISION FOR REVIEW.
- THERE ARE NO REGULATED WETLANDS PRESENT ON THIS SITE.
- STORAGE AREA FOR CONSTRUCTION MATERIAL SHALL NOT INTERFERE WITH FIRE/EMERGENCY SITE ACCESS.
- LONG TERM MAINTENANCE RESPONSIBILITIES SHALL BECOME A PART OF ANY SALES OR EXCHANGE AGREEMENT FOR THE LAND ON WHICH THE PERMANENT SOIL EROSION AND SEDIMENTATION CONTROL MEASURES ARE LOCATED.

PERMEABLE BRICK/PERVIOUS PAVEMENT MAINTENANCE NOTES:

A. RESPONSIBILITY

MAINTENANCE OF PERVIOUS PAVEMENT WILL BE THE RESPONSIBILITY OF THE CITY'S PARK AND RECREATION DIVISION.

B. PREVENT CLOGGING OF PAVEMENT SURFACE WITH SEDIMENT

- VACUUM PAVEMENT TWICE PER YEAR.
- MAINTAIN PLANTED AREAS ADJACENT TO PAVEMENT.
- IMMEDIATELY CLEAN ANY SOIL DEPOSITED ON PAVEMENT.
- DO NOT ALLOW CONSTRUCTION STAGING, SOIL/MULCH STORAGE, ETC. ON UNPROTECTED PAVEMENT.

C. SNOW/ICE REMOVAL

- DO NOT APPLY ABRASIVES SUCH AS SAND OR CINDERS ON OR ADJACENT TO PERVIOUS PAVEMENT.
- SNOW PLOWING IS FINE BUT SHOULD BE DONE CAREFULLY (I.E. SET THE BLADE SLIGHTLY HIGHER THAN USUAL).
- SALT APPLICATION IS ACCEPTABLE, ALTHOUGH MORE ENVIRONMENTALLY-BENIGN DEICERS ARE PREFERABLE. THE NEED FOR APPLICATION OF SALT AND OTHER DEICERS SHOULD BE MINIMAL, AS WATER DOES NOT POND AND FREEZE ON TOP OF A PROPERLY OPERATING PERVIOUS PAVEMENT.

D. REPAIRS

- SURFACE SHALL NEVER BE SEAL-COATED.
- PERVIOUS PAVERS MUST BE REPAIRED/REPLACED WITH SIMILAR PERVIOUS PAVER BLOCK MATERIAL.
- PERVIOUS PAVERS MAY REQUIRE THE ADDITION OF AGGREGATE ON AN ANNUAL BASIS OR AS NEEDED IN ORDER TO REPLENISH MATERIAL USED TO FILL IN THE OPEN AREAS OF THE PAVERS.

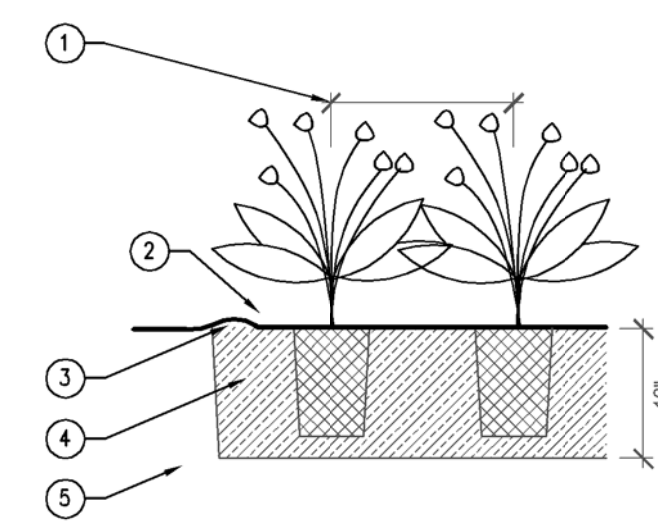
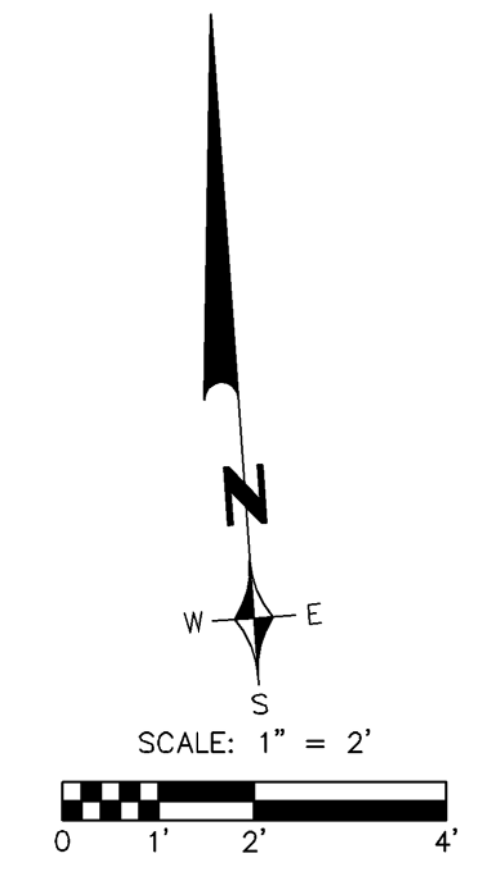
THREE FULL WORKING DAYS BEFORE YOU DRG, CALL THE MISS DIG SYSTEM 1-800-482-7171

EROSION CONTROL DETAILS ZEMET WOZNAK & ASSOCIATES Civil Engineers & Land Surveyors 5880 GRAND RIVER AVE., SUITE 100 NEW HUDSON, MICHIGAN 48165 P: (248) 437-5009 F: (248) 437-5222 www.zemetwozniak.com ZWA JOB NO. 16104	NEW FARMERS MARKET ENCLOSURE AT ANN ARBOR FARMERS MARKET 315 DETROIT STREET, SECTION 29, CITY OF ANN ARBOR, WASHENAW COUNTY, MI FOR ANN ARBOR PARKS & RECREATION DEPARTMENT 301 EAST HURON STREET, ANN ARBOR, MI 48107	DR. PTG CK. JWW	9/6/16 BIDDING 7/6/16 FSP REVIEW 6/20/16 REVISION 5/31/16 OPC REVIEW
		© COPYRIGHT 2016 KOHLER ARCHITECTURE, INC. #1627 COPING THIS DRAWING IS PROHIBITED AND SUBJECT TO PROSECUTION.	JOB #TB No. 4454 SHEET CE-8

Z:\Projects\16104\dwg\16104.dwg 16:04 NOTES AND DETAILS.dwg CE-8 EROSION CONTROL DETAILS 9/1/2016 12:51:21 PM EIT

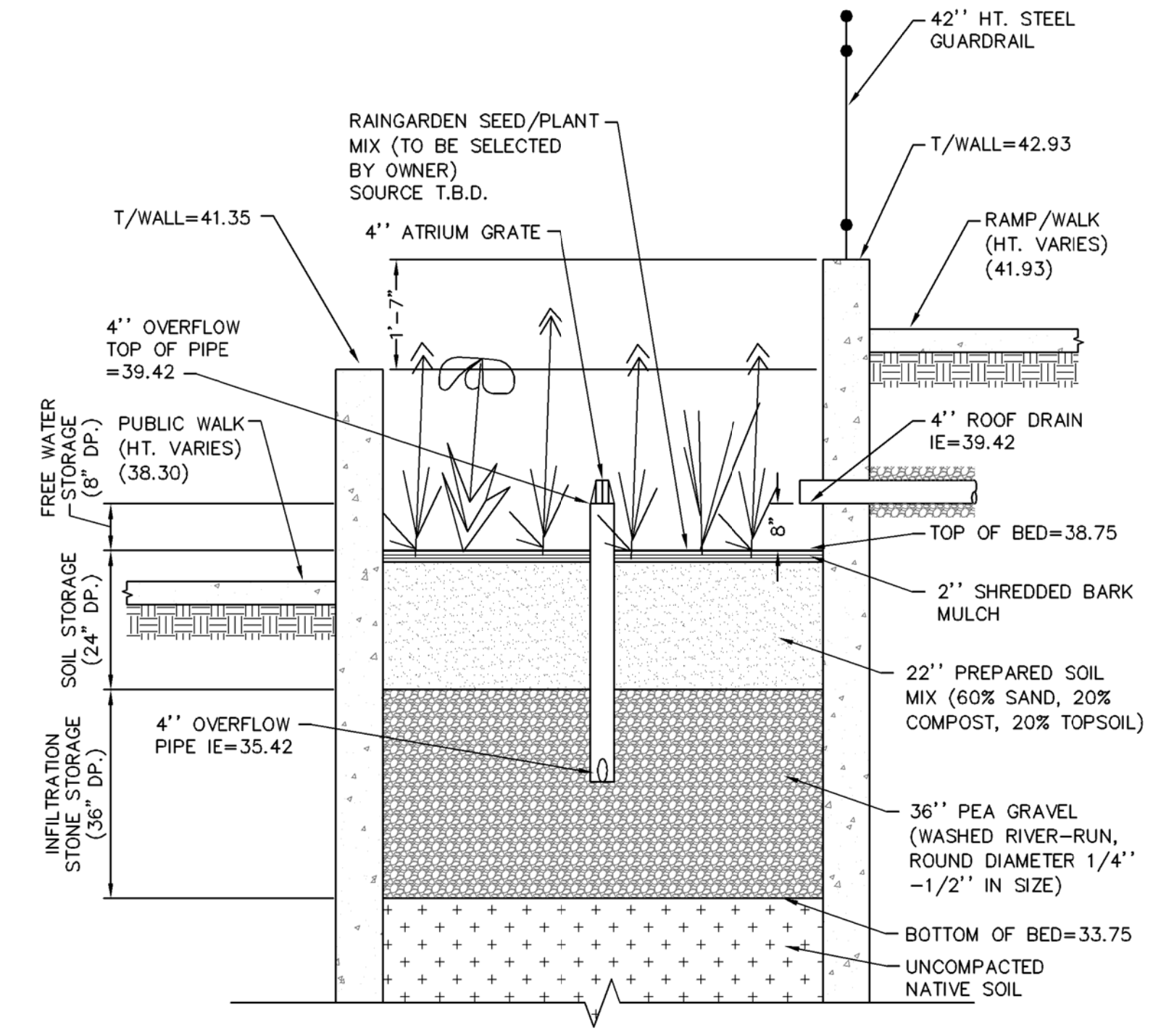


PLAN VIEW
SCALE: 1" = 2"



PERENNIAL / GROUND COVER PLANTING DETAIL
NOT TO SCALE

- 1 IRREGULAR PLANT SPACING
 - 2 2" DEPTH DOUBLE PROCESSED SHREDDED BARK MULCH
 - 3 MOUND TO FORM SAUCER - FORM SOIL SAUCER WITH 3" HT. CONTINUOUS RIM OR ALUM. EDGE, SEE PLAN
 - 4 EXCAVATE SOIL
 - 5 UNDISTURBED SUBGRADE
- NOTE:
REMOVE ALL FIBER, PLASTIC OR METAL CONTAINERS



RAIN GARDEN CROSS-SECTION
SCALE: 1" = 2"

RAINGARDEN PLANT MIX:

NATIVE GRASS			
114	SWITCHGRASS	PANICUM VIRGATUM "SHENANDOAH"	18" O.C.
PERENNIAL PLANTS			
THE REST OF THE PLANTS INTERSPERSED IN THE RAIN GARDEN:			
38	WILD STRAWBERRY	FRAGARIA VIRGINIANA	
38	WILD ONION	ALLIUM CERUUM	
38	SKY-BLUE ASTER	ASTER OOLENTANGENSIS	
PLANTS FOR RAINGARDEN - ALL PLUGS			

MULCH NOTES:

1. MULCH TO BE DOUBLE SHREDDED HARDWOOD BARK MULCH.
2. NO. GROUND WOOD PALETTE MULCH PERMITTED.

Planting Notes:

The Contractor shall verify all rights of way, easements, property lines and limits of work, etc. prior to commencing work.

The Contractor shall be responsible for contacting and coordinating with all pertinent utility companies 72 hours in advance of any digging to make himself familiar with all underground utilities, pipes and structures. The Contractor shall take sole responsibility for any cost incurred due to damage of said utilities.

The Contractor shall not willfully proceed with construction as designed when it is obvious that unknown obstructions and/or grade differences exist. Such conditions shall be immediately brought to the attention of the owner's representative and/or Landscape Architect. The Contractor shall assume full responsibility for all necessary revisions due to failure to give such notification.

Any discrepancies between dimensioned layout and actual field conditions shall be reported to the Owner's representative and Landscape Architect. Failure to make such discrepancies known will result in Contractor's responsibility and liability for any changes and associated cost.

The Contractor shall be responsible for any coordination with subcontractors as required to accomplish construction installation operations.

Do not scale drawings. Refer to written dimensions only.

The Contractor shall provide and maintain positive surface drainage.

The Contractor shall be responsible for any existing materials that are damaged during construction.

See plant list and planting details for planting requirements, materials and execution.

All plant material shall be approved by Owner's Representative and/or Landscape Architect prior to delivery to the site. Any plants delivered to the site not previously approved may be rejected and are the sole responsibility of the Contractor.

Final location of all plant material shall be subject to the approval of the Landscape Architect.

The Contractor to verify percolation of all planting pits prior to installation of plant material.

The Contractor shall place 2" depth of shredded bark mulch in all planting beds, unless otherwise indicated.



RAINGARDEN PLANTING DETAILS

Z EIMET W O Z N I A K
Civil Engineers & Land Surveyors
5880 GRAND RIVER AVE., SUITE 100
NEW HUDSON, MICHIGAN 48165
P: (248) 437-5099 F: (248) 437-5222 www.zewozniak.com
ZWA JOB NO. 16104

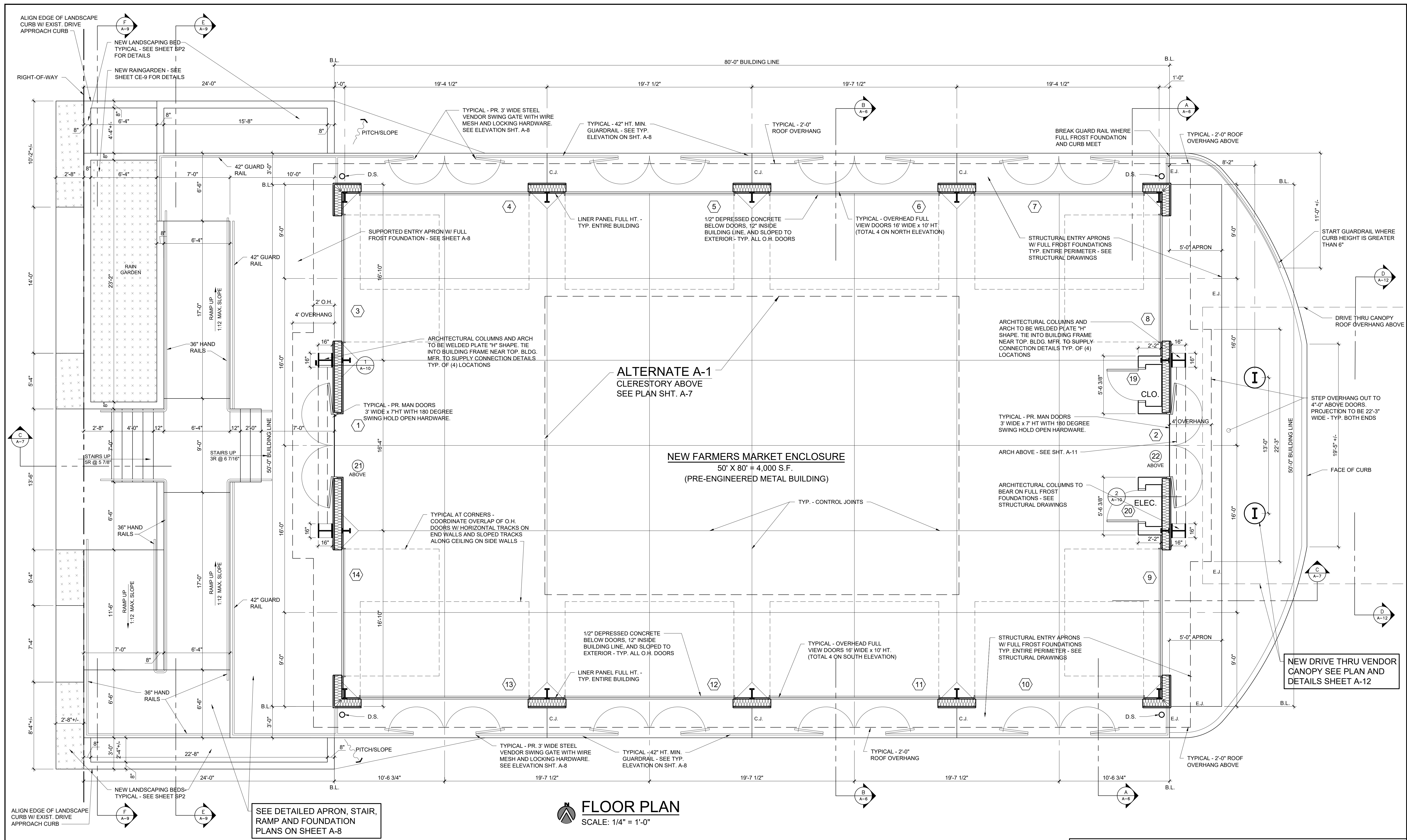
NEW FARMERS MARKET ENCLOSURE
AT ANN ARBOR FARMERS MARKET
315 DETROIT STREET, SECTION 29, CITY OF ANN ARBOR, WASHTENAW COUNTY, MI
FOR ANN ARBOR PARKS & RECREATION DEPARTMENT
301 EAST HURON STREET, ANN ARBOR, MI 48107

K O H L E R
ARCHITECTURE, INC.
1118 WEST FRONT STREET
MORROE, MICHIGAN 48161
PHONE: 734-242-8880, FAX: 734-242-8883

DR. DAB	CK. JJW	9/6/16	BIDDING
		7/6/16	FSP REVIEW
		6/20/16	REVISION
		5/31/16	OPC REVIEW
		DATE	STATUS
		JOB #	ITB No. 4454
		SHEET	CE-9

© COPYRIGHT 2016
K O H L E R
ARCHITECTURE, INC.
#1627
COPYING THIS DRAWING IS PROHIBITED AND SUBJECT TO PROSECUTION.

Z:\Projects\16104\dwg\16104 ENG.dwg, CE-9 RAINGARDEN PLANTING DETAILS, 9/1/2016 12:51:44 PM, ET

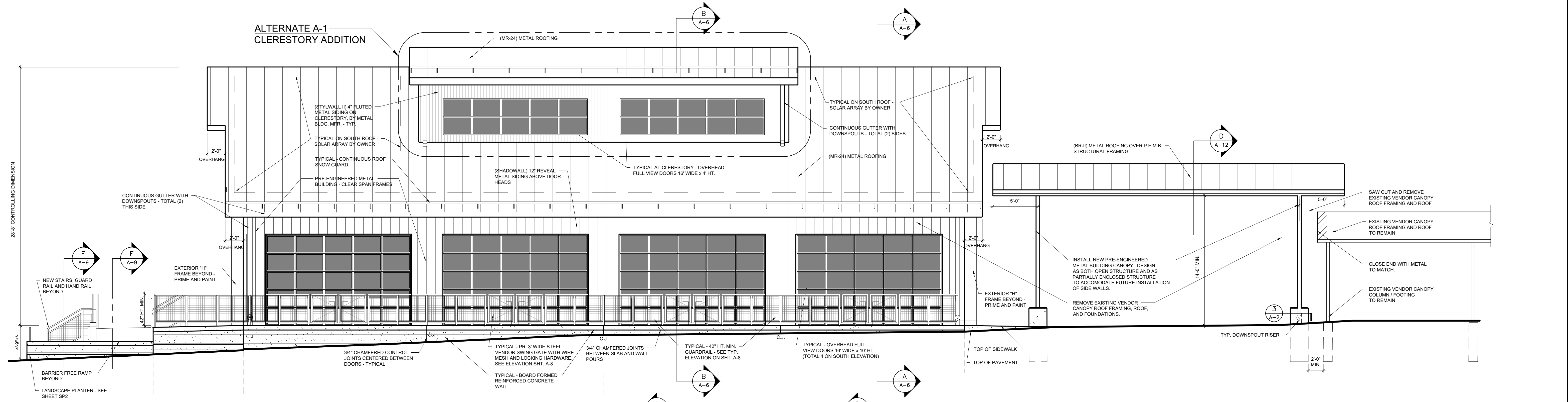


FLOOR PLAN
SCALE: 1/4" = 1'-0"

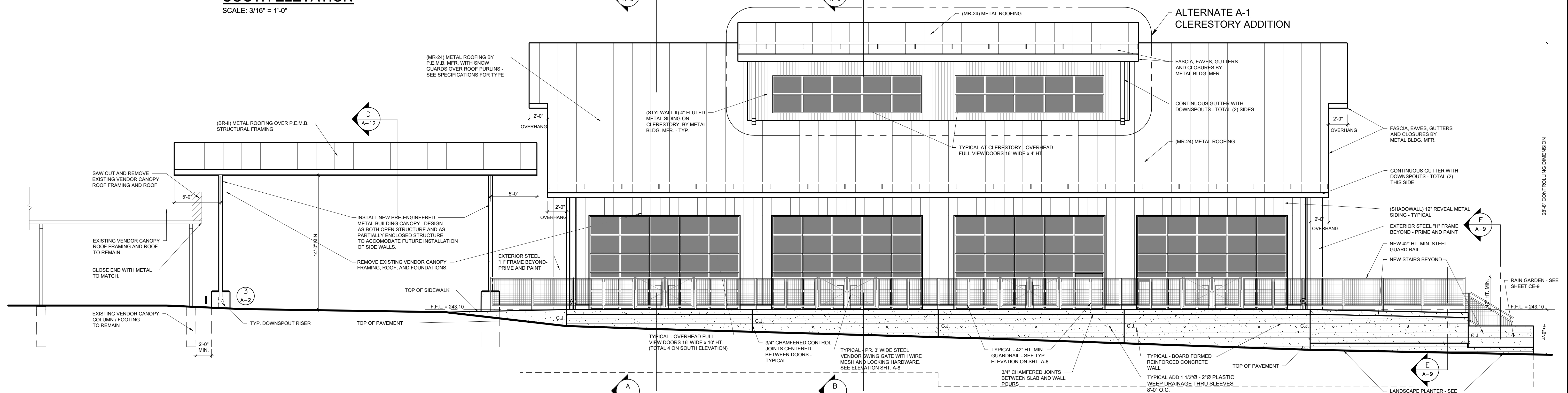
PLEASE NOTE: THE DRAWINGS ARE "DESCRIPTIVE" IN PRACTICE, PENDING SUBMITTAL AND ACCEPTANCE OF METAL BUILDING MANUFACTURER AS SELECTED BY SUCCESSFUL BIDDER, AND APPROVED BY THE ARCHITECT / OWNER. METAL BUILDING MANUFACTURER TO ENGINEER BUILDING SYSTEM AS REQUIRED TO ERECT BUILDING IN ACCORDANCE WITH THE GENERAL DESIGN AS INDICATED ON THE DRAWINGS. MODIFICATIONS TO THE STRUCTURAL FRAMING, WALL / ROOF PANELS AND OTHER BUILDING COMPONENTS, INCLUDING FINAL DETAILS, TO BE APPROVED BY THE ARCHITECT AND MANUFACTURERS BUILDING ENGINEER PRIOR TO SHOP DRAWING APPROVAL.



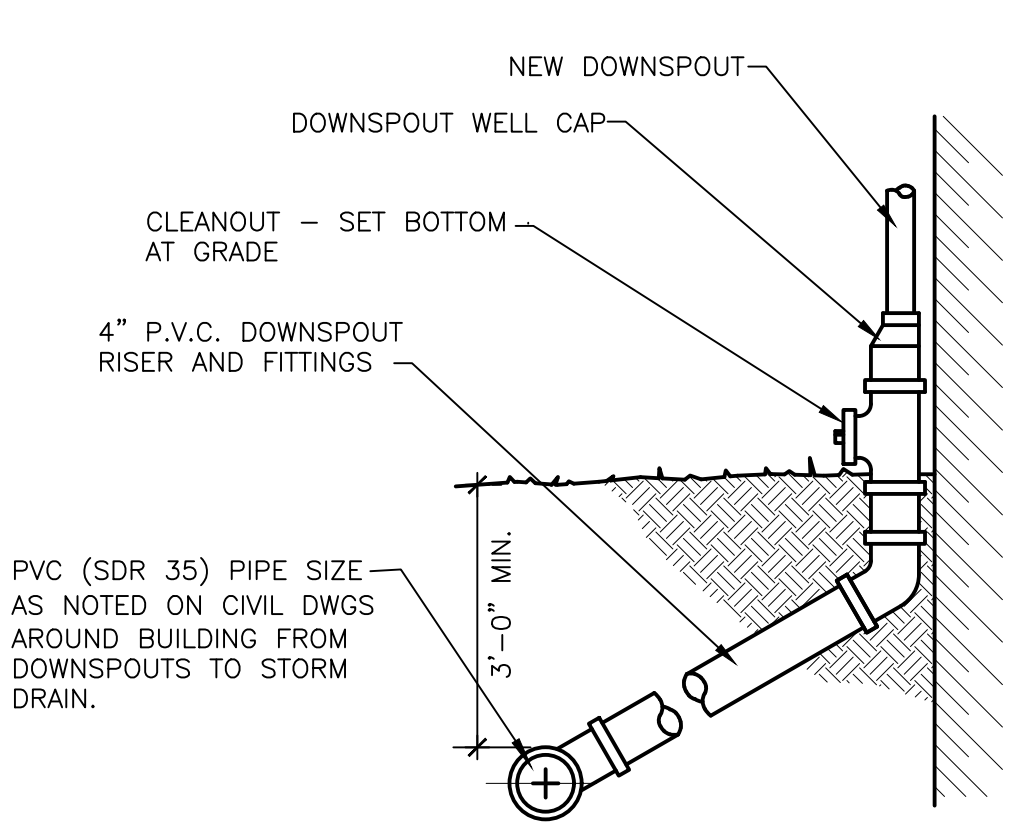
FLOOR PLAN		DR. KJK CK. MWK NEW FARMERS MARKET ENCLOSURE AT ANN ARBOR FARMERS MARKET <small>315 DETROIT STREET, SECTION 29, CITY OF ANN ARBOR, WASHTENAW COUNTY, MI FOR ANN ARBOR PARKS & RECREATION DEPARTMENT SERVICES 301 EAST HURON STREET, ANN ARBOR, MI 48107</small>	
 KOHLER ARCHITECTURE, INC. #1627 <small>1111 S. WEST FRONT STREET MONROE, MICHIGAN 48161 PHONE: 734-242-6880, FAX: 734-242-6883</small>		© COPYRIGHT 2016 KOHLER ARCHITECTURE, INC. #1627	9/6/16 BIDDING 7/6/16 FSP REVIEW 6/20/16 REVISION 5/31/16 CPC REVIEW DATE STATUS JOB ITB No. 4454 SHEET A1 OF 12
		COPIING THIS DRAWING IS PROHIBITED AND SUBJECT TO PROSECUTION.	



SOUTH ELEVATION
SCALE: 3/16" = 1'-0"



NORTH ELEVATION
SCALE: 3/16" = 1'-0"



3 DOWNSPOUT RISER DETAIL
SCALE: 3/4" = 1'-0"

PLEASE NOTE: THE DRAWINGS ARE "DESCRIPTIVE" IN PRACTICE, PENDING SUBMITTAL AND ACCEPTANCE OF METAL BUILDING MANUFACTURER AS SELECTED BY SUCCESSFUL BIDDER, AND APPROVED BY THE ARCHITECT / OWNER. METAL BUILDING MANUFACTURER TO ENGINEER BUILDING SYSTEM AS REQUIRED TO ERCT BUILDING IN ACCORDANCE WITH THE GENERAL DESIGN AS INDICATED ON THE DRAWINGS. MODIFICATIONS TO THE STRUCTURAL FRAMING, WALL / ROOF PANELS AND OTHER BUILDING COMPONENTS, INCLUDING FINAL DETAILS, TO BE APPROVED BY THE ARCHITECT AND MANUFACTURERS BUILDING ENGINEER PRIOR TO SHOP DRAWING DRAWING APPROVAL.



EXTERIOR ELEVATIONS	
NEW FARMERS MARKET ENCLOSURE AT ANN ARBOR FARMERS MARKET 315 DETROIT STREET, SECTION 29, CITY OF ANN ARBOR, WASHTENAW COUNTY, MI FOR ANN ARBOR PARKS & RECREATION DEPARTMENT SERVICES 301 EAST HURON STREET, ANN ARBOR, MI 48107	
DR. KJK	CK. MWK
© COPYRIGHT 2016 KOHLER ARCHITECTURE, INC. #1627	9/6/16 BIDDING 7/6/16 FSP REVIEW 6/20/16 REVISION 5/31/16 CPC REVIEW DATE STATUS JOB ITB No. 4454
KOHLER ARCHITECTURE, INC. 11118 WEST FRONT STREET MONROE, MICHIGAN 48161 PHONE: 734-242-6880, FAX: 734-242-6883	
COPYING THIS DRAWING IS PROHIBITED AND SUBJECT TO PROSECUTION.	
SHEET 2 OF 12	

BUILDING CODE CHECKLIST		New Ann Arbor Farmer's Market Enclosure 315 Detroit Street, Ann Arbor, MI 48104 #1627	
BUILDING CODE	MICHIGAN 2012		
ISSUE	REF	REQMT.	DATA / COMMENTS
USE AND OCCUPANCY CLASSIFICATION Chapter 3			
Classification	309		Group A-4 - Assembly without alcohol Group A-2 - Assembly with alcohol
GENERAL BUILDING HEIGHT & AREAS Chapter 5			
General limits	503.1.2		Type VB
Allowable limits	T503		Height: 1-story (40') Area: 6,000 S.F.
Area modifications	506		Not Applicable New Enclosure is less than 6,000 S.F.

TYPES OF CONSTRUCTION Chapter 6			
Construction Classification	602		
Fire rating of building elements	T601		Primary Structural Frame 0Hr Bearing Walls: Exterior 0Hr, Interior 0Hr Non-Bearing Walls: Exterior 0Hr, Interior 0Hr Floor Construction 0Hr Roof Construction 0Hr

INTERIOR FINISHES Chapter 8			
Finish requirements by occupancy	T803.9		

FIRE PROTECTION SYSTEMS Chapter 9			
Sprinklers	903.2.1.4	Group A-4 - Not required if less than 12,000 S.F. and occupant load is less than 300.	
	903.2.1.2	Group A-2 - Not required if less than 5,000 S.F. and occupant load is less than 100.	
Fire extinguishers	906	Type 2-A (1 per 3,000 S.F.) Mount top at max. 60" above finished floor	
Fire alarms	907.2.1	Not Required if less than 300 occupants	

MEANS OF EGRESS Chapter 10			
Elevation change	1003.5, 1008.1.5		Floor elevation shall be the same on both sides of door
Floor area / Occupant Load	1004, T1004.1.2, 1004.1.2		Assembly 1/15 S.F. gross (4000 / 15) = 267 300 people maximum
Posting occupant load	1004.3		Every space that is assembly occupancy must have a sign posting occupant load.
Egress width	1005.3		Egress = 0.2' Occupant without sprinklers Stairways = 0.3' Occupant without sprinklers
Accessible means of egress	1007		Min. 1 accessible means of egress required
Doors	1008		Min. 34" wide ext. - (36" wide for ADA)
Stairways	1009, 1022		1009.10 - Max 12" rise between landings
Star width	1009.4		Min 44" width, 80" Headroom
Treads & risers	1009.7.2		Risers - Min. 4", Max 7" Tread - Min. 11"
Exit signs	1011		Required in areas that have more than 1 exit
Handrails	1012		Must extend min 12" beyond top riser Must extend min 1 tread beyond bottom riser
Ramps	1010		Max slope = 1:12, Max Rise 30" between landings
Number of exit access	T1015.1		2 exits required > 49 people
Travel distance	1016.1, T1016.2		200 ft. without sprinkler system
Corridors	1018, T1018.1		greater than 30 people - 1 hr. fire rating
Number of exits	1021		2 exits required

INTERIOR ENVIRONMENT Chapter 12			
Natural ventilation	1203.4		Min openable area is 4% of floor area being ventilated
Natural light	1205.2		Min glazed area is 8% of floor area of room served

ENERGY EFFICIENCY Chapter 13			
			See Envelope Compliance Certificate his Sheet.

EXTERIOR WALLS Chapter 14			
Water-resistive barrier	1404.2		
Min. thicknesses	T1405.2		

ROOF ASSEMBLIES & ROOFTOP STRUCTURES Chapter 15			
Fire classification	T1505.1		
Metal panel	T1507.4.3		1. The minimum slope for lapped, non-soldered seam metal roofs without applied lap sealant shall be three units vertical in 12 units horizontal (25-percent slope). 2. The minimum slope for lapped, non-soldered seam metal roofs with applied lap sealant shall be one-half unit vertical in 12 units horizontal (4-percent slope). Lap sealants shall be applied in accordance with the approved manufacturer's installation instructions. 3. The minimum slope for standing seam of roof systems shall be one-quarter unit vertical in 12 units horizontal (2-percent slope). (Section 1507.4.2)
Shingles	T1507.8		Wood shingles shall be installed on slopes of three units vertical in 12 units horizontal (3-12) or greater.
"Flat" roofs	T1507.10		Built-up roofs shall have a design slope of a minimum of one-fourth unit vertical in 12 units horizontal (2-percent slope) for drainage, except for coal-tar built-up roofs that shall have a design slope of a minimum one-eighth unit vertical in 12 units horizontal (1-percent slope). (Section 1507.10.1)

STRUCTURAL DESIGN Chapter 16			
Building classification	T1604.5		Review w/ engineer
Live loads	T1607.1		Review w/ engineer

SPECIAL INSPECTIONS & TESTS Chapter 17			
Steel inspections	T1704.3		Applies if over 25,000 SF or 15' high
Concrete inspections	T1704.4		
Level 1 inspections	T1704.5.1		Applies to non-essential facilities
Level 2 inspections	T1704.5.3		Applies to essential facilities.

PLUMBING CODE CHECKLIST				
USE GROUP	REF	REQMT.	DATA / COMMENTS	
PLUMBING FIXTURES Chapter 4				
Assembly	T403.1	Water Closets	1 per 75 for first 1,500 (Male)	
		Water Closets	1 per 40 for first 1,520 (Female)	
		Lavatories	1 per 250 (Male)	
		Lavatories	1 per 150 (Female)	
Location	403.3.3	Drinking Fountains	1 per 1,000	
			Public and employee toilet facilities shall be barrier free accessible and the path of travel to such facilities shall not exceed a distance of 500 feet.	

COMcheck Software Version 4.3.4
Envelope Compliance Certificate

Project Information

Energy Code: 90.1 (2007) Standard
Project Title: A2 FM - W/ Clerestory - All Glass O.H. WD Doors
Location: Ann Arbor, Michigan
Climate Zone: 5a
Project Type: New Construction
Vertical Glazing / Wall Area: 56%

Construction Site: Owner/Agent: Designer/Contractor:

Building Area	Floor Area
1-Convention Center - Nonresidential	4000

Envelope Assemblies	Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	Proposed U-Factor	Budget U-Factor
Roof: Metal Building, Standing Seam, (Bldg. Use 1 - Convention Center)		2320	0.0	19.0	0.051	0.065
Floor: Unheated Slab-On-Grade, Vertical 2 R, (Bldg. Use 1 - Convention Center) (c)		252	---	10.0	0.540	0.540
NORTH						
Ext. Wall: Metal Building Wall, Single Layer Mineral Fiber, (Bldg. Use 1 - Convention Center) (b)		1181	13.0	0.0	0.113	0.113
Door: Perf. Specs. Product ID WD K.AL, SHGC 0.50, (Bldg. Use 1 - Convention Center) (b)		145	---	---	0.284	0.550
Door: Perf. Specs. Product ID WD K.AL, SHGC 0.50, (Bldg. Use 1 - Convention Center) (b)		640	---	---	0.284	0.550
EAST						
Ext. Wall: Metal Building Wall, Single Layer Mineral Fiber, (Bldg. Use 1 - Convention Center) (b)		1020	13.0	0.0	0.113	0.113
Door: Perf. Specs. Product ID KN Trifab 451, SHGC 0.45, (Bldg. Use 1 - Convention Center) (b)		62	---	---	0.480	0.800
Door: Perf. Specs. Product ID WD K.AL, SHGC 0.50, (Bldg. Use 1 - Convention Center) (b)		240	---	---	0.284	0.550
Window: Metal Frame Curtain Wall/Storefront, Fixed, Perf. Specs. Product ID KN Trifab 451, SHGC 0.45, (Bldg. Use 1 - Convention Center) (b)		142	---	---	0.480	0.450
SOUTH						
Ext. Wall: Metal Building Wall, Single Layer Mineral Fiber, (Bldg. Use 1 - Convention Center) (b)		1181	13.0	0.0	0.113	0.113
Door: Perf. Specs. Product ID WD K.AL, SHGC 0.50, (Bldg. Use 1 - Convention Center) (b)		145	---	---	0.284	0.550
Door: Perf. Specs. Product ID WD K.AL, SHGC 0.50, (Bldg. Use 1 - Convention Center) (b)		640	---	---	0.284	0.550
WEST						
Ext. Wall: Metal Building Wall, Single Layer Mineral Fiber, (Bldg. Use 1 - Convention Center) (b)		1020	13.0	0.0	0.113	0.113
Door: Perf. Specs. Product ID KN Trifab 451, SHGC 0.45, (Bldg. Use 1 - Convention Center) (b)		62	---	---	0.480	0.800
Door: Perf. Specs. Product ID WD K.AL, SHGC 0.50, (Bldg. Use 1 - Convention Center) (b)		240	---	---	0.284	0.550
Window: Metal Frame Curtain Wall/Storefront, Fixed, Perf. Specs. Product ID KN Trifab 451, SHGC 0.45, (Bldg. Use 1 - Convention Center) (b)		142	---	---	0.480	0.450

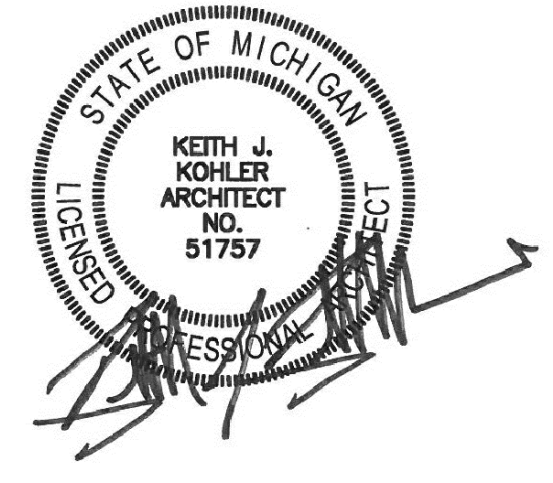
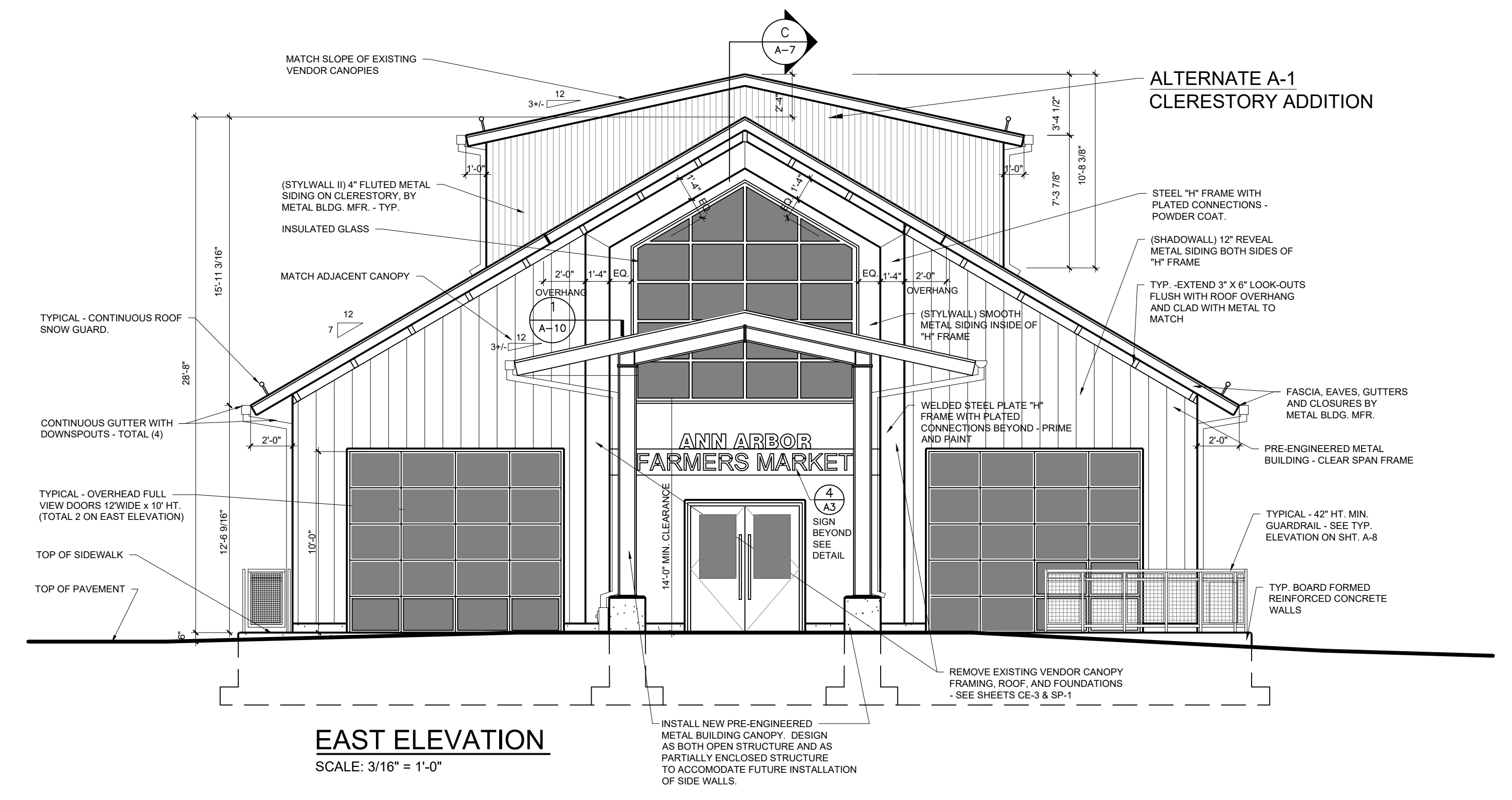
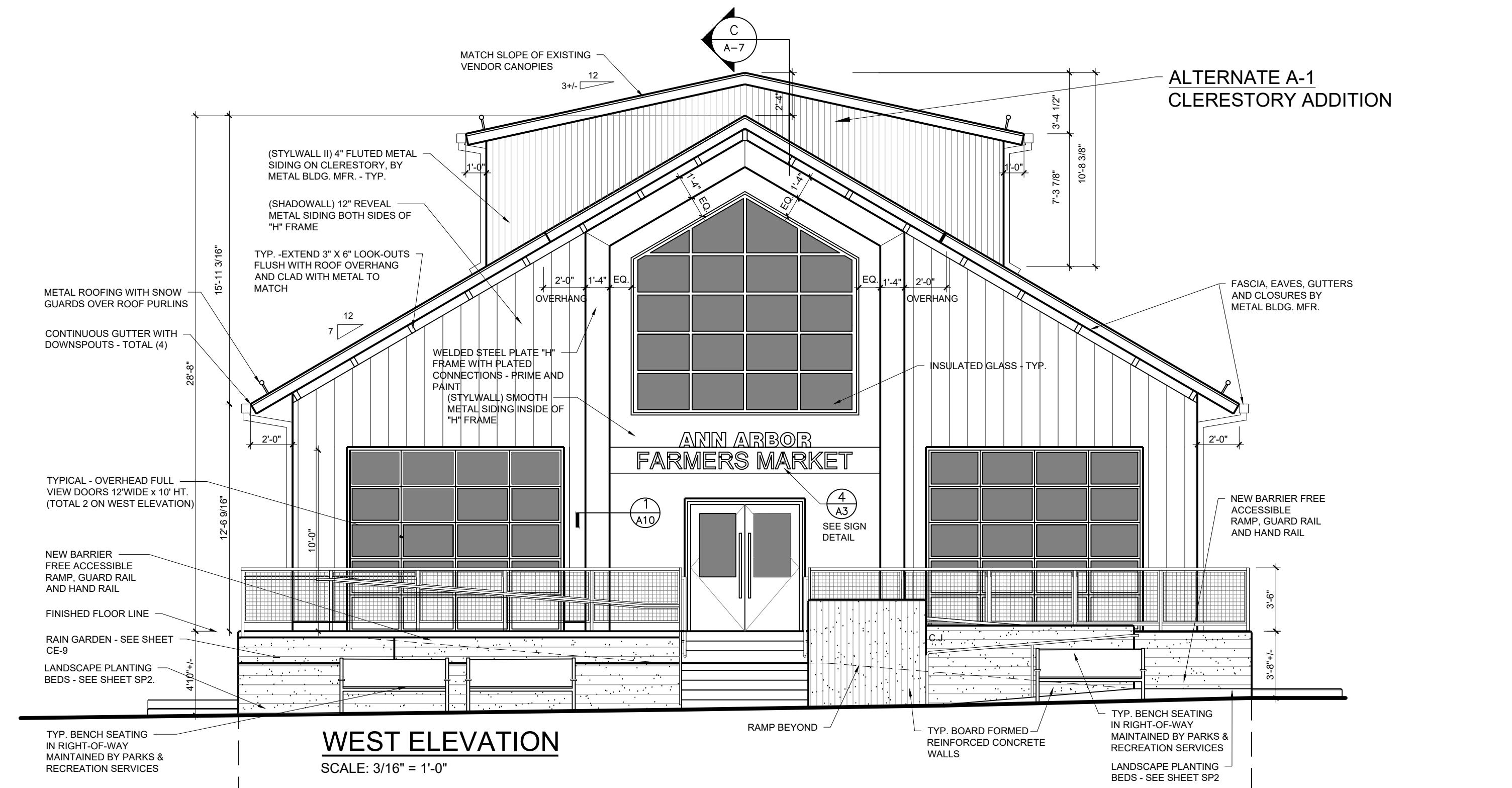
(a) Budget U-factors are used for software baseline calculations ONLY, and are not code requirements.
(b) Fenestration product performance must be certified in accordance with NFRC and requires supporting documentation.
(c) Slab-On-Grade proposed and budget U-factors shown in table are F-factors.

Envelope PASSES: Design 4% better than code

Envelope Compliance Statement
Compliance Statement: The proposed envelope design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed envelope systems have been designed to meet the 90.1 (2007) Standard requirements in COMcheck's Version 4.3.4 and to comply with the mandatory requirements listed in the Inspection Checklist.

KEITH KOHLER ARCHITECT
Name: Title: Signature: Date: 7.29.16

PLEASE NOTE: THE DRAWINGS ARE "DESCRIPTIVE" IN PRACTICE, PENDING SUBMITTAL AND ACCEPTANCE OF METAL BUILDING MANUFACTURER AS SELECTED BY SUCCESSFUL BIDDER, AND APPROVED BY THE ARCHITECT / OWNER. METAL BUILDING MANUFACTURER TO ENGINEER BUILDING SYSTEM AS REQUIRED TO ERECT BUILDING IN ACCORDANCE WITH THE GENERAL DESIGN AS INDICATED ON THE DRAWINGS. MODIFICATIONS TO THE STRUCTURAL FRAMING, WALL / ROOF PANELS AND OTHER BUILDING COMPONENTS, INCLUDING FINAL DETAILS, TO BE APPROVED BY THE ARCHITECT AND MANUFACTURERS BUILDING ENGINEER PRIOR TO SHOP DRAWING DRAWING APPROVAL.



EXTERIOR ELEVATIONS			
NEW FARMERS MARKET ENCLOSURE AT ANN ARBOR FARMERS MARKET 315 DETROIT STREET, SECTION 29, CITY OF ANN ARBOR, WASHTENAW COUNTY, MI FOR ANN ARBOR PARKS & RECREATION DEPARTMENT SERVICES 301 EAST HURON STREET, ANN ARBOR, MI 48107		DR. KJK CK. MWK	9/6/16 BIDDING 7/6/16 FSP REVIEW 6/20/16 REVISION 5/31/16 CPC REVIEW
KOHLER ARCHITECTURE, INC. 11118 WEST FRONT STREET MONROE, MICHIGAN 48161 PHONE: 734-242-6880, FAX: 734-242-6883		© COPYRIGHT 2016 KOHLER ARCHITECTURE, INC. #1627 COPING THIS DRAWING IS PROHIBITED AND SUBJECT TO PROSECUTION.	DATE STATUS JOB ITB No. 4454 SHEETA3 OF 12



PERSPECTIVE VIEW
NO SCALE LOOKING NORTHEAST



PERSPECTIVE VIEW
NO SCALE LOOKING SOUTHEAST

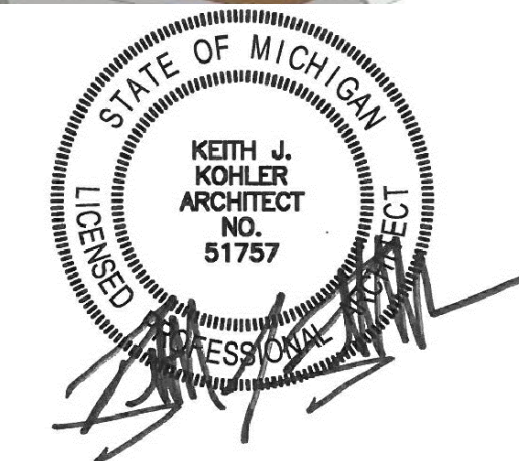


PERSPECTIVE VIEW
NO SCALE LOOKING WEST



PERSPECTIVE VIEW
NO SCALE LOOKING NORTHWEST

PLEASE NOTE: THE PERSPECTIVE VIEWS ON THIS SHEET ARE FOR GENERAL MASSING AND DESIGN CONCEPT ONLY. THESE VIEWS ARE NOT TO BE USED FOR CONSTRUCTION OR DETAIL PURPOSES.



PERSPECTIVE VIEWS			
NEW FARMERS MARKET ENCLOSURE AT ANN ARBOR FARMERS MARKET 315 DETROIT STREET, SECTION 29, CITY OF ANN ARBOR, WASHTENAW COUNTY, MI FOR ANN ARBOR PARKS & RECREATION DEPARTMENT SERVICES 301 EAST HURON STREET, ANN ARBOR, MI 48107		DR. KJK	9/6/16 BIDDING
		CK MWK	7/6/16 FSP REVIEW
		© COPYRIGHT 2016 KOHLER ARCHITECTURE, INC. #1627	6/20/16 REVISION
			5/31/16 CPC REVIEW
		JOB # ITB No. 4454	DATE STATUS
			SHEET A4 OF 12



COPYING THIS DRAWING IS PROHIBITED AND SUBJECT TO PROSECUTION.



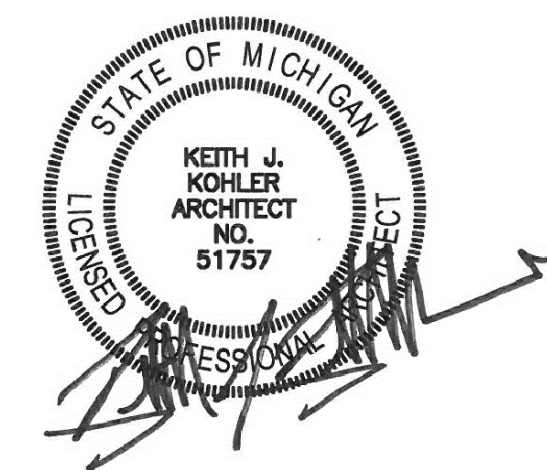
SITE SECTION
NO SCALE LOOKING SOUTH




SITE SECTION
NO SCALE LOOKING NORTH

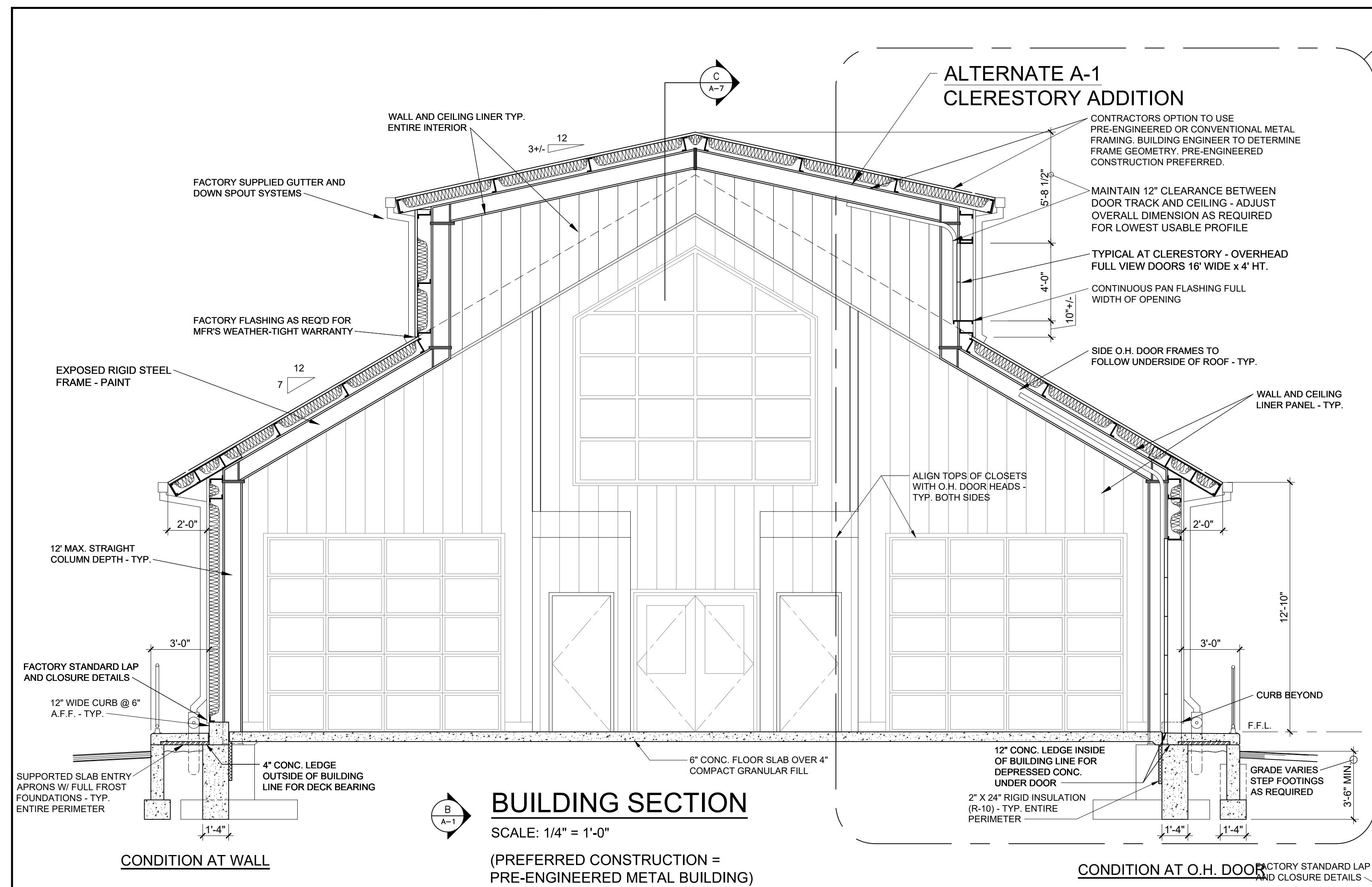


SITE SECTION
NO SCALE LOOKING EAST

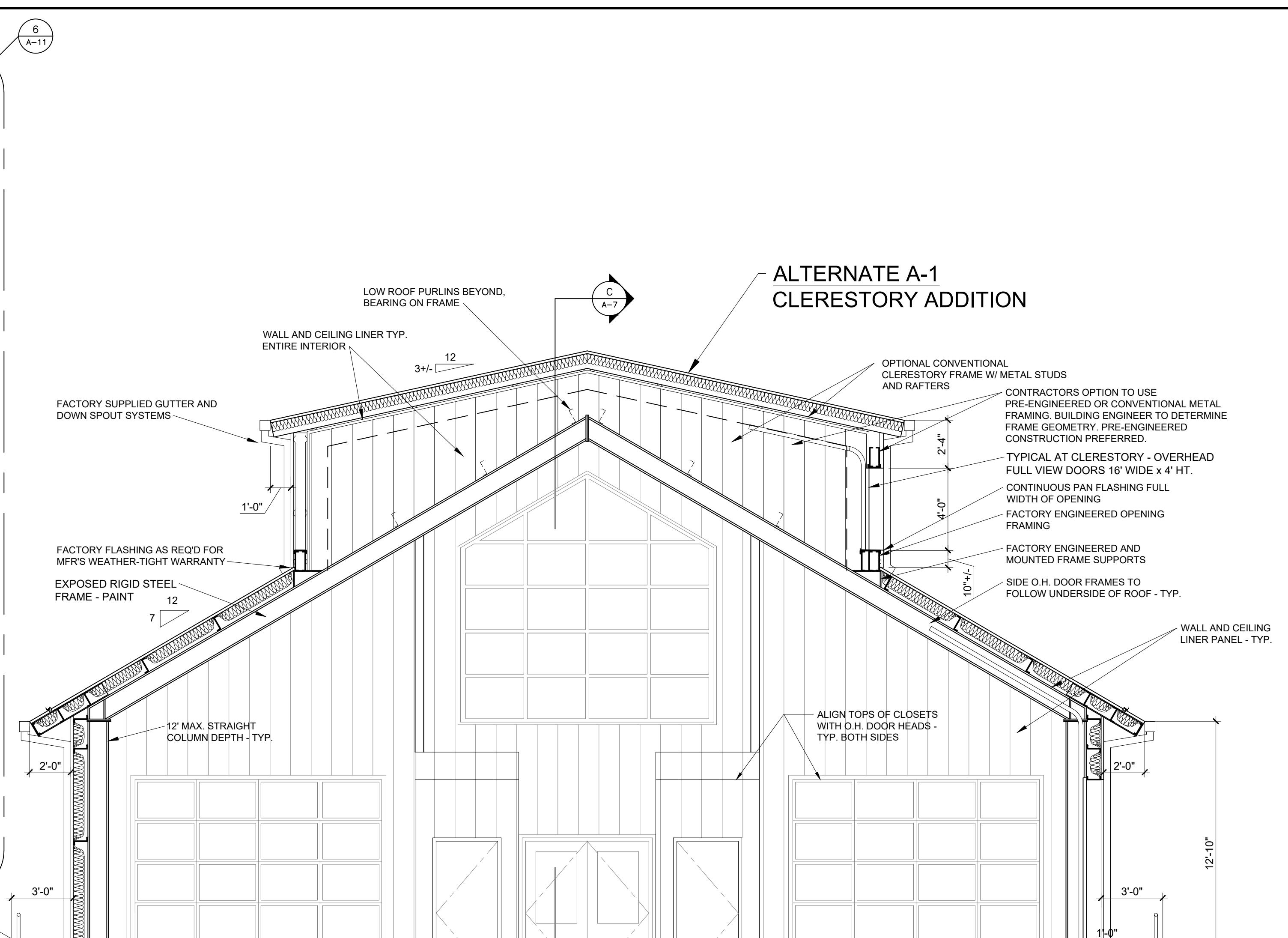


PLEASE NOTE: THE SITE SECTIONS ON THIS SHEET ARE FOR GENERAL MASSING AND DESIGN CONCEPT ONLY. THESE VIEWS ARE NOT TO BE USED FOR CONSTRUCTION OR DETAIL PURPOSES.

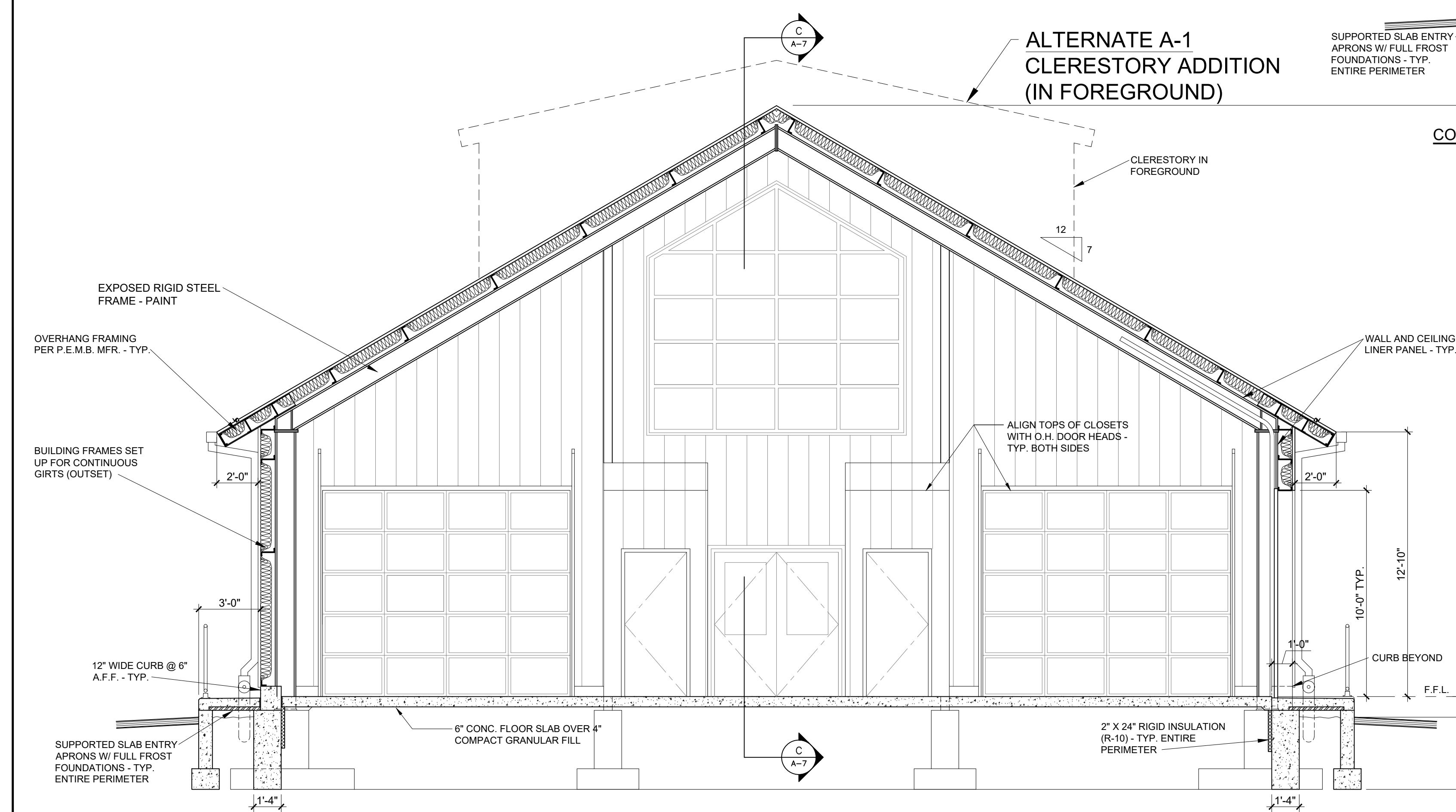
SITE SECTIONS			
NEW FARMERS MARKET ENCLOSURE AT ANN ARBOR FARMERS MARKET 315 DETROIT STREET, SECTION 29, CITY OF ANN ARBOR, WASHTENAW COUNTY, MI FOR ANN ARBOR PARKS & RECREATION DEPARTMENT SERVICES 301 EAST HURON STREET, ANN ARBOR, MI 48107		DR. KJK CK MWK	9/6/16 BIDDING 7/6/16 FSP REVIEW
© COPYRIGHT 2016 KOHLER ARCHITECTURE, INC. #1627		DATE	STATUS
 KOHLER ARCHITECTURE, INC. 1119 WEST FRONT STREET MONROE, MICHIGAN 48161 PHONE: 734-242-6880, FAX: 734-242-6883		JOB #1627	ITB No. 4454
COPYING THIS DRAWING IS PROHIBITED AND SUBJECT TO PROSECUTION.		SHEET A5 OF 12	



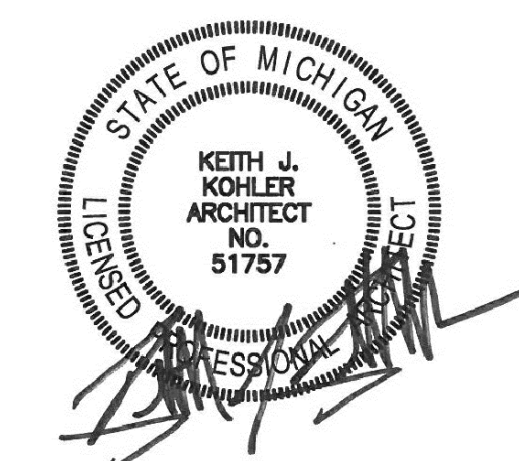
BUILDING SECTION
 SCALE: 1/4" = 1'-0"
 (PREFERRED CONSTRUCTION = PRE-ENGINEERED METAL BUILDING)



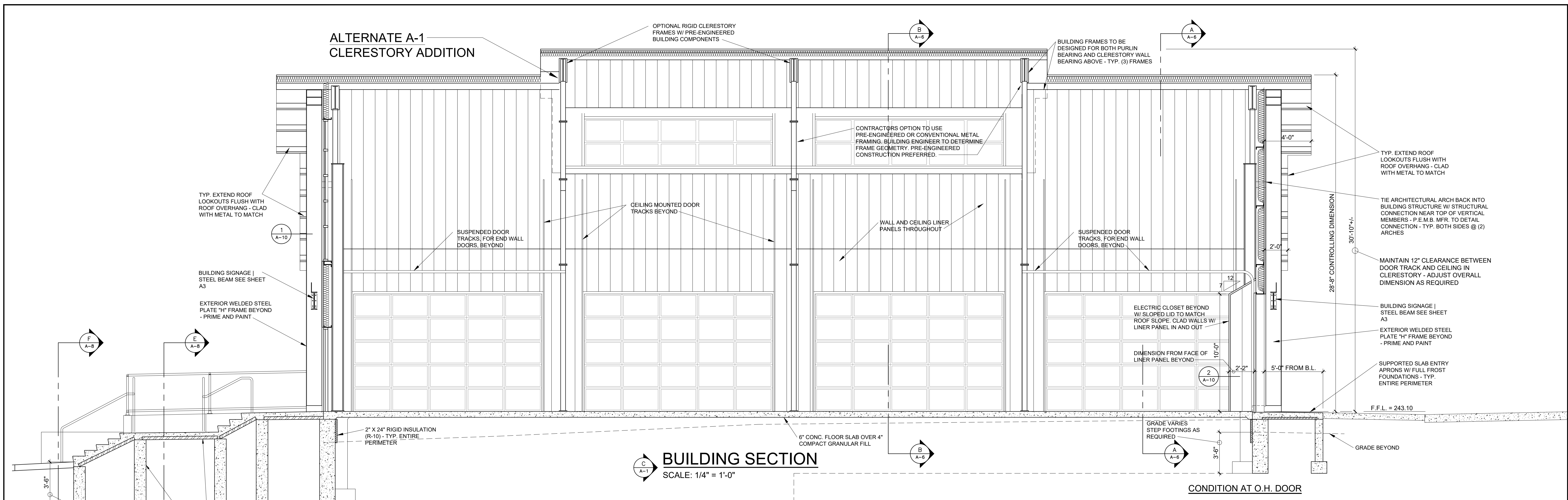
BUILDING SECTION
 SCALE: 1/4" = 1'-0"
 (OPTIONAL CONSTRUCTION = PRE-ENGINEERED METAL BUILDING W/ CONVENTIONAL CLERESTORY FRAMING)



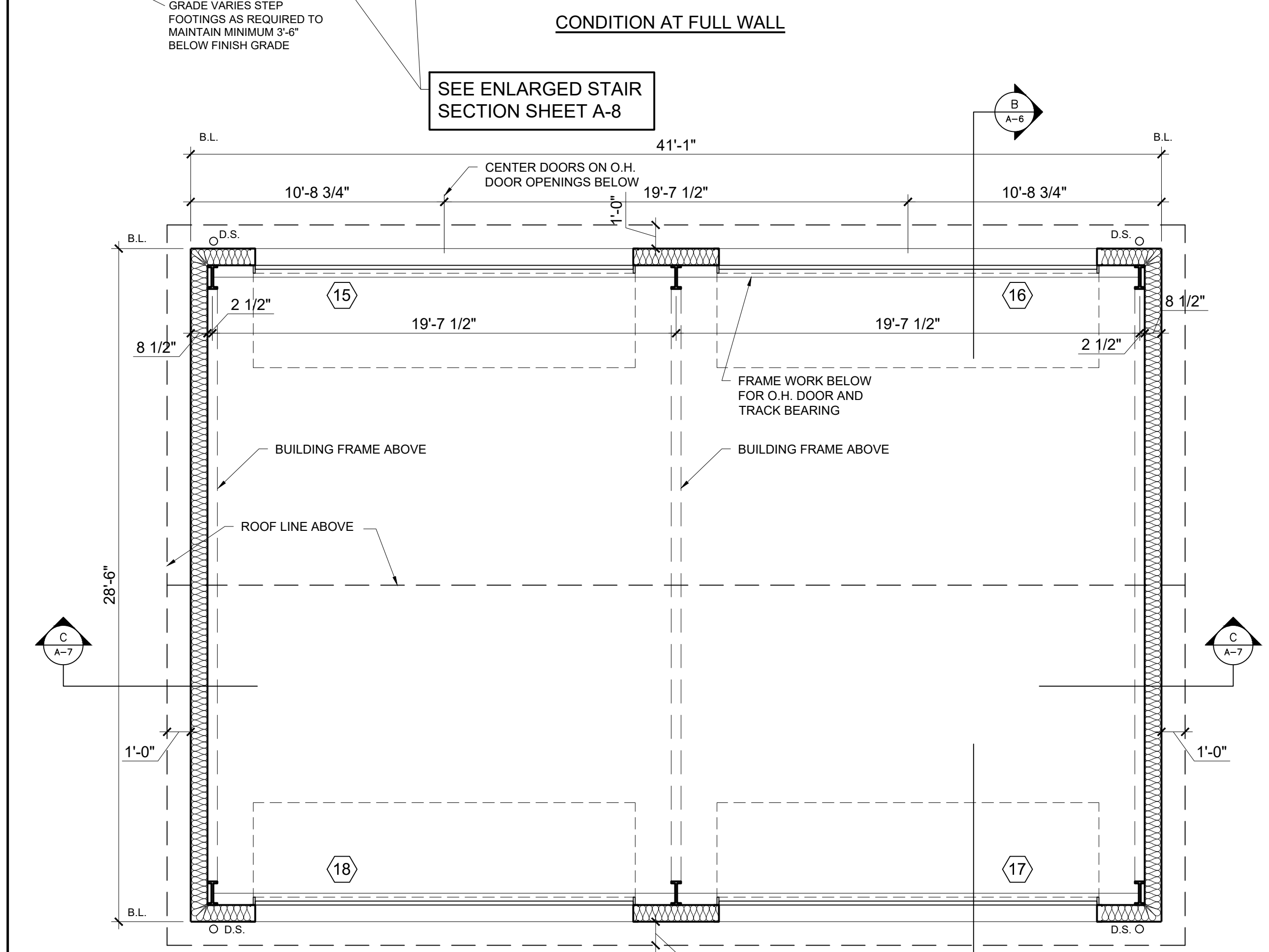
BUILDING SECTION
 SCALE: 1/4" = 1'-0"



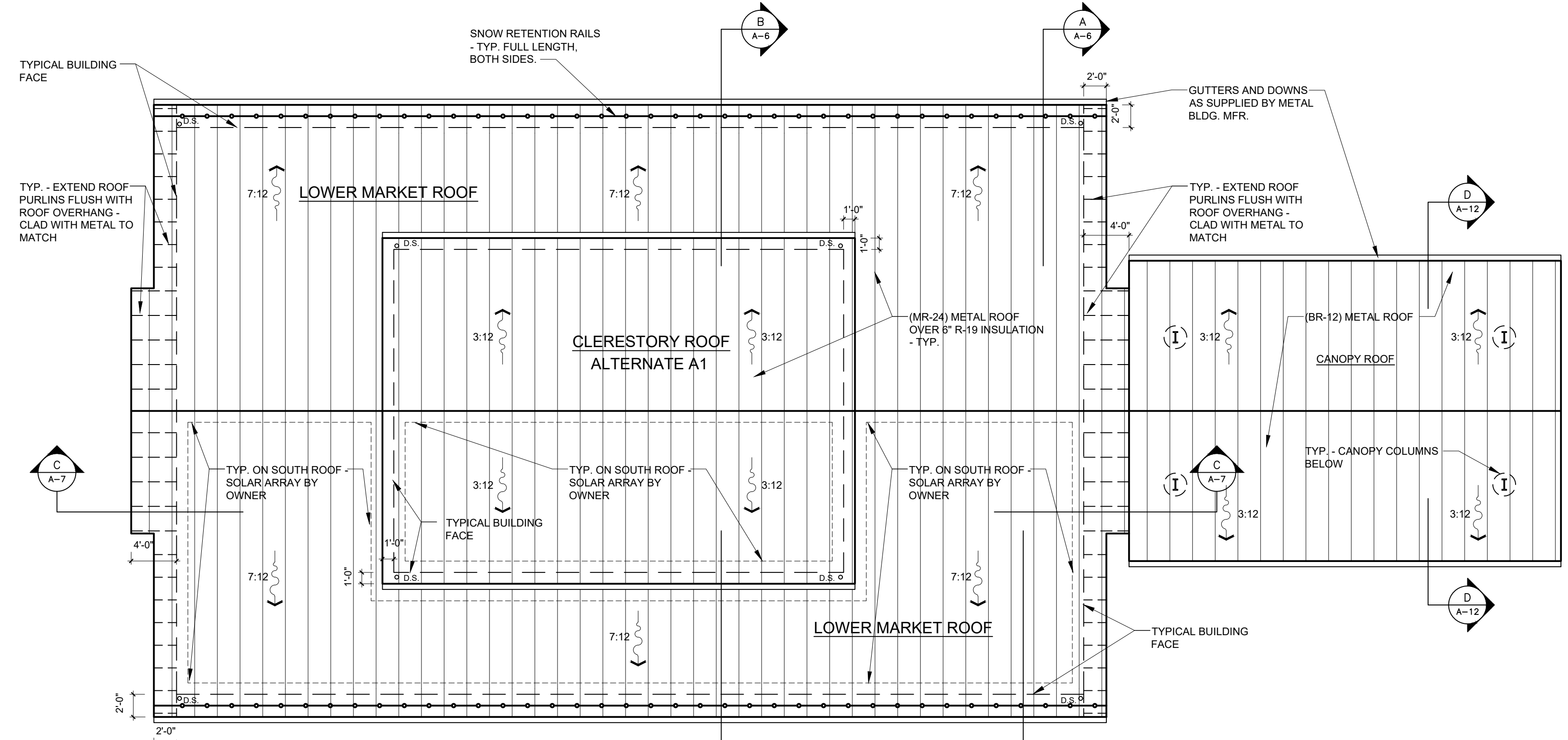
BUILDING SECTIONS			
NEW FARMERS MARKET ENCLOSURE AT ANN ARBOR FARMERS MARKET <small>315 DETROIT STREET, SECTION 29, CITY OF ANN ARBOR, WASHTENAW COUNTY, MI FOR ANN ARBOR PARKS & RECREATION DEPARTMENT SERVICES 301 EAST HURON STREET, ANN ARBOR, MI 48107</small>			
DR. KJK	CK. MWK	9/6/16	BIDDING
		7/6/16	FSP REVIEW
© COPYRIGHT 2016 KOHLER ARCHITECTURE, INC.		6/20/16	REVISION
		5/31/16	CPC REVIEW
		DATE	STATUS
		JOB #1627	ITB No. 4454
COPIING THIS DRAWING IS PROHIBITED AND SUBJECT TO PROSECUTION.		SHEET A6 OF 12	



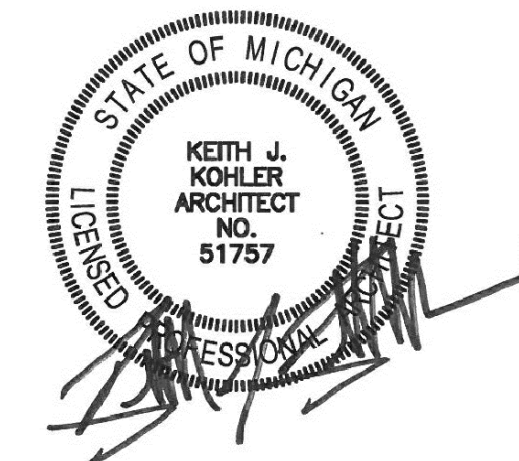
BUILDING SECTION
SCALE: 1/4" = 1'-0"



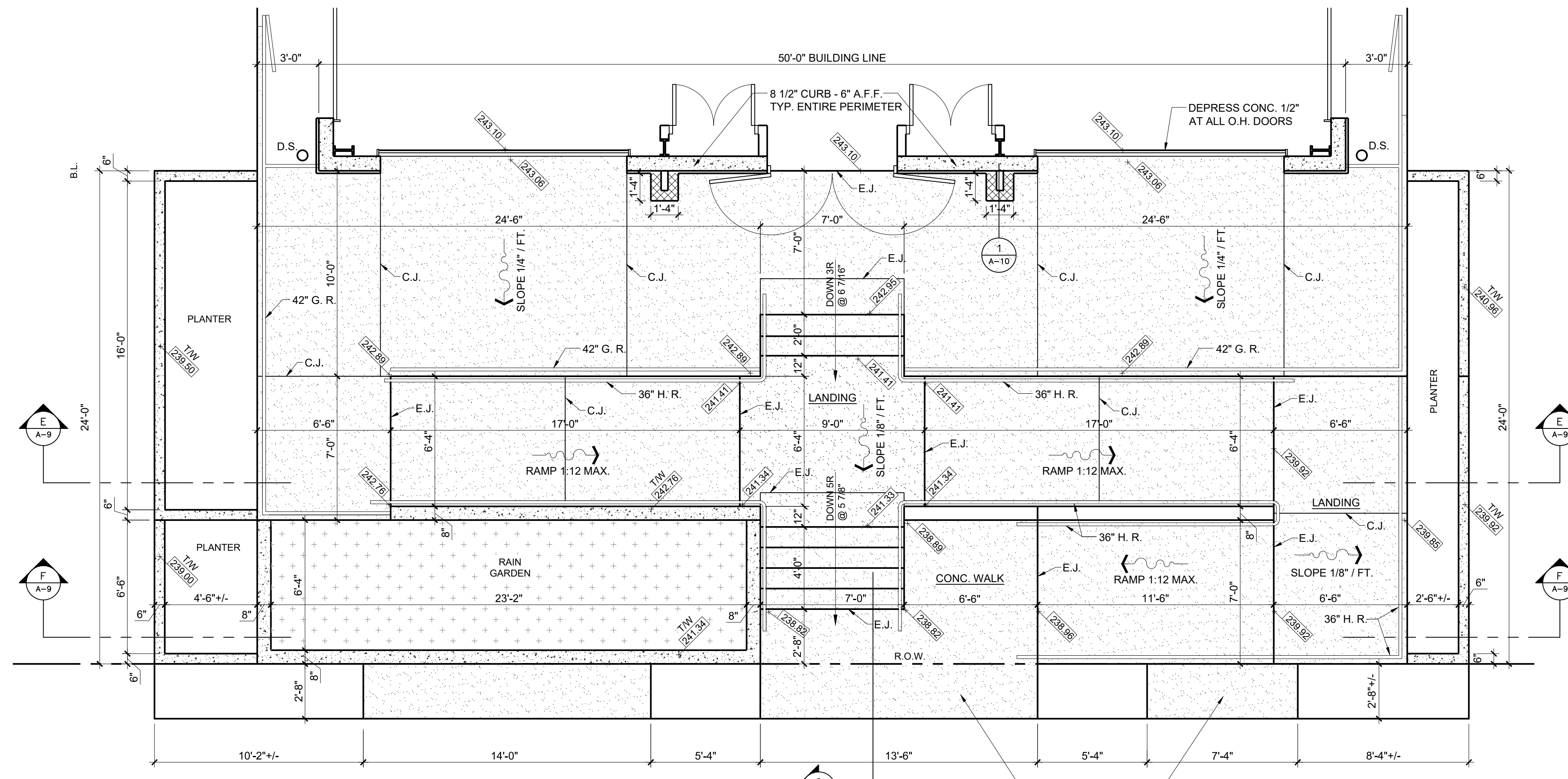
CLERESTORY PLAN
SCALE: 1/4" = 1'-0"
(ALTERNATE A-1)



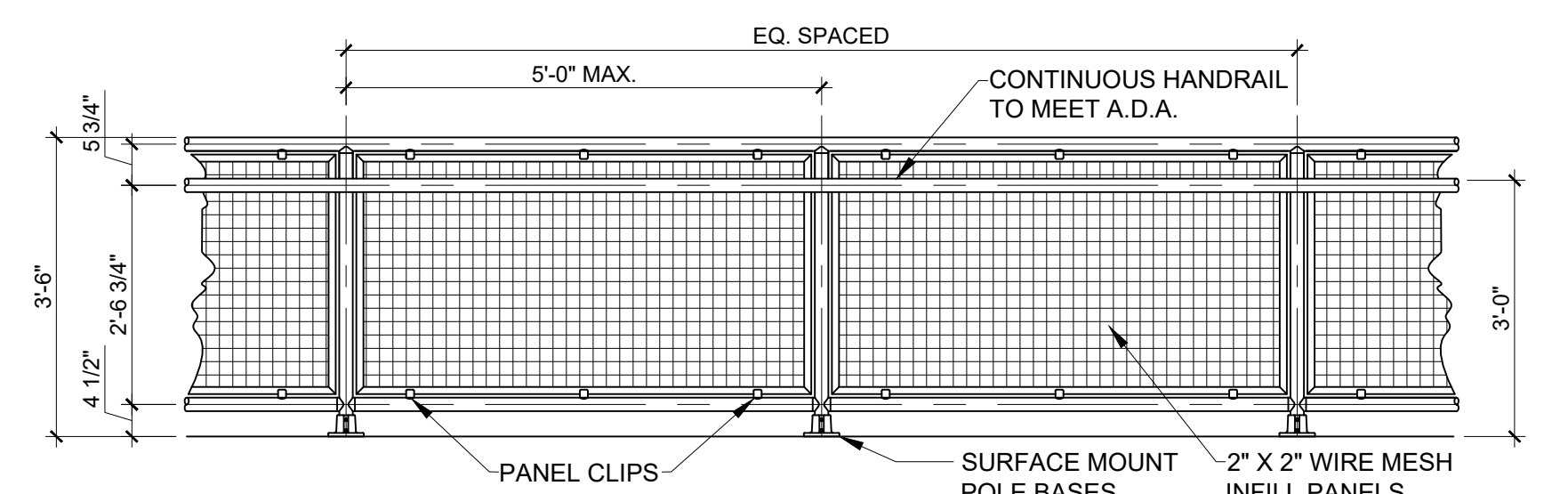
ROOF PLAN
SCALE: 1/8" = 1'-0"



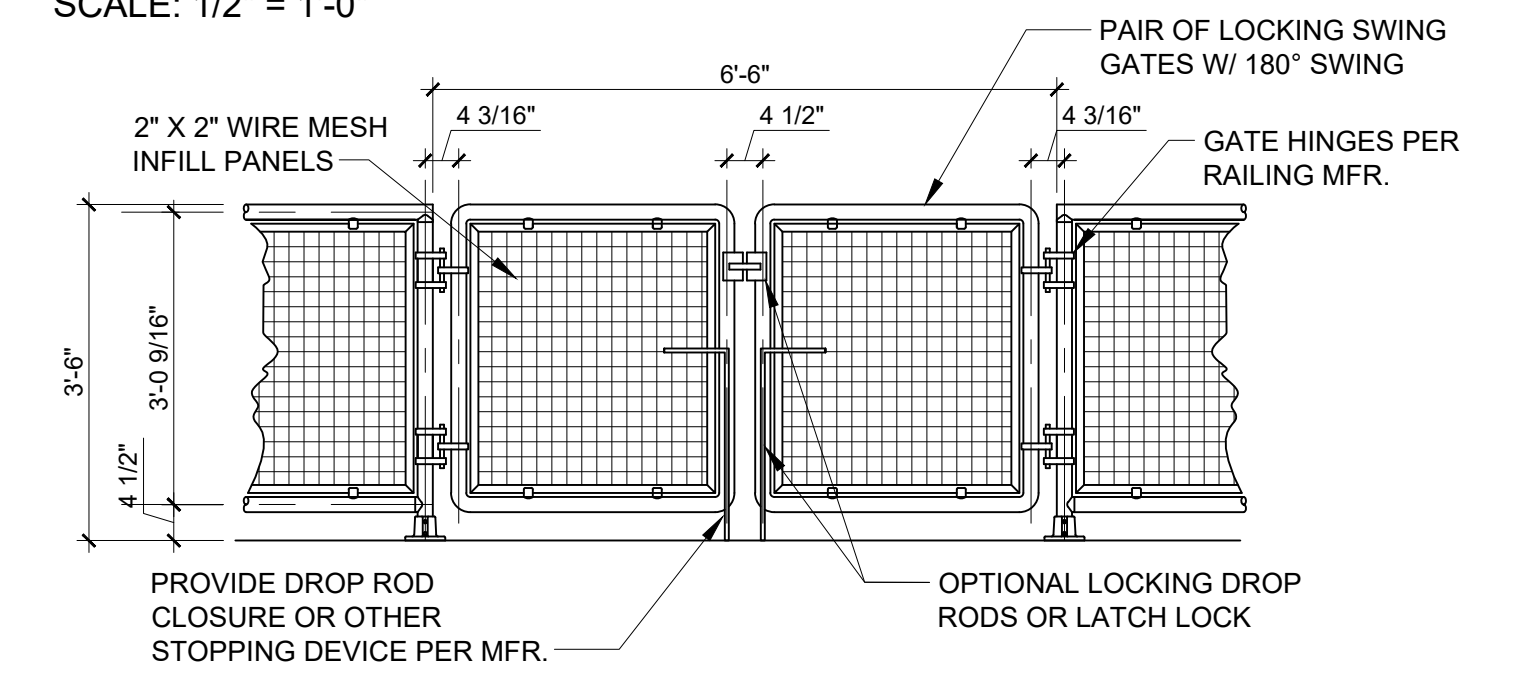
BUILDING SECTIONS NEW FARMERS MARKET ENCLOSURE AT ANN ARBOR FARMERS MARKET <small>315 DETROIT STREET, SECTION 29, CITY OF ANN ARBOR, WASHTENAW COUNTY, MI</small> FOR ANN ARBOR PARKS & RECREATION DEPARTMENT SERVICES <small>301 EAST HURON STREET, ANN ARBOR, MI 48107</small>		DR. KJK	CK. MWK	9/6/16	BIDDING
		7/6/16	FSP REVIEW	6/20/16	REVISION
KOHLER ARCHITECTURE, INC. <small>11115 WEST FRONT STREET MONROE, MICHIGAN 48161 PHONE: 734-242-6880, FAX: 734-242-6883</small>		© COPYRIGHT 2016 KOHLER ARCHITECTURE, INC. #1627		5/31/16	CPC REVIEW
		DATE	STATUS	JOB	ITB No. 4454
COPIING THIS DRAWING IS PROHIBITED AND SUBJECT TO PROSECUTION.		SHEET 7 OF 12			



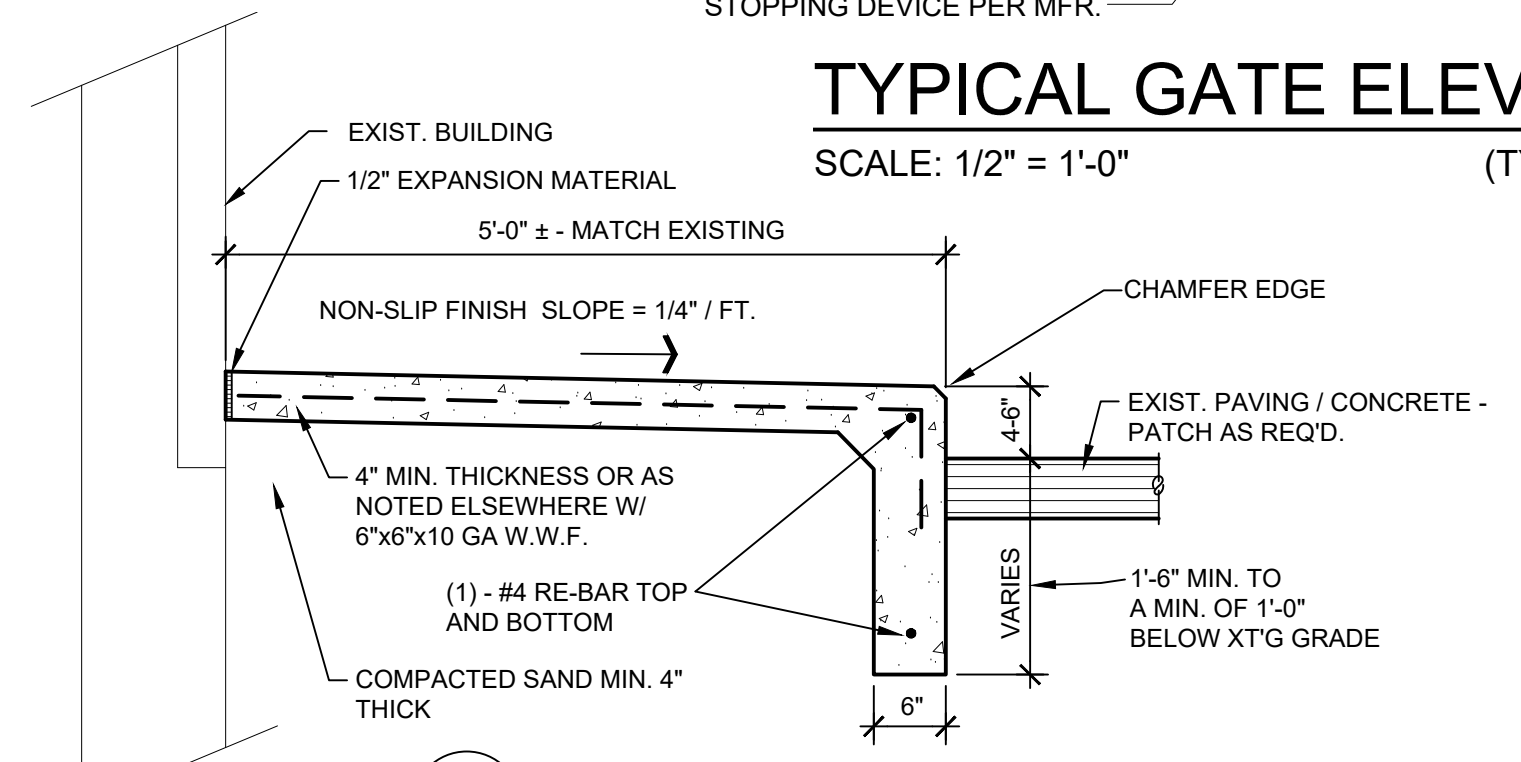
RAMP AND STAIR PLAN
SCALE: 1/4" = 1'-0"



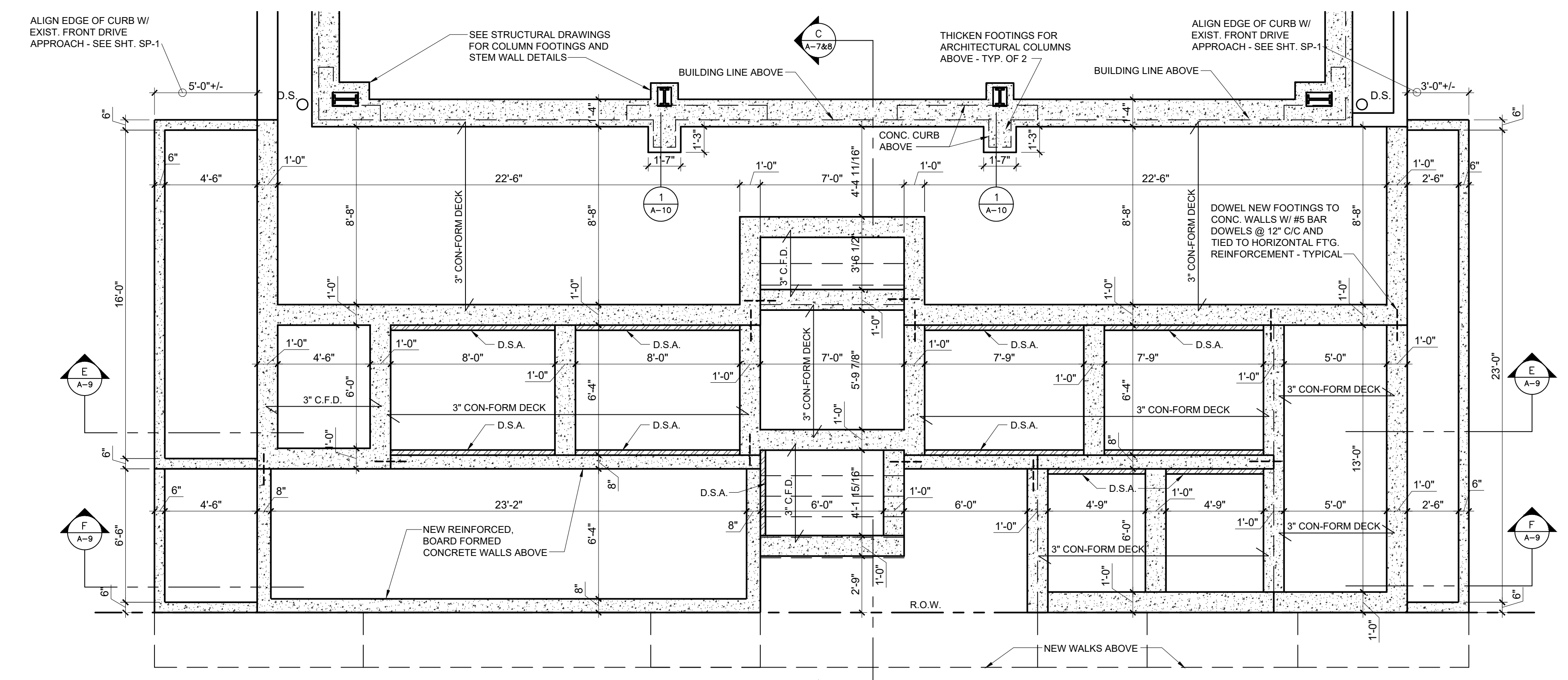
TYPICAL HANDRAIL & INFILL ELEVATION
SCALE: 1/2" = 1'-0"



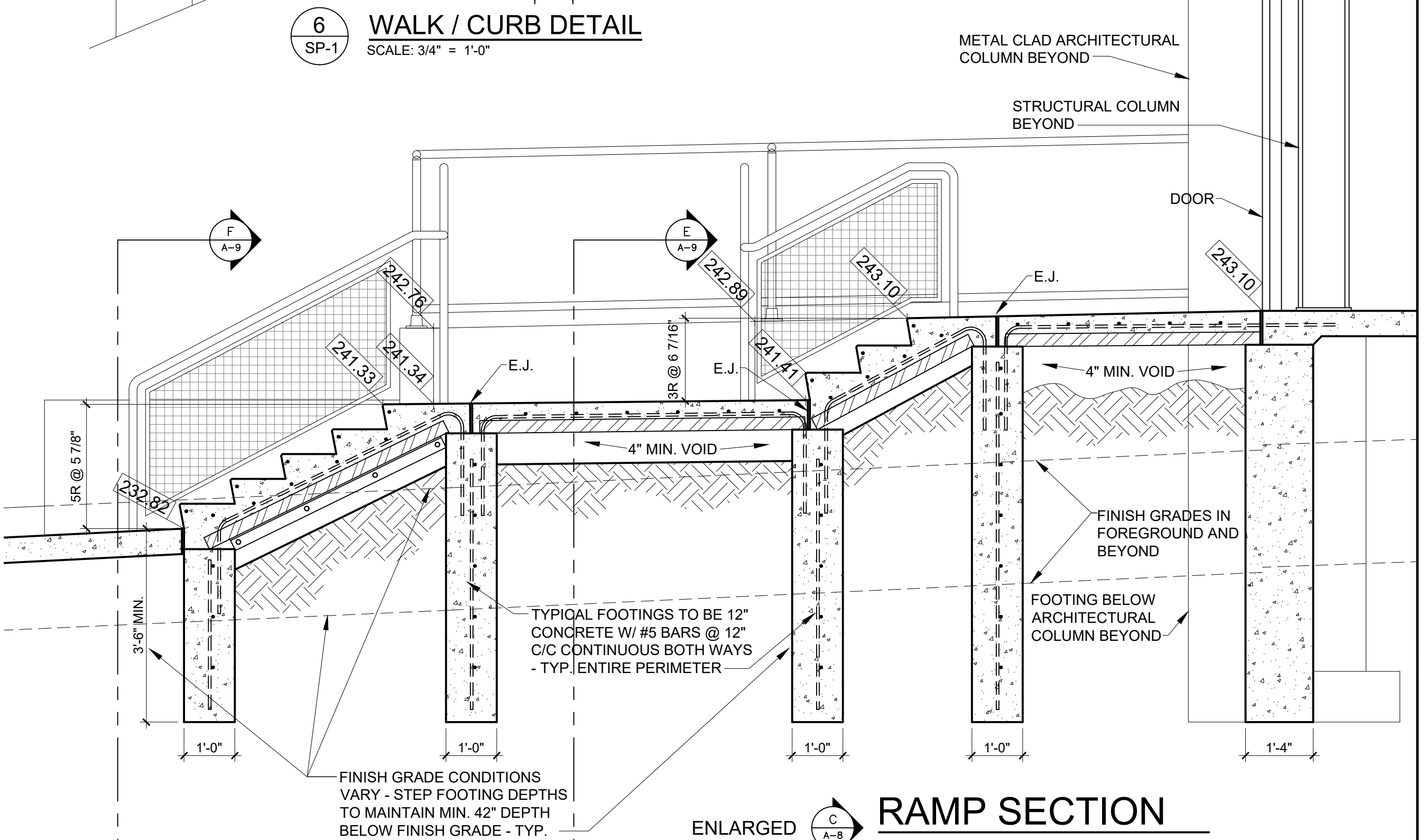
TYPICAL GATE ELEVATION
SCALE: 1/2" = 1'-0" (TYPICAL OF 8)



6 WALK / CURB DETAIL
SCALE: 3/4" = 1'-0"



RAMP AND STAIR FOUNDATION PLAN
SCALE: 1/4" = 1'-0"



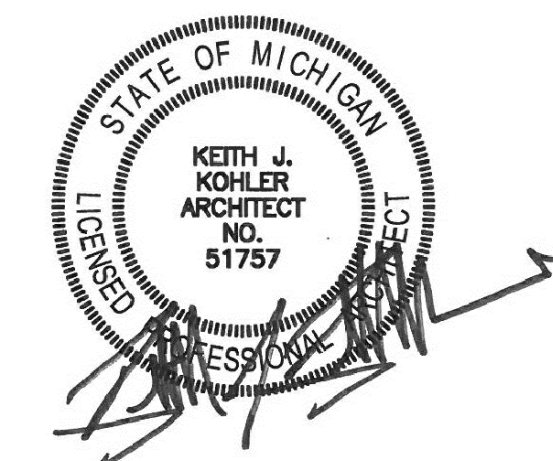
ENLARGED RAMP SECTION
SCALE: 1/2" = 1'-0"

NOTE:
ALL FOOTINGS ABUTTING ONE ANOTHER TO BE TIED TOGETHER W/ 24" X 24" #5 HOOKED BARS @ 12" C/C IN ALL DIRECTIONS, CREATING A CONTINUOUS AND INTEGRAL FOUNDATION

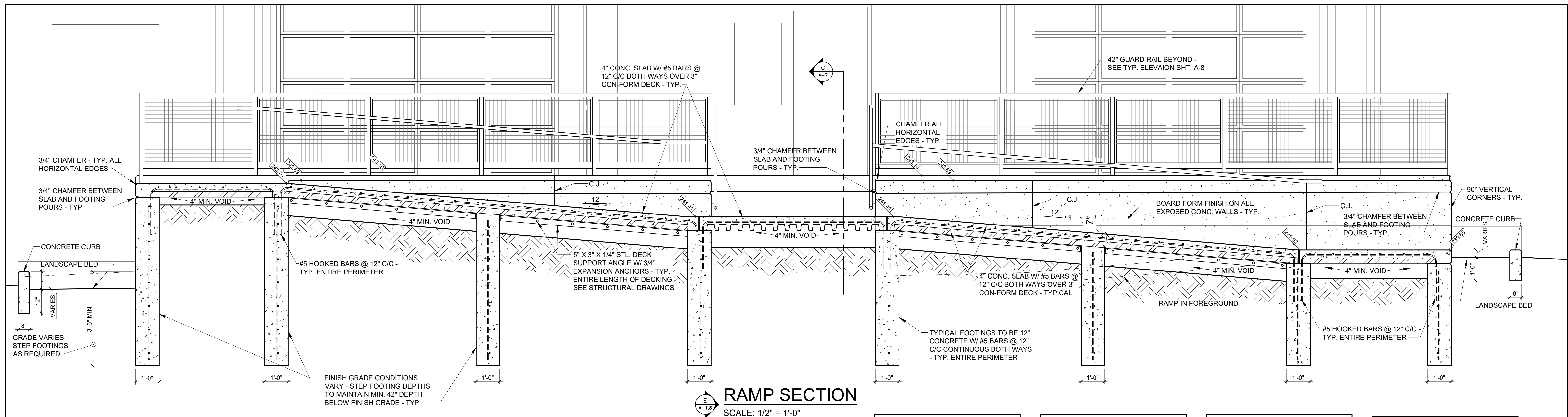
CONTRACTORS OPTION:
INSTALL UNFORMED TRENCH FOOTINGS BELOW GRADE W/ BOARD FORMED EXPOSED WALLS ABOVE.

NOTE:
ALL EXPOSED WALLS ABOVE GRADE TO BE BOARD FORMED - SEE SPECIFICATIONS

NOTE:
ALL HORIZONTAL COLD JOINTS WHERE SLABS OVERLAP EXPOSED WALLS SHALL HAVE CONTINUOUS "V" JOINTS



RAMP & STAIR PLANS, SECTIONS		DR. KJK CK. MWK	9/6/16 BIDDING
NEW FARMERS MARKET ENCLOSURE AT ANN ARBOR FARMERS MARKET 315 DETROIT STREET, SECTION 29, CITY OF ANN ARBOR, WASHTENAW COUNTY, MI FOR ANN ARBOR PARKS & RECREATION DEPARTMENT SERVICES 301 EAST HURON STREET, ANN ARBOR, MI 48107		© COPYRIGHT 2016 KOHLER ARCHITECTURE, INC. #1627	7/6/16 FSP REVIEW 6/20/16 REVISION 5/31/16 CPC REVIEW
KOHLER ARCHITECTURE, INC. 1119 WEST FRONT STREET MONROE, MICHIGAN 48161 PHONE: 734-242-6880, FAX: 734-242-6883		DATE 5/31/16 STATUS REVISION	JOB ITB No. 4454
		COPYING THIS DRAWING IS PROHIBITED AND SUBJECT TO PROSECUTION.	SHEET A8 OF 12



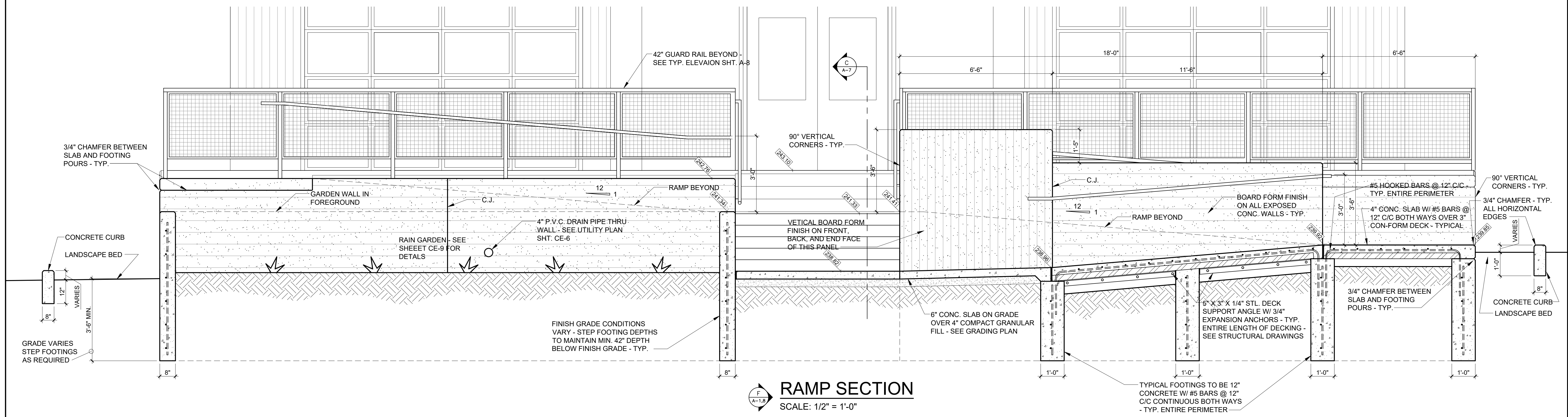
RAMP SECTION
SCALE: 1/2" = 1'-0"

NOTE:
ALL FOOTINGS ABUTTING ONE ANOTHER TO BE TIED TOGETHER W/ 24" X 24" #5 HOOKED BARS @ 12" C/C IN ALL DIRECTIONS, CREATING A CONTINUOUS AND INTEGRAL FOUNDATION

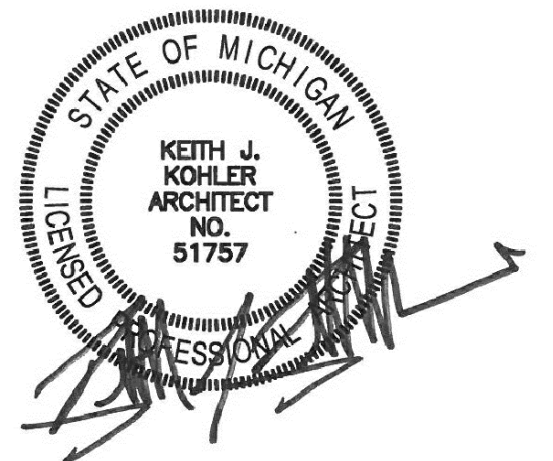
CONTRACTORS OPTION:
INSTALL UNFORMED TRENCH FOOTINGS BELOW GRADE W/ BOARD FORMED EXPOSED WALLS ABOVE.

NOTE:
ALL EXPOSED WALLS ABOVE GRADE TO BE BOARD FORMED - SEE SPECIFICATIONS

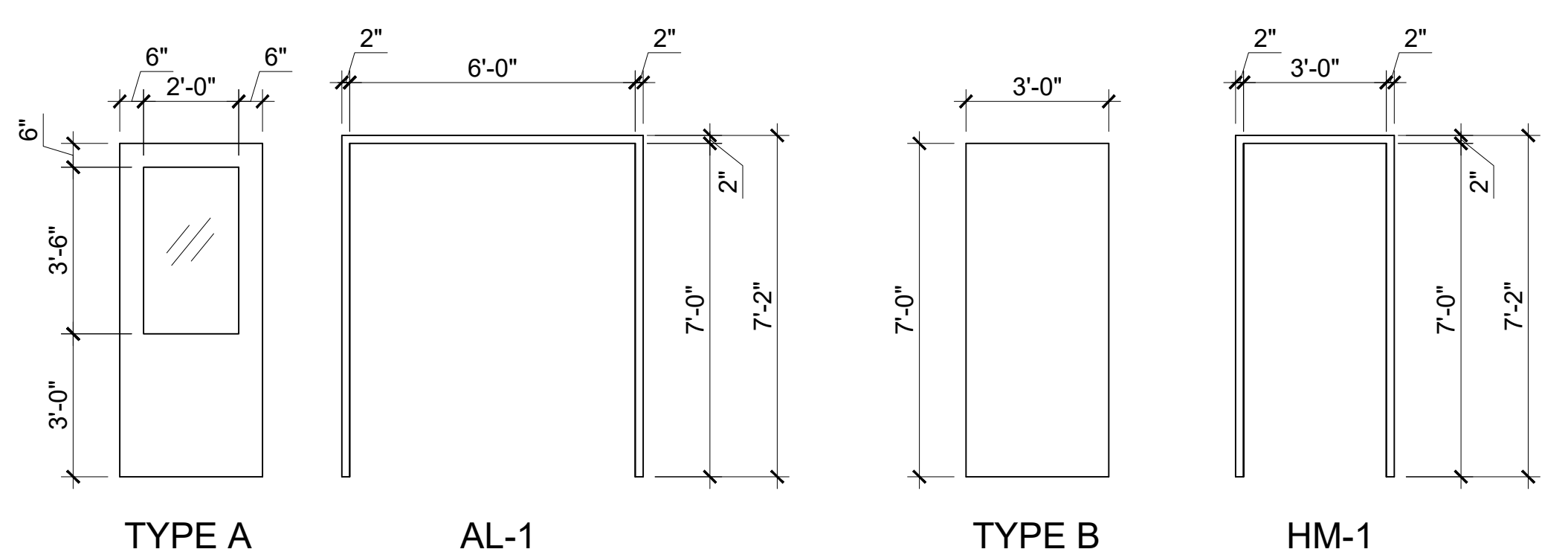
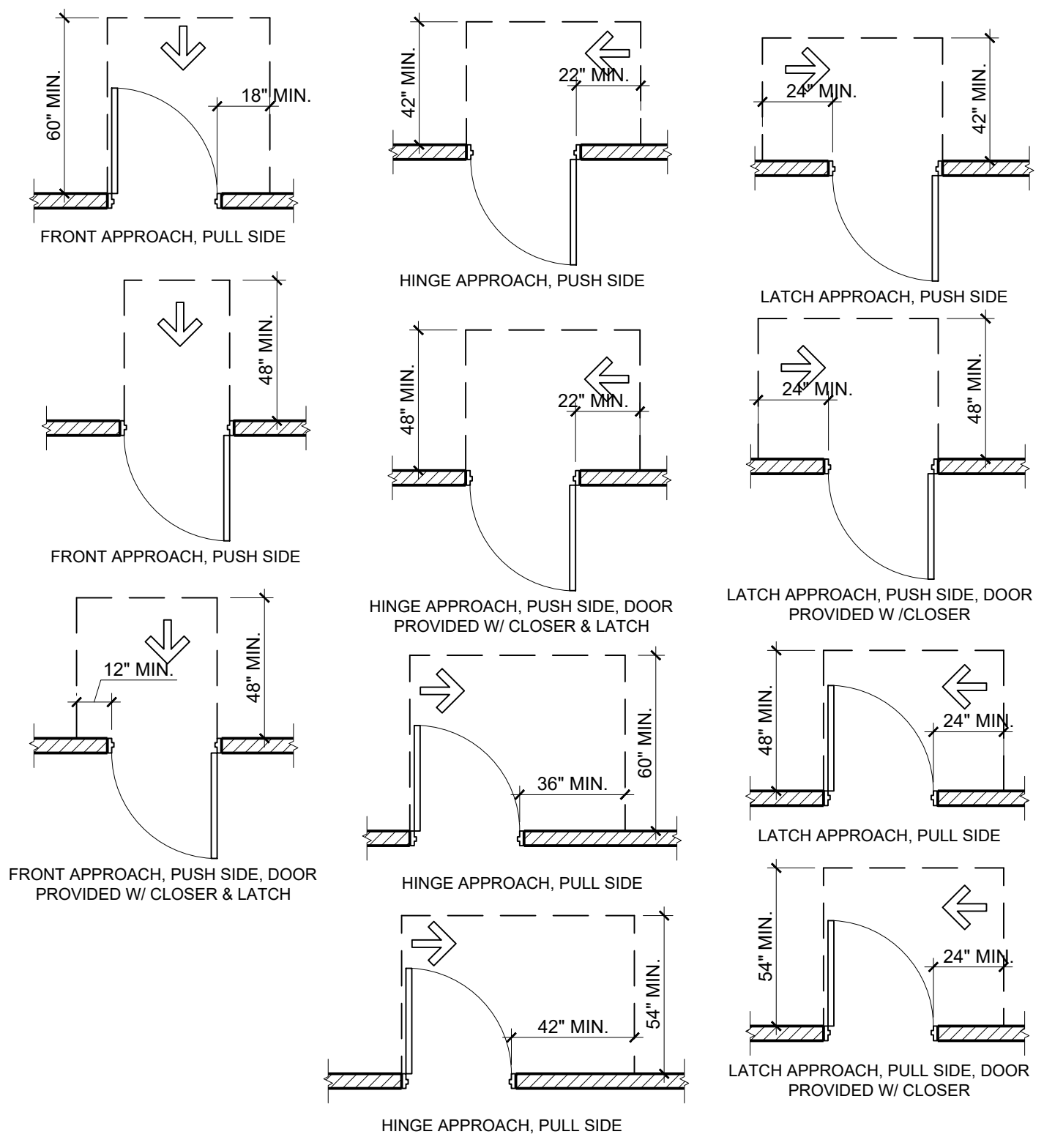
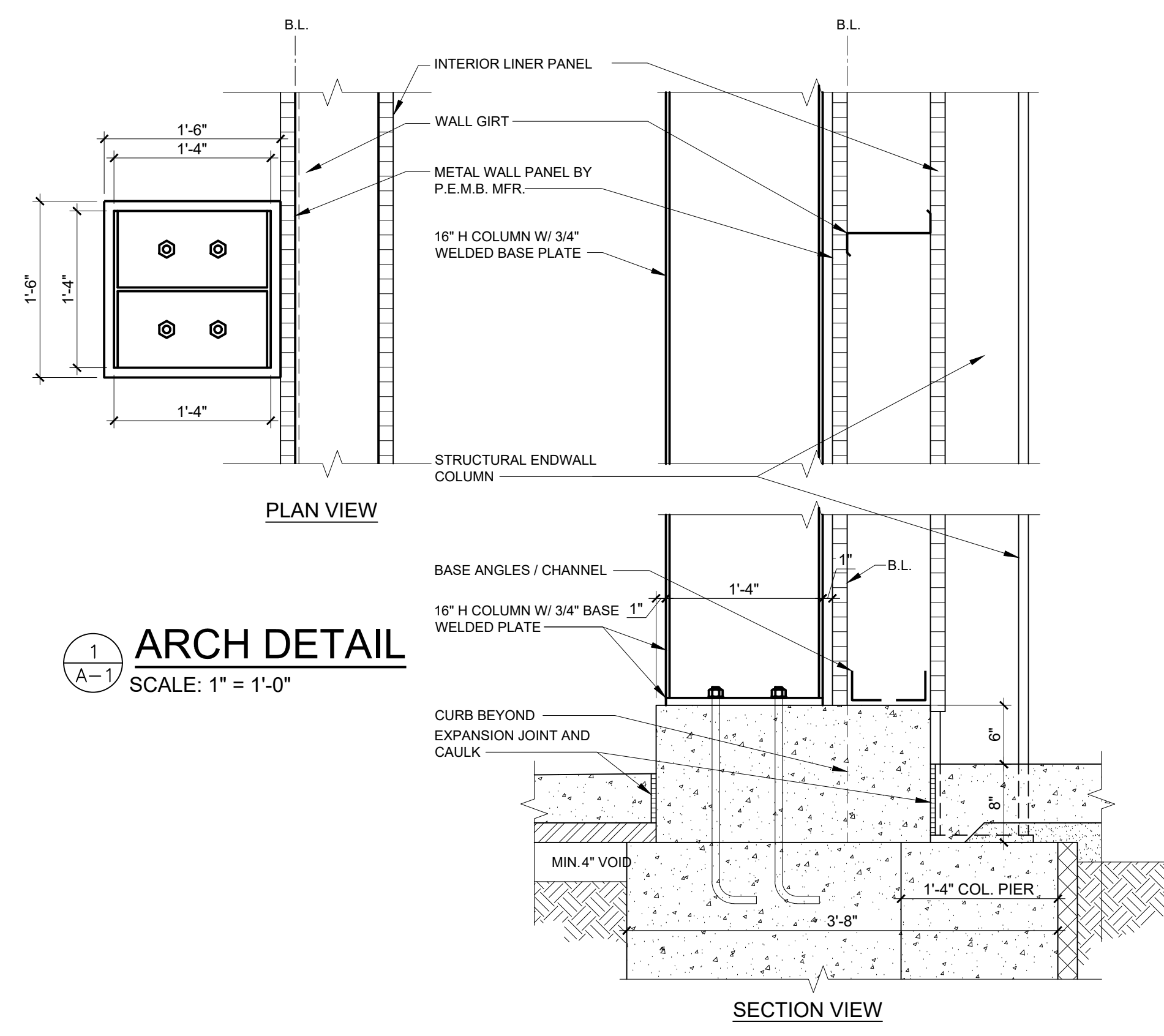
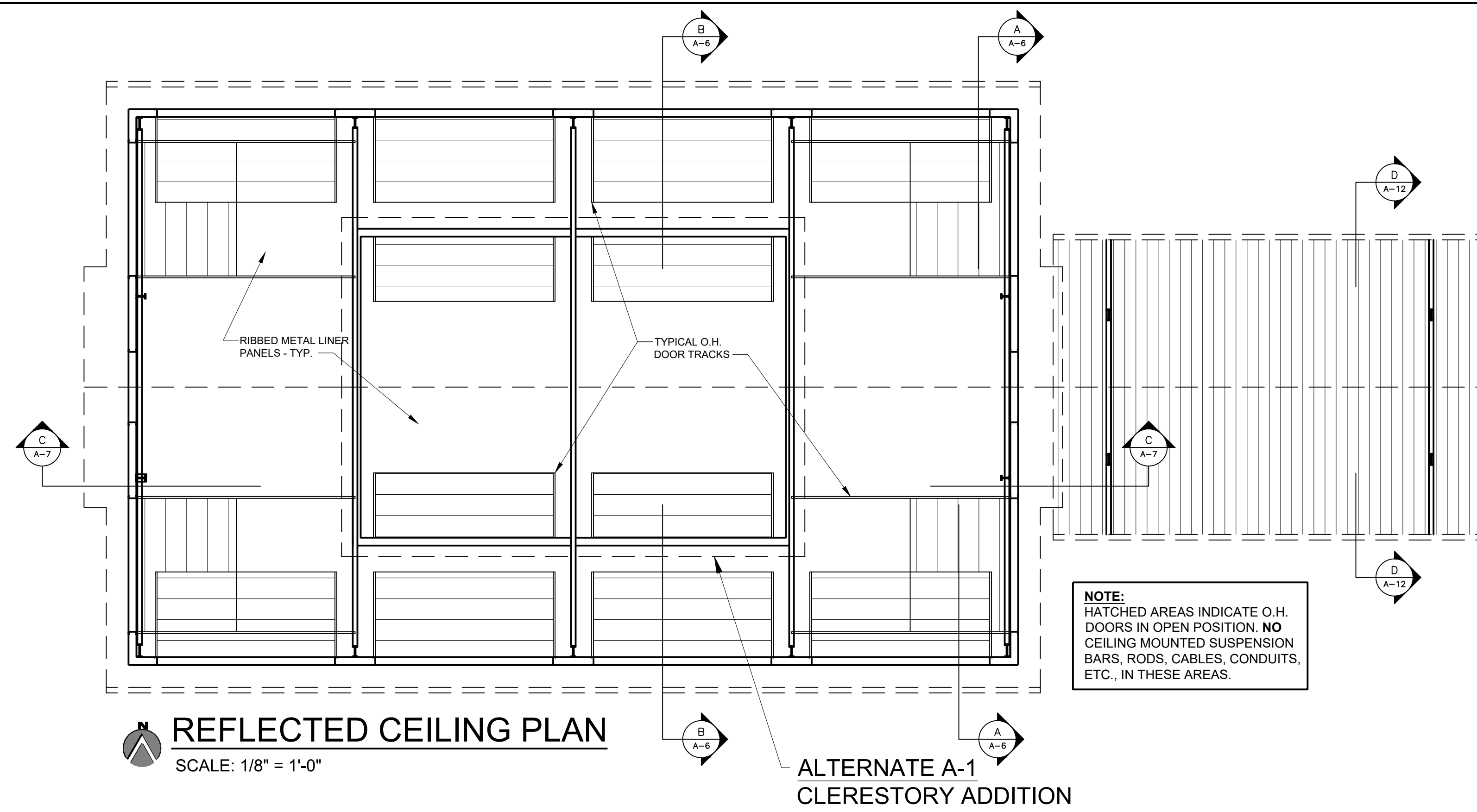
NOTE:
ALL HORIZONTAL COLD JOINTS WHERE SLABS OVERLAP EXPOSED WALLS SHALL HAVE CONTINUOUS "V" JOINTS



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

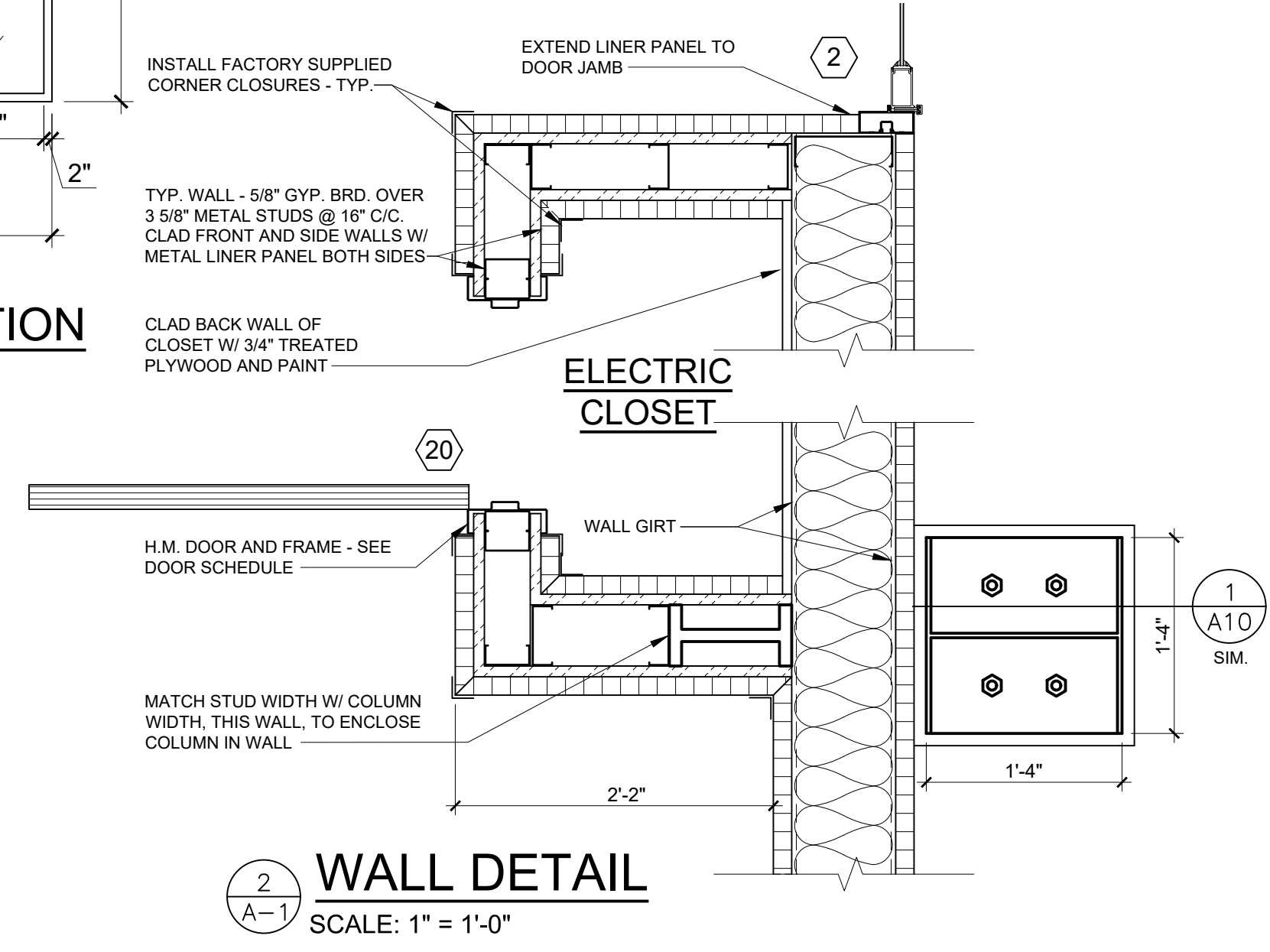
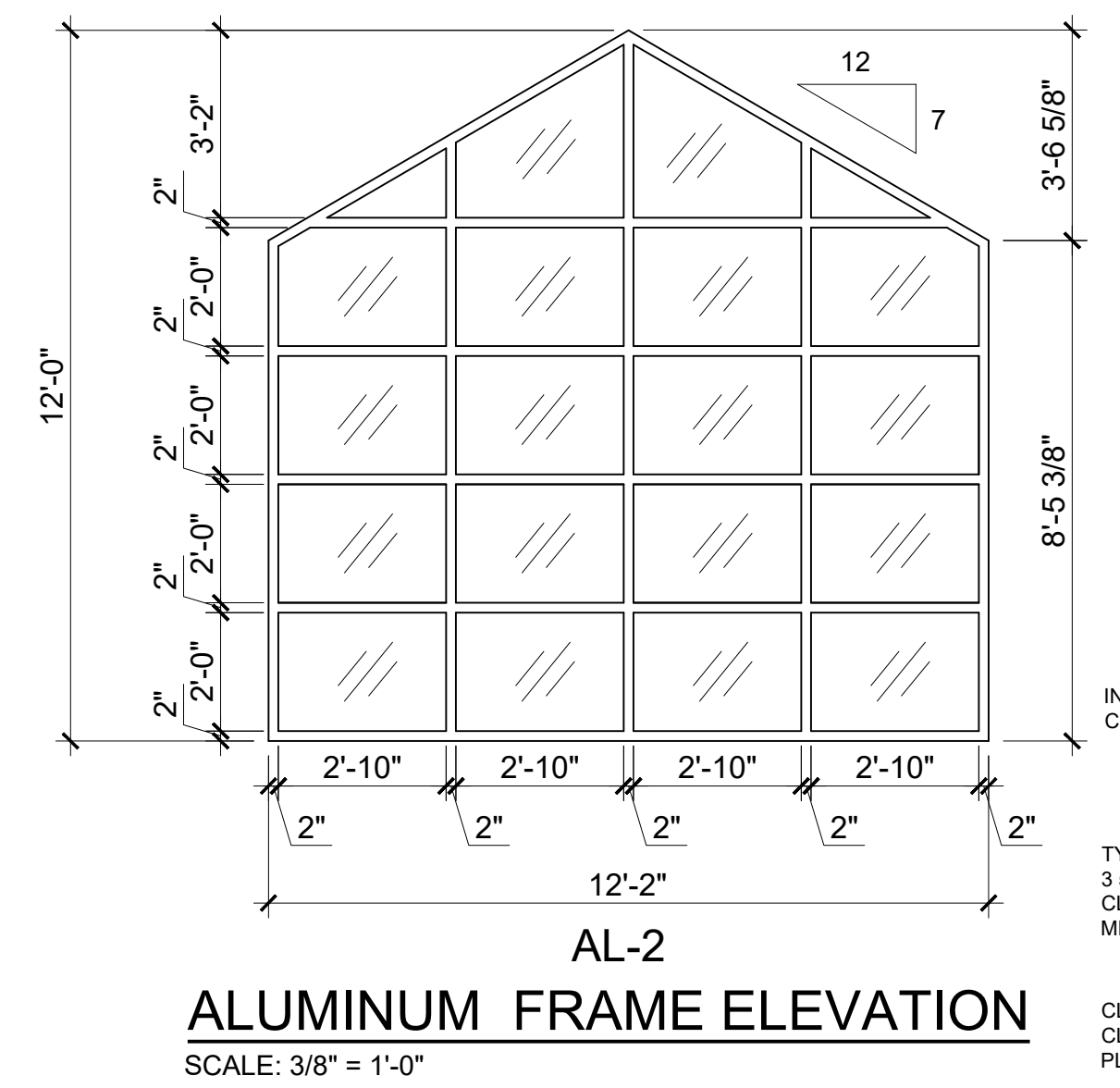


RAMP & STAIR SECTIONS	
NEW FARMERS MARKET ENCLOSURE AT ANN ARBOR FARMERS MARKET 315 DETROIT STREET, SECTION 29, CITY OF ANN ARBOR, WASHTENAW COUNTY, MI FOR ANN ARBOR PARKS & RECREATION DEPARTMENT SERVICES 301 EAST HURON STREET, ANN ARBOR, MI 48107	
DR. KJK	CK. MWK
9/6/16 BIDDING	7/6/16 FSP REVIEW
6/20/16 REVISION	5/31/16 CPC REVIEW
DATE	STATUS
JOB #1627	ITB No. 4454
KOHLER ARCHITECTURE, INC. 11115 WEST FRONT STREET MONROE, MICHIGAN 48161 PHONE: 734-242-6880, FAX: 734-242-6883	
COPYING THIS DRAWING IS PROHIBITED AND SUBJECT TO PROSECUTION.	
SHEET 9 OF 12	



ALUMINUM DOOR AND FRAME ELEVATIONS
SCALE: 3/8" = 1'-0"

HOLLOW METAL DOOR AND FRAME ELEVATIONS
SCALE: 3/8" = 1'-0"



MANEUVERING CLEARANCES AT MANUAL SWINGING DOORS AND GATES

TYPE OF USE		MINIMUM MANEUVERING CLEARANCE	
APPROACH DIRECTION	DOOR OR GATE SIDE	PERPENDICULAR TO DOORWAY	PARALLEL TO DOORWAY (BEYOND LATCH SIDE UNLESS NOTED)
FROM FRONT	PULL	60 INCHES	18 INCHES
FROM FRONT	PUSH	48 INCHES	0 INCHES (1)
FROM HINGE SIDE	PULL	60 INCHES	36 INCHES
FROM HINGE SIDE	PUSH	54 INCHES	42 INCHES
FROM HINGE SIDE	PULL	42 INCHES (2)	22 INCHES (3)
FROM HINGE SIDE	PUSH	42 INCHES (2)	22 INCHES (3)
FROM LATCH SIDE	PULL	48 INCHES (4)	24 INCHES
FROM LATCH SIDE	PUSH	42 INCHES (4)	24 INCHES

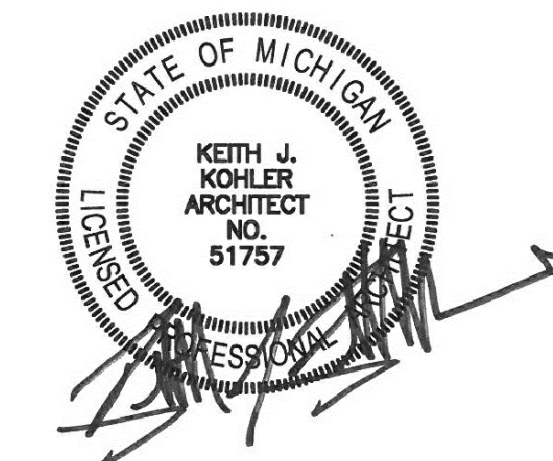
(1) ADD 12 INCHES IF CLOSER AND LATCH ARE PROVIDED.
(2) ADD 6 INCHES IF CLOSER AND LATCH ARE PROVIDED.
(3) BEYOND HINGE SIDE.
(4) ADD 6 INCHES IF CLOSER IS PROVIDED.

DOOR AND FRAME SCHEDULE

NO.	DOOR		FRAME		LABEL (DOOR + FRAME)	REMARKS
	SIZE	TYPE MATL	TYPE MATL	DEPTH		
01	PR 3'x 7'x 1-3/4"	A AL	AL-1 AL	4-1/2"	●	HARDWARE SET #1
02	PR 3'x 7'x 1-3/4"	A AL	AL-1 AL	4-1/2"	●	HARDWARE SET #1
03	12'x 10'x 2"	O.H. AL	● ● ●	●	●	HORIZONTAL TRACKS
04	16'x 10'x 2"	O.H. AL	● ● ●	●	●	SLOPED TRACKS
05	16'x 10'x 2"	O.H. AL	● ● ●	●	●	SLOPED TRACKS
06	16'x 10'x 2"	O.H. AL	● ● ●	●	●	SLOPED TRACKS
07	16'x 10'x 2"	O.H. AL	● ● ●	●	●	SLOPED TRACKS
08	12'x 10'x 2"	O.H. AL	● ● ●	●	●	HORIZONTAL TRACKS
09	12'x 10'x 2"	O.H. AL	● ● ●	●	●	HORIZONTAL TRACKS
10	16'x 10'x 2"	O.H. AL	● ● ●	●	●	SLOPED TRACKS
11	16'x 10'x 2"	O.H. AL	● ● ●	●	●	SLOPED TRACKS
12	16'x 10'x 2"	O.H. AL	● ● ●	●	●	SLOPED TRACKS
13	16'x 10'x 2"	O.H. AL	● ● ●	●	●	SLOPED TRACKS
14	12'x 10'x 2"	O.H. AL	● ● ●	●	●	HORIZONTAL TRACKS
15	16'x 4'x 2"	O.H. AL	● ● ●	●	●	CLERESTORY - ALTERNATE A-1
16	16'x 4'x 2"	O.H. AL	● ● ●	●	●	CLERESTORY - ALTERNATE A-1
17	16'x 4'x 2"	O.H. AL	● ● ●	●	●	CLERESTORY - ALTERNATE A-1
18	16'x 4'x 2"	O.H. AL	● ● ●	●	●	CLERESTORY - ALTERNATE A-1
19	3'x 7'x 1-3/4"	B HM	HM-1 HM	6-1/2"	●	HARDWARE SET #2
20	3'x 7'x 1-3/4"	B HM	HM-1 HM	6-1/2"	●	HARDWARE SET #2

WINDOW SCHEDULE

NO.	SIZE	TYPE	MATL	DEPTH	REMARKS
21	12'x 12'	● ●	AL-2 AL	4-1/2"	● SLOPE TOPPED POLYGON
22	12'x 12'	● ●	AL-2 AL	4-1/2"	● SLOPE TOPPED POLYGON



BUILDING DETAILS

NEW FARMERS MARKET ENCLOSURE
AT ANN ARBOR FARMERS MARKET
315 DETROIT STREET, SECTION 29, CITY OF ANN ARBOR, WASHTENAW COUNTY, MI
FOR ANN ARBOR PARKS & RECREATION DEPARTMENT SERVICES
301 EAST HURON STREET, ANN ARBOR, MI 48107

DR. KJK CK. MWK
© COPYRIGHT 2016 KOHLER ARCHITECTURE, INC. #1627
JOB # ITB No. 4454

9/6/16 BIDDING
7/6/16 FSP REVIEW
6/20/16 REVISION
5/31/16 CPC REVIEW

DATE STATUS

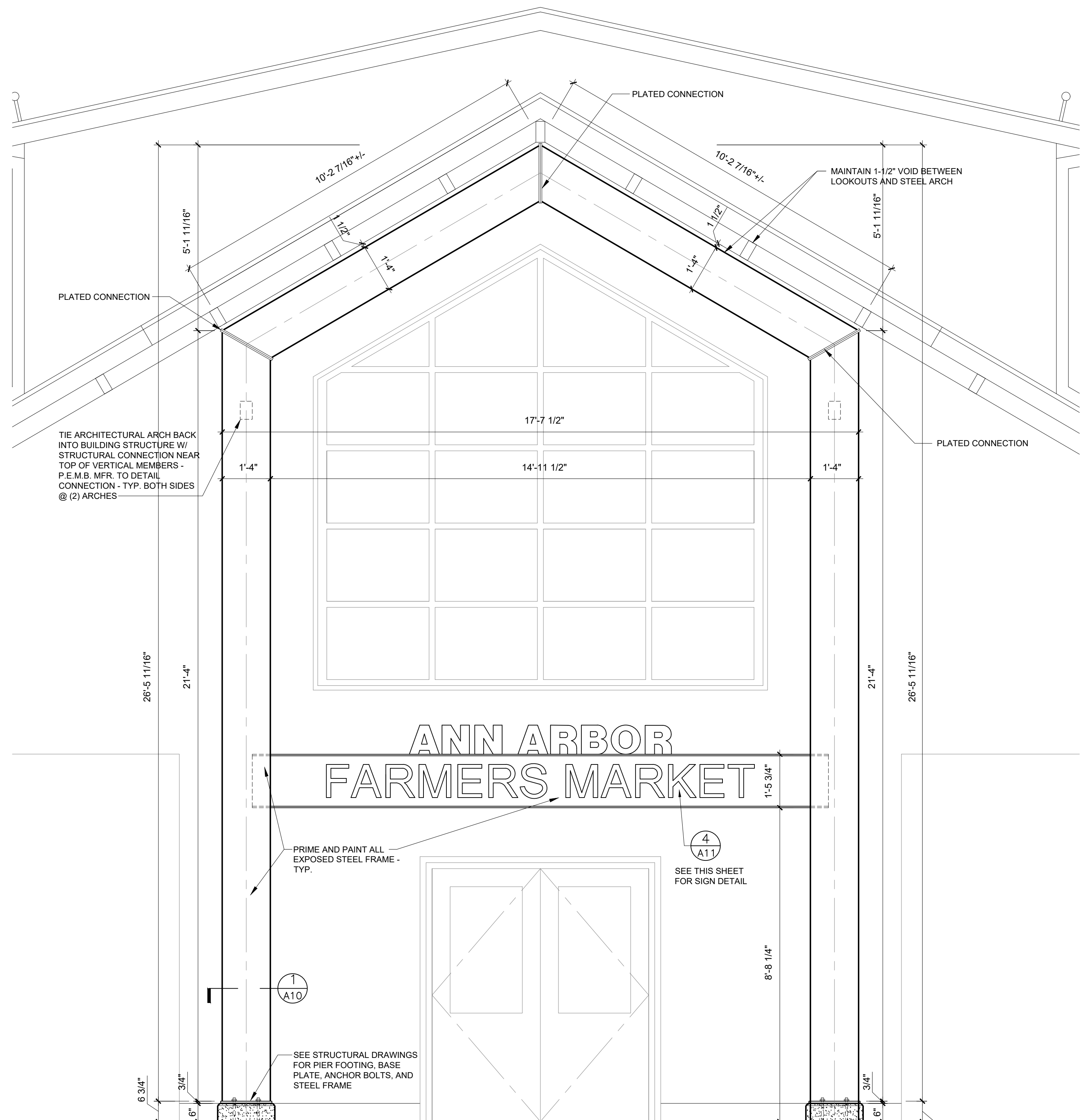
COPIES

PHONE: 734-242-6880, FAX: 734-242-6883

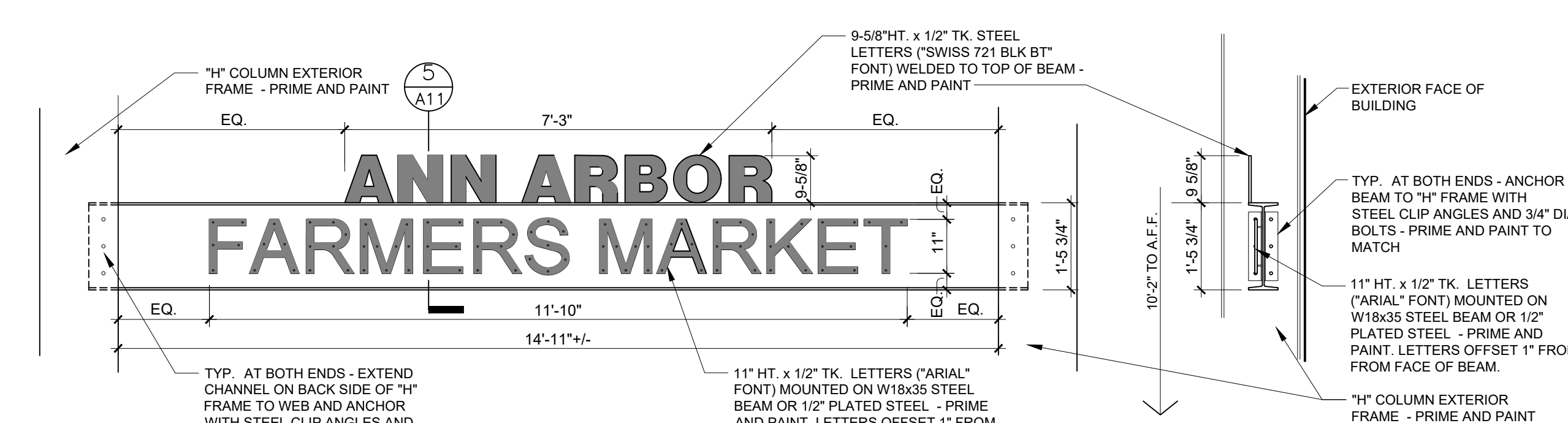
**11118 WEST FRONT STREET
MONROE, MICHIGAN 48161**

COPIING THIS DRAWING IS PROHIBITED AND SUBJECT TO PROSECUTION.

SHEET 10 OF 12

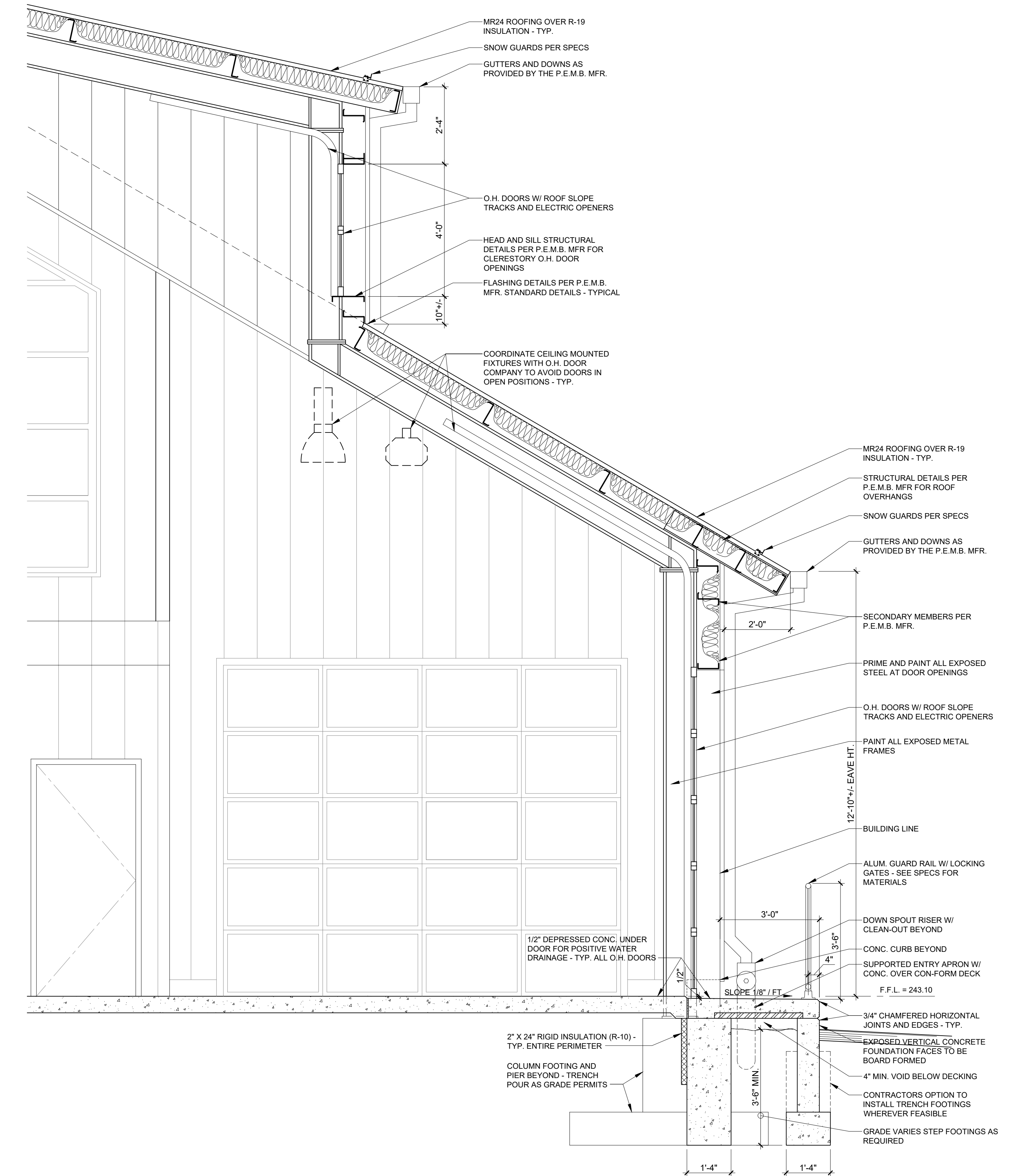


ENLARGED ENTRY FRAME ELEVATION
SCALE: 1/2" = 1'-0"



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

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

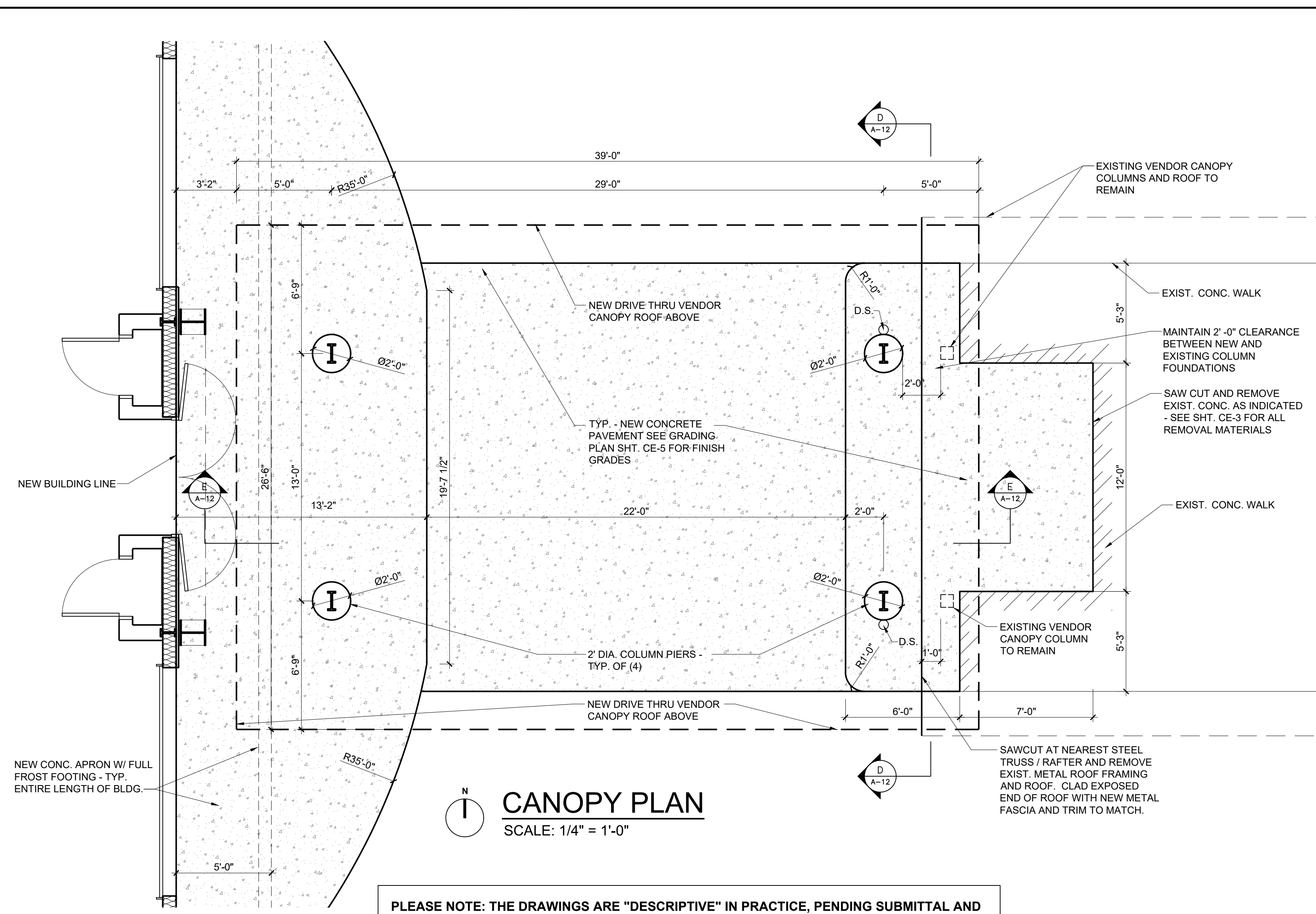


ENLARGED WALL SECTION
SCALE: 1/2" = 1'-0"



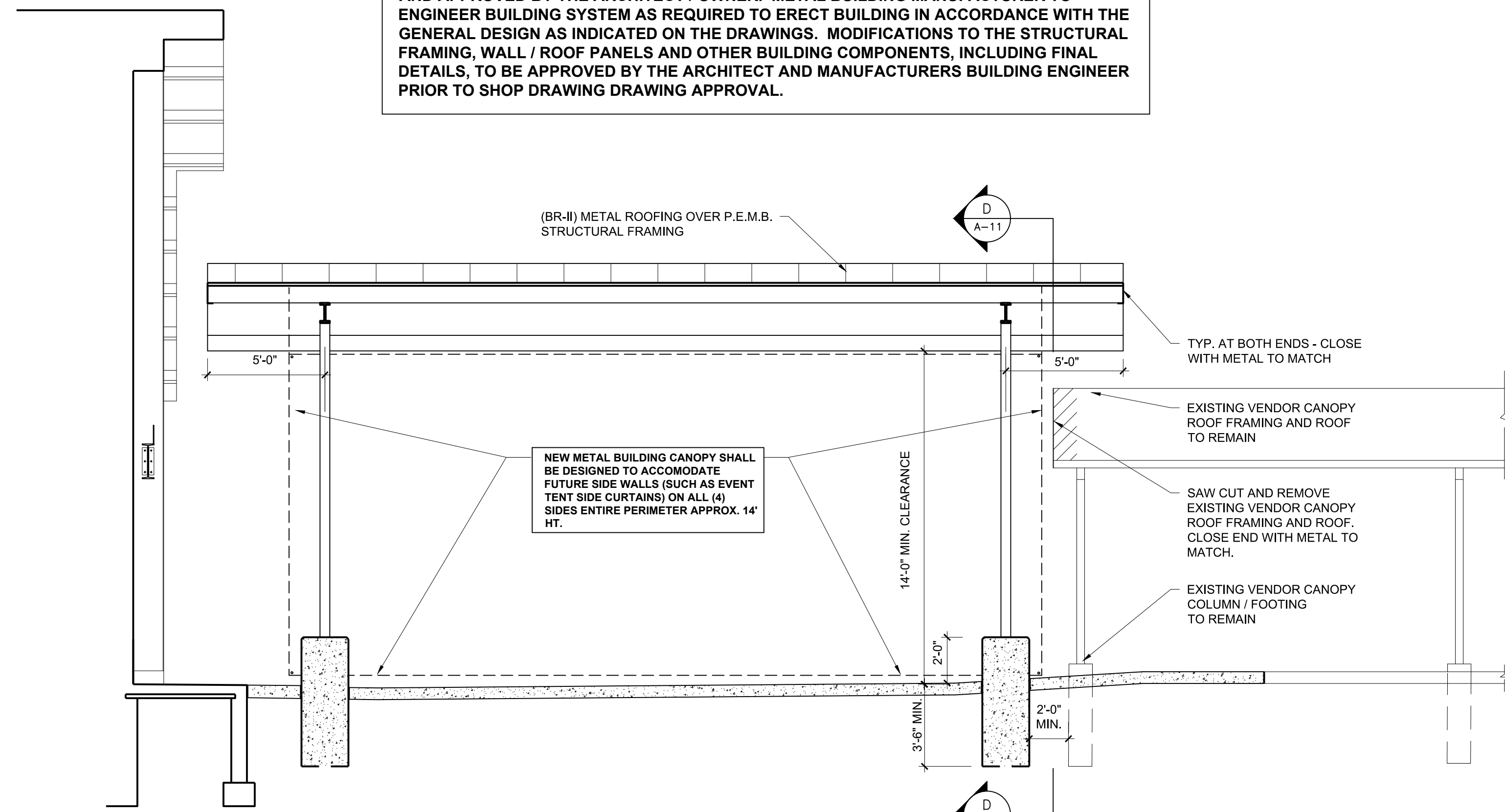
ENLARGED SECTIONS / DETAILS			
NEW FARMERS MARKET ENCLOSURE AT ANN ARBOR FARMERS MARKET 315 DETROIT STREET, SECTION 29, CITY OF ANN ARBOR, WASHTENAW COUNTY, MI FOR ANN ARBOR PARKS & RECREATION DEPARTMENT SERVICES 301 EAST HURON STREET, ANN ARBOR, MI 48107			
DR. KJK	CK. MWK	9/6/16	BIDDING
		7/6/16	FSP REVIEW
© COPYRIGHT 2016 KOHLER ARCHITECTURE, INC.		6/20/16	REVISION
		5/31/16	CPC REVIEW
		DATE	STATUS
JOB #1627		ITB No. 4454	
SHEET A11		OF 12	

COPYING THIS DRAWING IS PROHIBITED AND SUBJECT TO PROSECUTION.

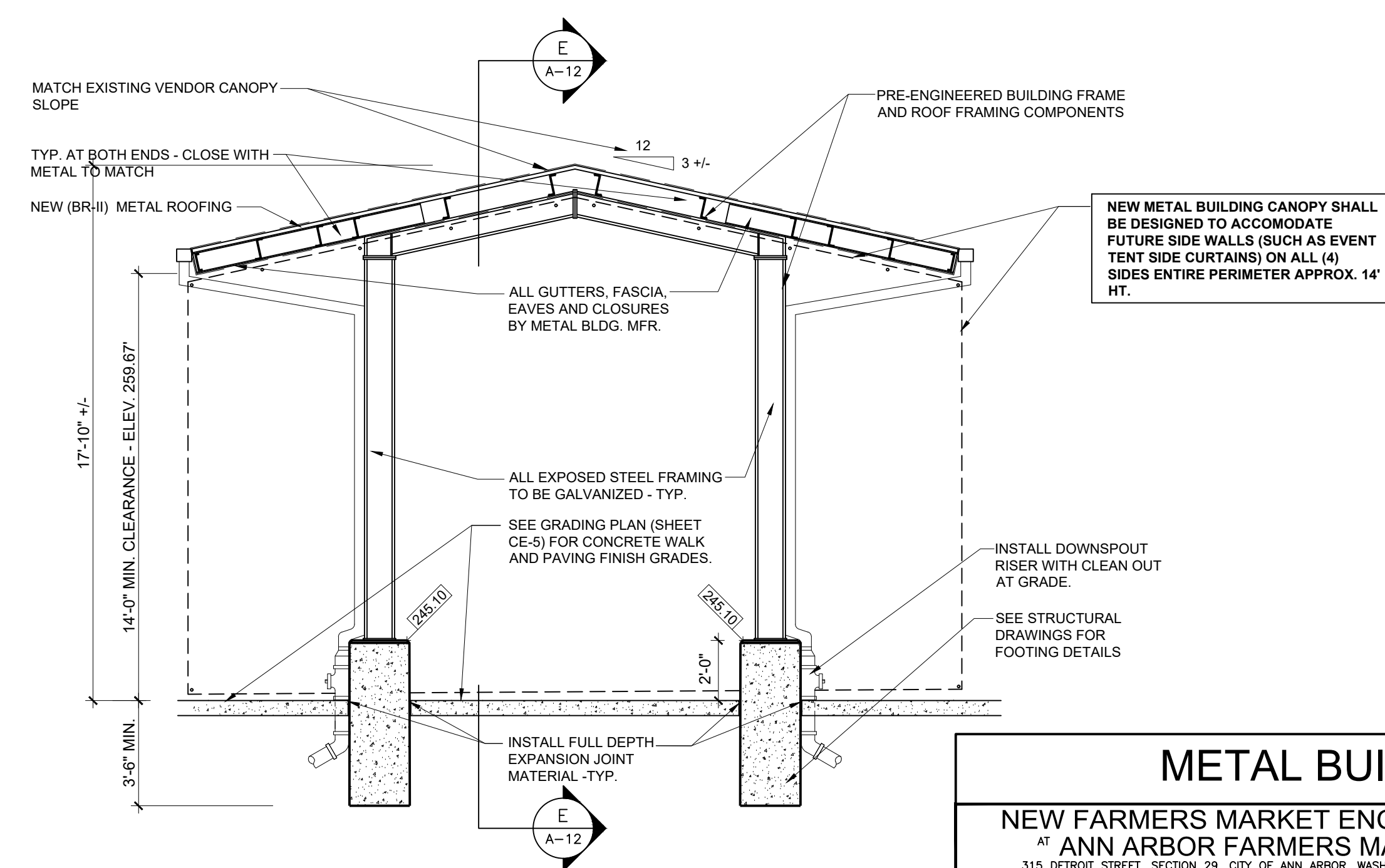


CANOPY PLAN
SCALE: 1/4" = 1'-0"

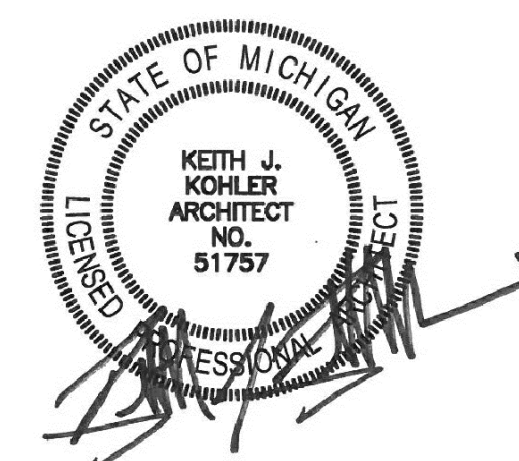
PLEASE NOTE: THE DRAWINGS ARE "DESCRIPTIVE" IN PRACTICE, PENDING SUBMITTAL AND ACCEPTANCE OF METAL BUILDING MANUFACTURER AS SELECTED BY SUCCESSFUL BIDDER, AND APPROVED BY THE ARCHITECT / OWNER. METAL BUILDING MANUFACTURER TO ENGINEER BUILDING SYSTEM AS REQUIRED TO ERECT BUILDING IN ACCORDANCE WITH THE GENERAL DESIGN AS INDICATED ON THE DRAWINGS. MODIFICATIONS TO THE STRUCTURAL FRAMING, WALL / ROOF PANELS AND OTHER BUILDING COMPONENTS, INCLUDING FINAL DETAILS, TO BE APPROVED BY THE ARCHITECT AND MANUFACTURERS BUILDING ENGINEER PRIOR TO SHOP DRAWING DRAWING APPROVAL.




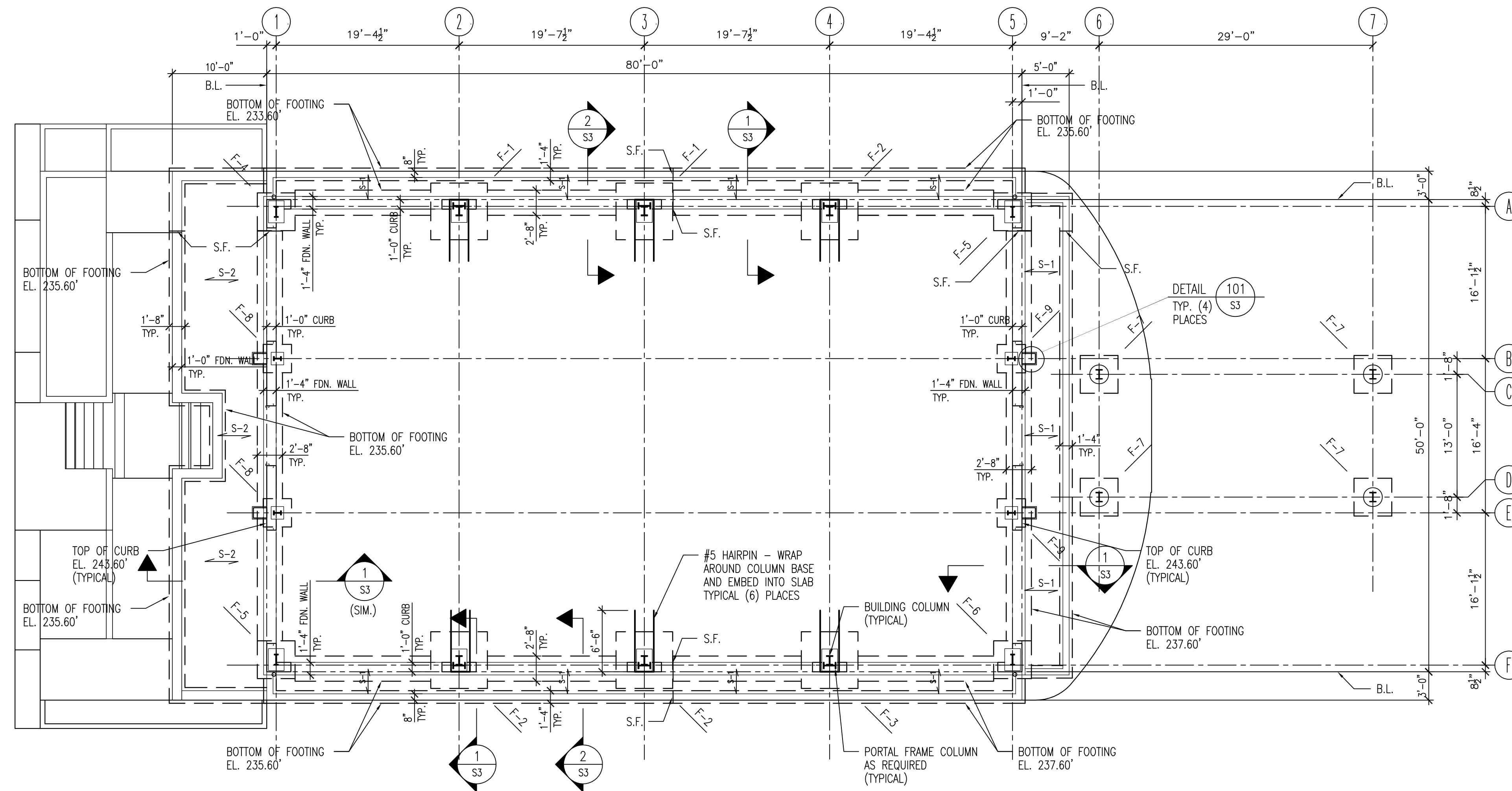
CANOPY SECTION
SCALE: 1/4" = 1'-0"



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



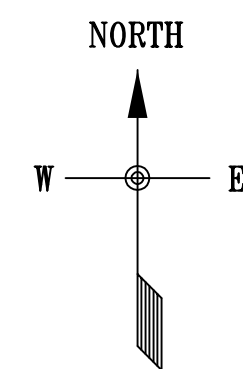
METAL BUILDING CANOPY	
NEW FARMERS MARKET ENCLOSURE AT ANN ARBOR FARMERS MARKET 315 DETROIT STREET, SECTION 29, CITY OF ANN ARBOR, WASHTENAW COUNTY, MI FOR ANN ARBOR PARKS & RECREATION DEPARTMENT SERVICES 301 EAST HURON STREET, ANN ARBOR, MI 48107	
DR. KJK	CK. MWK
© COPYRIGHT 2016 KOHLER ARCHITECTURE, INC. #1627	9/6/16 BIDDING 7/6/16 FSP REVIEW 6/20/16 REVISION 5/31/16 CPC REVIEW
 KOHLER ARCHITECTURE, INC. 11118 WEST FRONT STREET MONROE, MICHIGAN 48161 PHONE: 734-242-6880, FAX: 734-242-6883	JOB #1627 ITB No. 4454 SHEETA 12 OF 12



SEE ARCHITECTURAL DRAWINGS FOR SITE WALLS, RAMPS AND STAIRS.

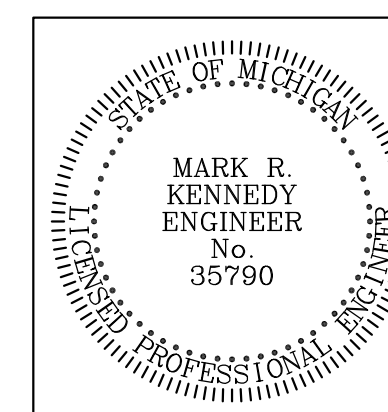
FOUNDATION AND FLOOR PLAN

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



NOTES:

1. FINISH FLOOR = EL. 243.10'
2. FLOOR CONSTRUCTION:
6" SLAB ON GRADE REINFORCED WITH ONE LAYER OF 6 x 6 - W4.0 x W4.0 W.W.F.
3. S-2 INDICATES A SUPPORTED SLAB - SEE SECTIONS ON DRAWING S3.
S-1 INDICATES 4 1/2" CONCRETE OVER 1 1/2" x 20 GAGE FORM DECK - TOTAL THICKNESS = 6" REINFORCE WITH #3 REBAR AT 8" c/c AND #3 REBAR AT 12" c/c T & S.
S-2 INDICATES 5" CONCRETE OVER 3" x 18 GAGE FORM DECK - TOTAL THICKNESS = 8" REINFORCE WITH #4 REBAR AT 8" c/c AND #4 REBAR AT 12" c/c T & S.
4. S.F. INDICATES A STEPPED FOOTING - SEE TYPICAL DETAIL ON DRAWING S2
5. B.L. INDICATES BUILDING LINE (OUTSIDE FACE OF GIRTS)

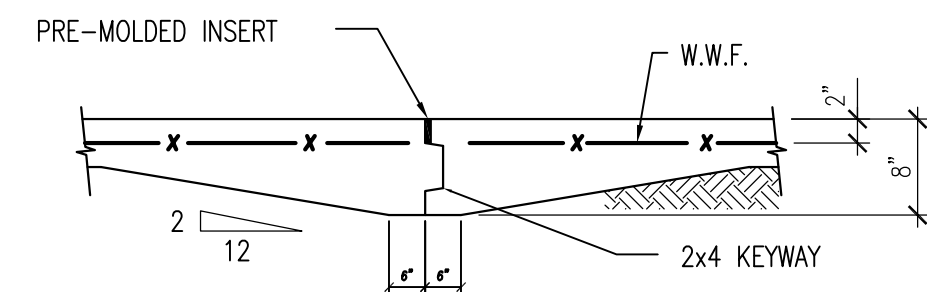


LKL engineers ltd.
CONSULTING STRUCTURAL ENGINEERS
2735 N. HOLLAND-SYLVANIA RD. SUITE A-2 TOLEDO, OHIO 43615
(419) 578-0195 FAX (419) 578-2125 LKLengrs@lklengrs.com
LKL JOB No. 16-12310
This drawing and all information contained herein is the exclusive property of LKL Engineers, Ltd. and is not to be copied or used in any way without the express written consent of LKL Engineers, Ltd. and must be returned upon request. © Copyright 2016

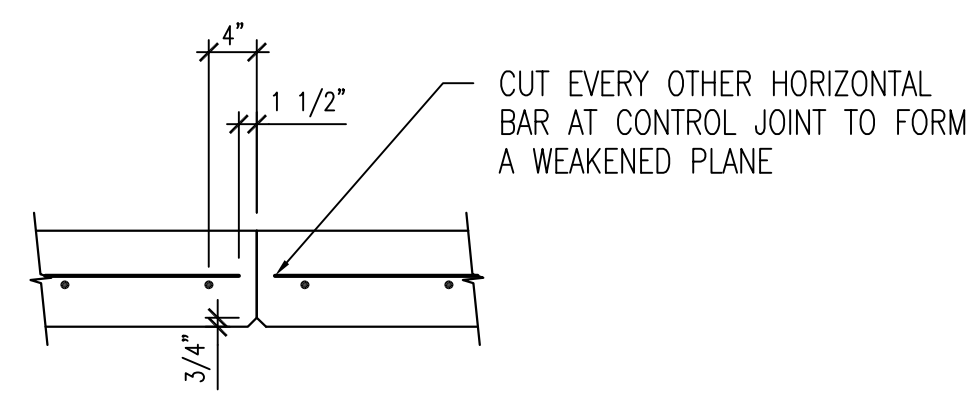
NEW FARMERS MARKET ENCLOSURE
AT ANN ARBOR FARMERS MARKET
315 DETROIT STREET, SECTION 29, CITY OF ANN ARBOR, WASHTENAW COUNTY, MI
FOR ANN ARBOR PARKS & RECREATION DEPARTMENT
301 EAST HURON STREET, ANN ARBOR, MI 48107

KOHLER ARCHITECTURE, INC.
1118 WEST FRONT STREET
MONROE, MICHIGAN 48161
PHONE: 734-242-6880, FAX: 734-242-6883

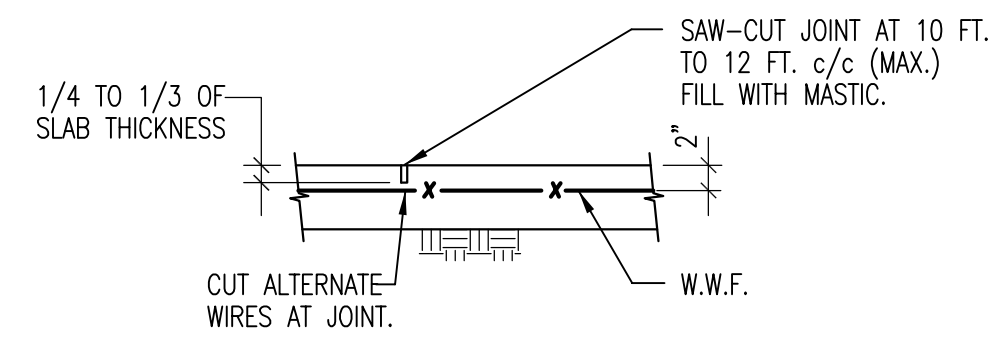
DR. F.M. HORNYAK	CK.		
© COPYRIGHT 2016 KOHLER ARCHITECTURE, INC. #1627		9-6-16 BIDDING	
COPYING THIS DRAWING IS PROHIBITED AND SUBJECT TO PROSECUTION.		5/31/16 CPC REVIEW	
		DATE STATUS	
		JOB	ITB No. 4454
		SHEET	S1 OF 3



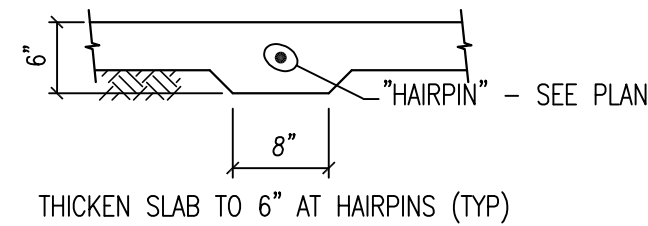
TYPICAL DETAIL - CONSTRUCTION JOINT



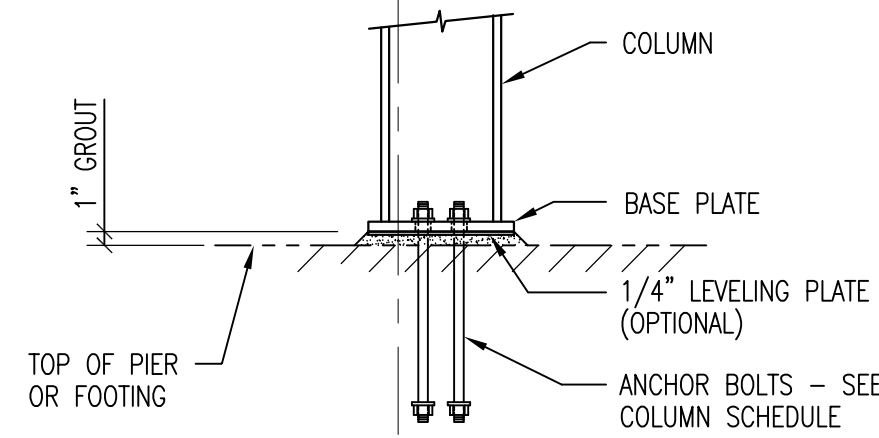
TYPICAL DETAIL - WALL CONTROL JOINT
(SEE ARCHITECTURAL DRAWINGS FOR LOCATIONS)



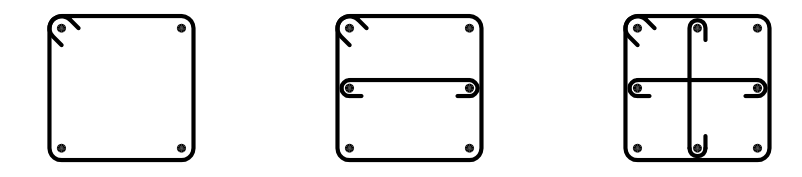
TYPICAL DETAIL - CONTROL JOINT



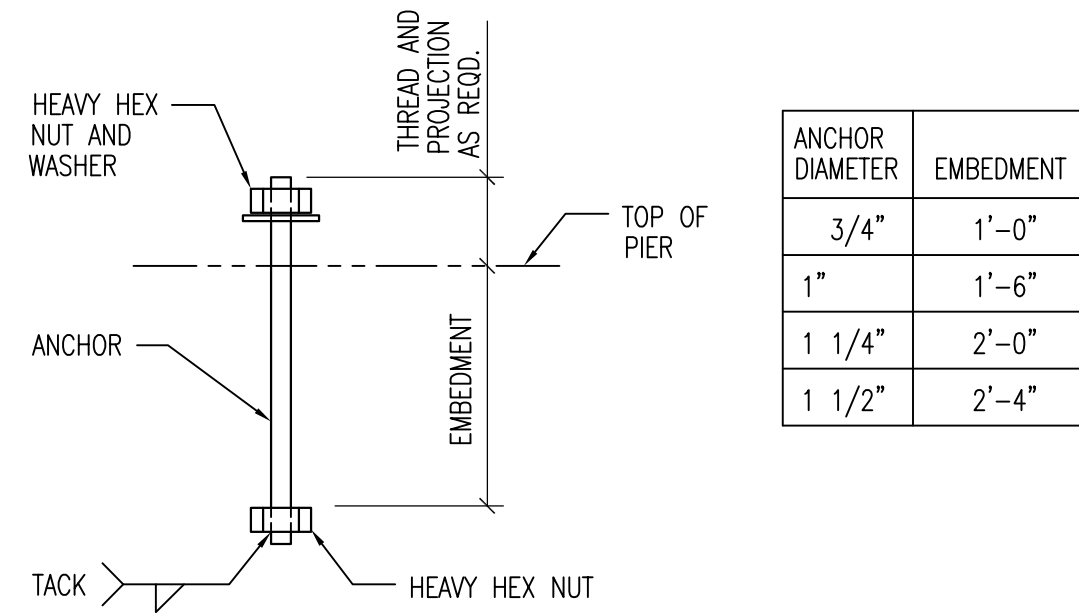
TYPICAL DETAIL - HAIRPIN



TYPICAL DETAIL - COLUMN BASE PLATE AND ANCHOR BOLT

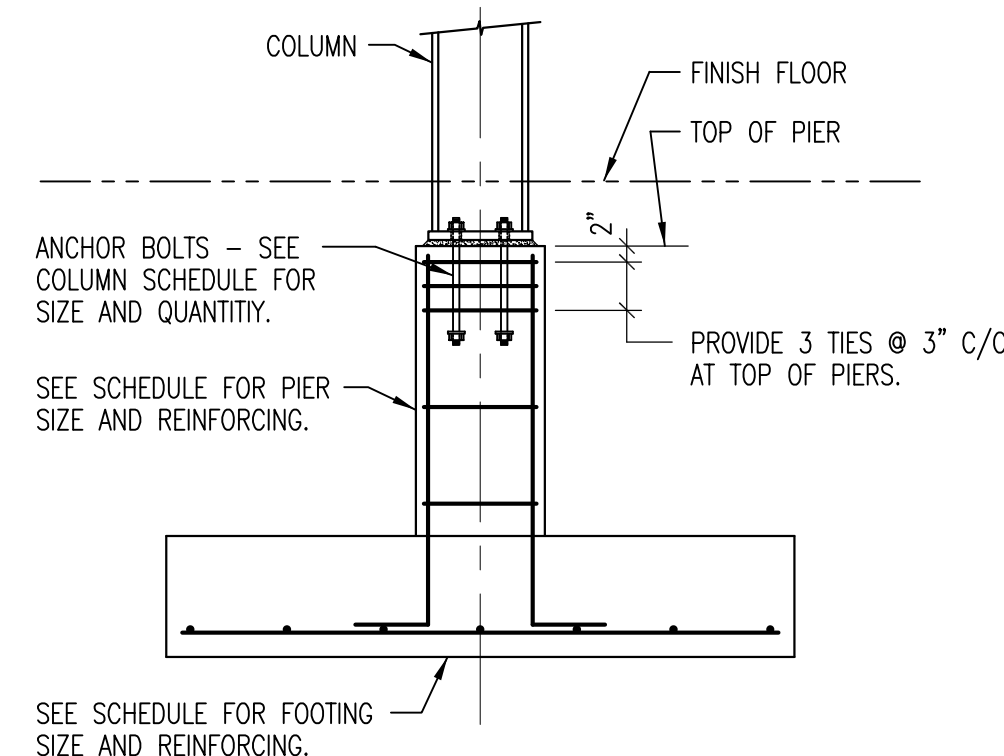


TYPICAL DETAILS - PIER TIES



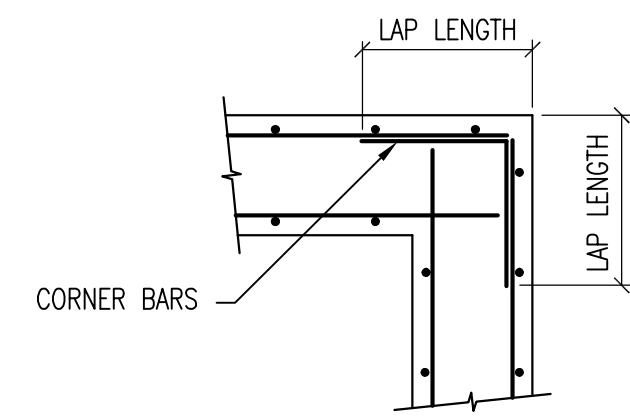
TYPE "A" ANCHOR BOLT DETAIL

ANCHOR DIAMETER	EMBEDMENT
3/4"	1'-0"
1"	1'-6"
1 1/4"	2'-0"
1 1/2"	2'-4"

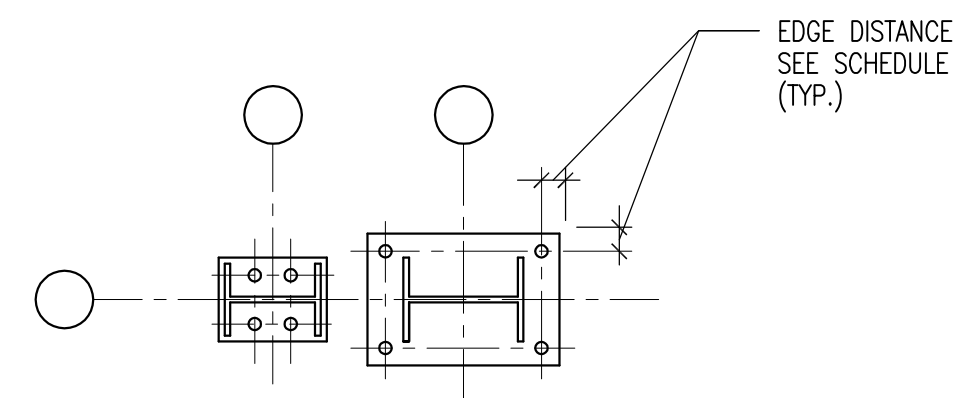


TYPICAL DETAIL - PIER/COLUMN FOOTING

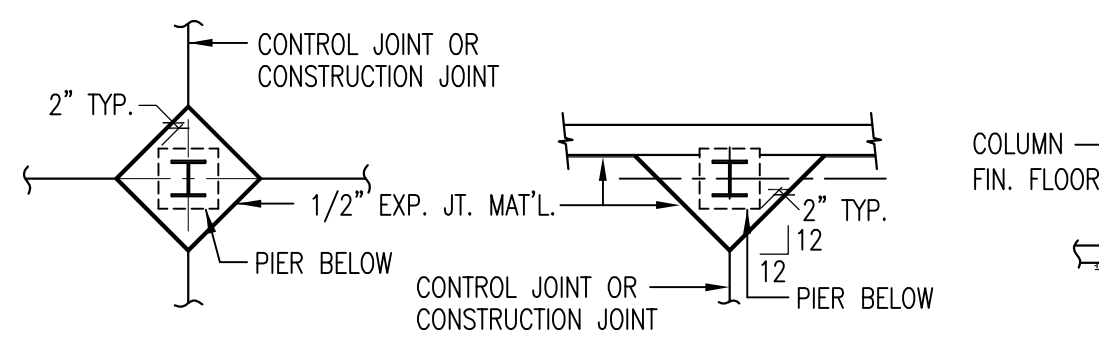
ANCHOR DIAMETER	MAX. HOLE DIAMETER	MIN. WASHER DIAMETER	EDGE DISTANCE
3/4"	1 5/16"	1 7/8"	1 1/2"
1"	1 13/16"	2 5/8"	1 3/4"
1 1/4"	2 1/16"	2 7/8"	2"
1 1/2"	2 5/16"	3 1/8"	2 1/4"
1 3/4"	2 3/4"	3 3/4"	2 1/2"
2"	3 1/4"	4 1/2"	3"



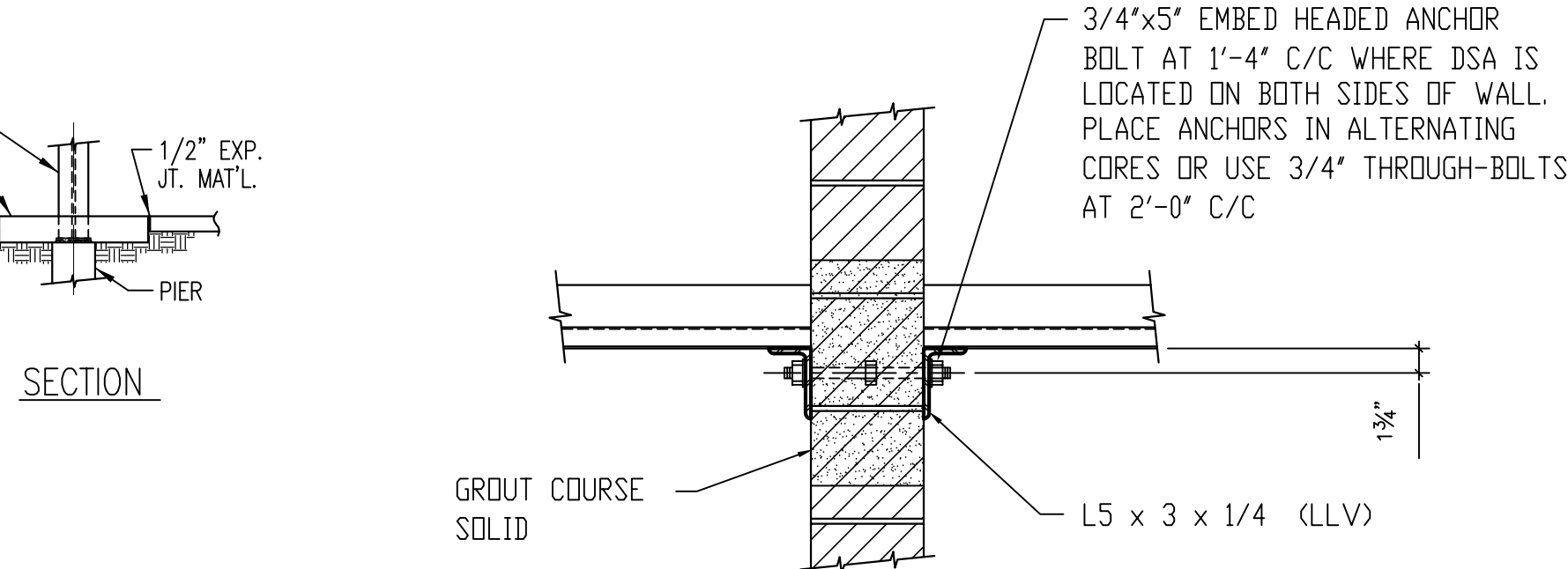
TYPICAL DETAIL - CORNER REINFORCING



TYPICAL DETAIL - COLUMN BASE PLATES



TYPICAL DETAILS - COLUMN ISOLATION JOINT



TYPICAL DETAIL - FLOOR DECK SUPPORT ANGLE (DSA)

FOOTING AND PIER SCHEDULE

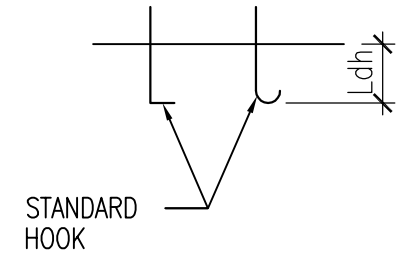
MARK	F-1	F-2	F-3	F-4	F-5	F-6	F-7	F-8	F-9	F-
SIZE	2'-4" x 1'-8"	2'-4" x 1'-8"	2'-4" x 1'-8"	2'-4" x 1'-8"	2'-4" x 1'-8"	2'-4" x 1'-8"	2'-0" DIA.	1'-4" x 1'-4"	1'-4" x 1'-4"	.
REINFORCING	(12) #6	(12) #6	(12) #6	(12) #6	(12) #6	(12) #6	(12) #6	(8) #5	(8) #5	.
TIES	#3 at 12" c/c	#3 at 12" c/c	#3 at 12" c/c	#3 at 12" c/c	#3 at 12" c/c	#3 at 12" c/c	#3 at 12" c/c	#3 at 12" c/c	#3 at 12" c/c	.
TOP/PIER EL.	242.43'	242.43'	242.43'	242.43'	242.43'	242.43'	245.10'	242.43'	242.43'	.
FOOTING SIZE (dxbxt)	6'-0" x 6'-0" x 1'-0"	6'-0" x 6'-0" x 1'-0"	6'-0" x 6'-0" x 1'-0"	4'-0" x 4'-0" x 1'-0"	4'-0" x 4'-0" x 1'-0"	4'-0" x 4'-0" x 1'-0"	4'-0" x 4'-0" x 1'-0"	3'-0" x 3'-0" x 1'-0"	3'-0" x 3'-0" x 1'-0"	.
REINFORCING (BOT. EACH WAY)	(8) #4	(8) #4	(8) #4	(5) #4	(5) #4	(5) #4	(5) #4	(4) #4	(4) #4	.
BDT. /FTG. EL.	233.60'	235.60'	237.60'	233.60'	235.60'	237.60'	239.60'	235.60'	237.60'	.
REMARKS	.	.	.	.	.	.	.	.	.	.

CONCRETE REINFORCEMENT CLASS B LAP SPLICES

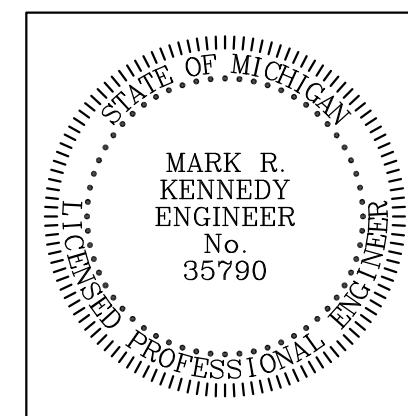
BAR SIZE	WALLS, SLABS, JOISTS		BEAMS, COLUMNS, PIERS		FOOTINGS, TRENCH FOOTINGS	
	TOP REINF'G.	OTHER REINF'G.	TOP REINF'G.	OTHER REINF'G.	TOP REINF'G.	OTHER REINF'G.
#3	1'-0"	1'-0"	1'-7"	1'-3"	1'-1"	1'-0"
#4	1'-7"	1'-3"	2'-1"	1'-7"	1'-6"	1'-2"
#5	2'-4"	1'-9"	2'-7"	2'-0"	1'-10"	1'-5"
#6	3'-1"	2'-5"	3'-1"	2'-5"	2'-2"	1'-8"
#7	5'-0"	3'-10"	4'-6"	3'-6"	3'-2"	2'-5"
#8	6'-2"	4'-9"	5'-2"	4'-0"	3'-7"	2'-9"
#9	7'-6"	5'-9"	5'-10"	4'-6"	4'-5"	3'-5"
#10	9'-0"	6'-11"	6'-7"	5'-1"	5'-6"	4'-3"
#11	10'-7"	8'-2"	7'-3"	5'-7"	6'-7"	5'-1"

- NOTES:
- LAP SPLICES SHALL BE CLASS B UNLESS CLASS A IS INDICATED. CLASS A SPLICE = 0.77 X CLASS B SPLICE. MINIMUM SPLICE LENGTH = 1'-0"
 - TOP BARS ARE DEFINED AS HORIZONTAL BARS SO PLACED THAT MORE THAN 12" OF FRESH CONCRETE IS CAST IN THE MEMBER BELOW THE SPLICE.
 - MECHANICAL OR BUTT WELDED SPLICES DEVELOPING 125% OF YIELD STRENGTH OF REINFORCEMENT IS PERMITTED.

BAR SIZE	Ldh	
	fc' = 3,000 PSI	fc' = 4,000 PSI
3	0'-9"	0'-7"
4	0'-11"	0'-10"
5	1'-2"	1'-0"
6	1'-5"	1'-3"
7	1'-8"	1'-5"
8	1'-10"	1'-7"
9	2'-1"	1'-10"
10	2'-4"	2'-1"
11	2'-7"	2'-3"



MINIMUM EMBEDMENT DEPTH OF CONCRETE REINFORCEMENT
STANDARD HOOK, Ldh



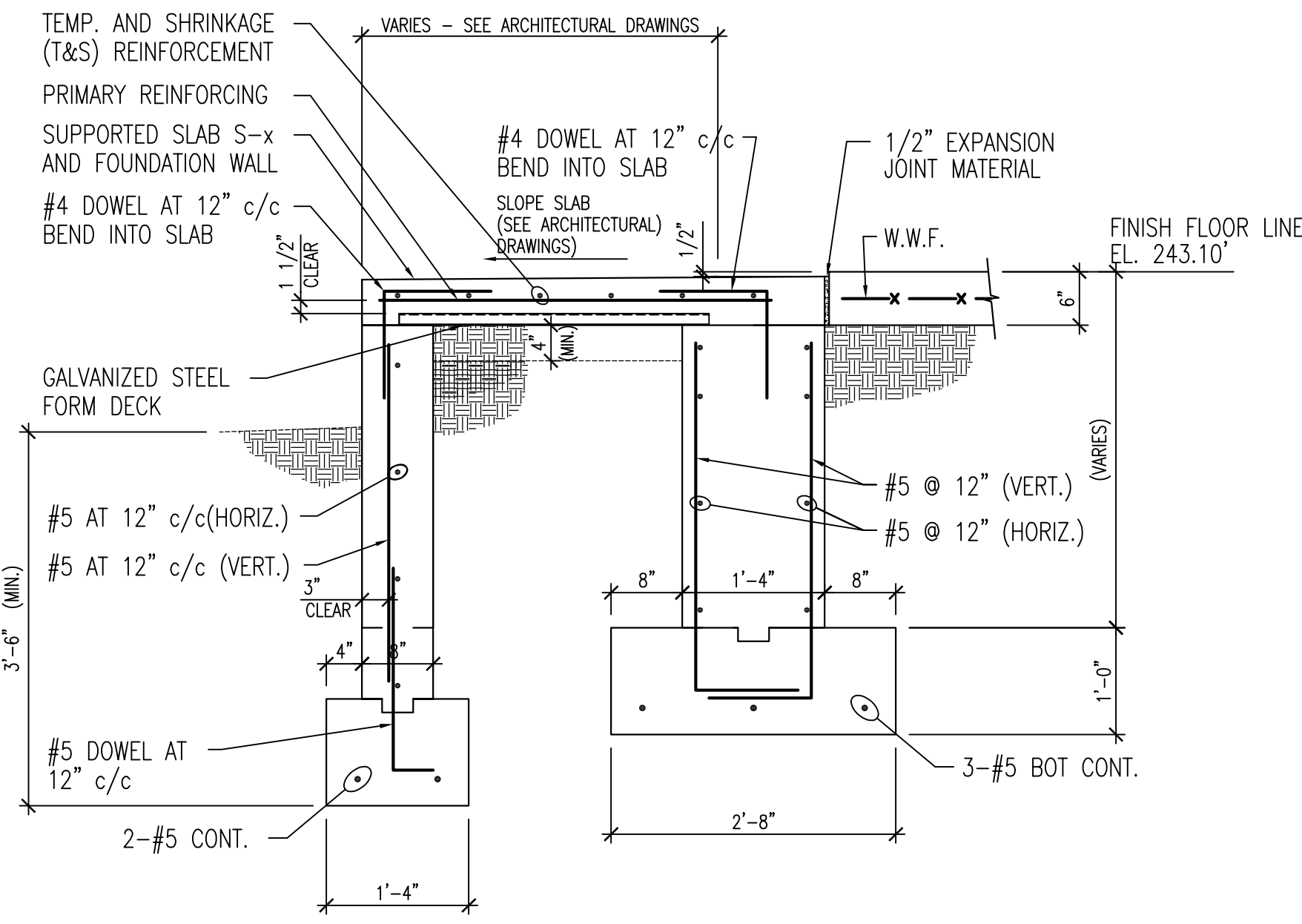
LKL engineers ltd.
CONSULTING STRUCTURAL ENGINEERS
2735 N. HOLLAND-SYLVANIA RD. SUITE A-2 TOLEDO, OHIO 43615
(419) 578-0195 FAX (419) 578-2125 LKLengrs@lklengrs.com
LKL JOB No. 16-12310

This drawing and all information contained herein is the exclusive property of LKL Engineers, Ltd. and is not to be copied or used in any way without the express written consent of LKL Engineers, Ltd. and must be returned upon request. © Copyright 2016

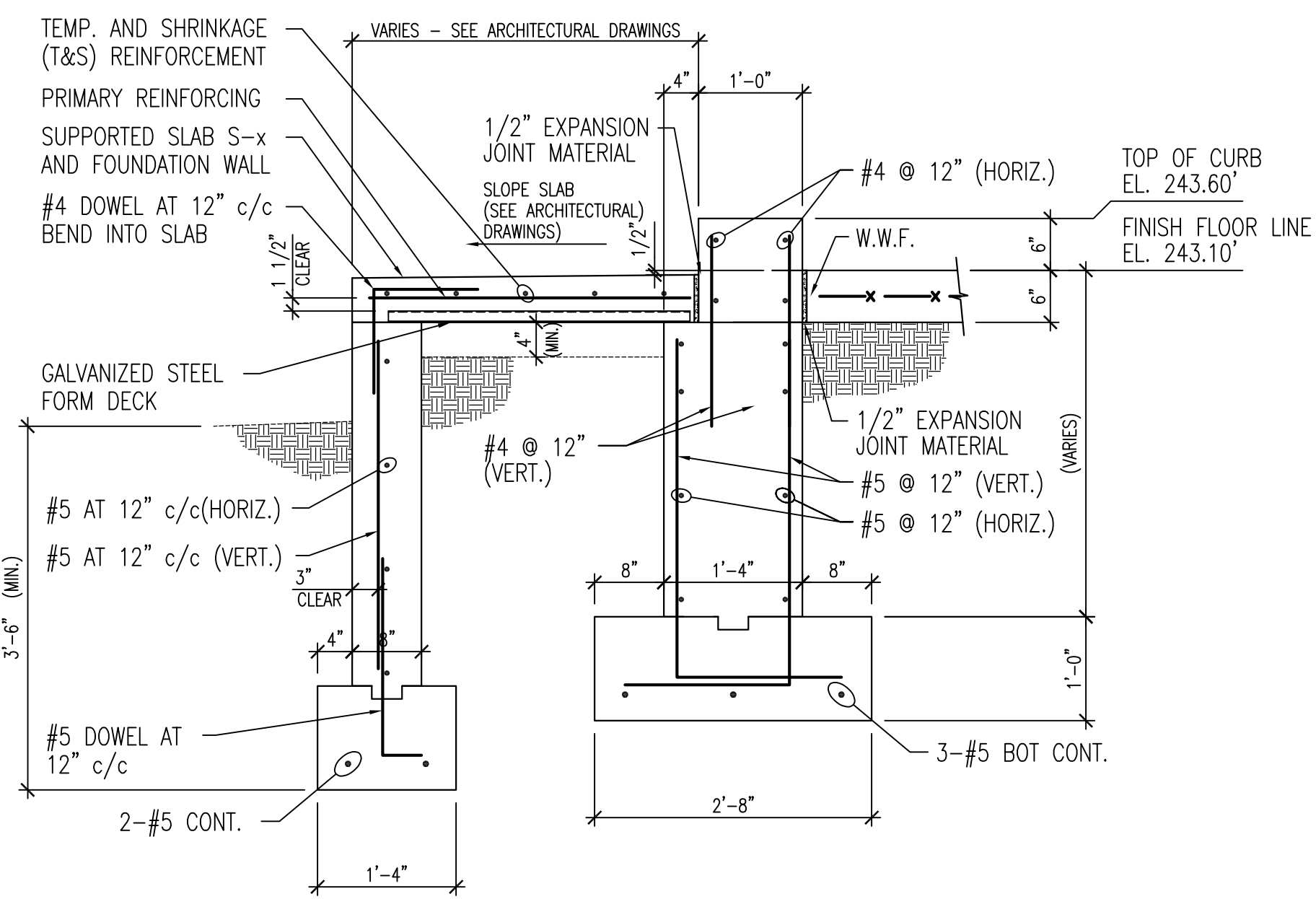
NEW FARMERS MARKET ENCLOSURE
AT ANN ARBOR FARMERS MARKET
315 DETROIT STREET, SECTION 29, CITY OF ANN ARBOR, WASHTENAW COUNTY, MI
FOR ANN ARBOR PARKS & RECREATION DEPARTMENT
301 EAST HURON STREET, ANN ARBOR, MI 48107

KOHLER ARCHITECTURE, INC.
1118 WEST FRONT STREET
MONROE, MICHIGAN 48161
PHONE: 734-242-6880, FAX: 734-242-6883

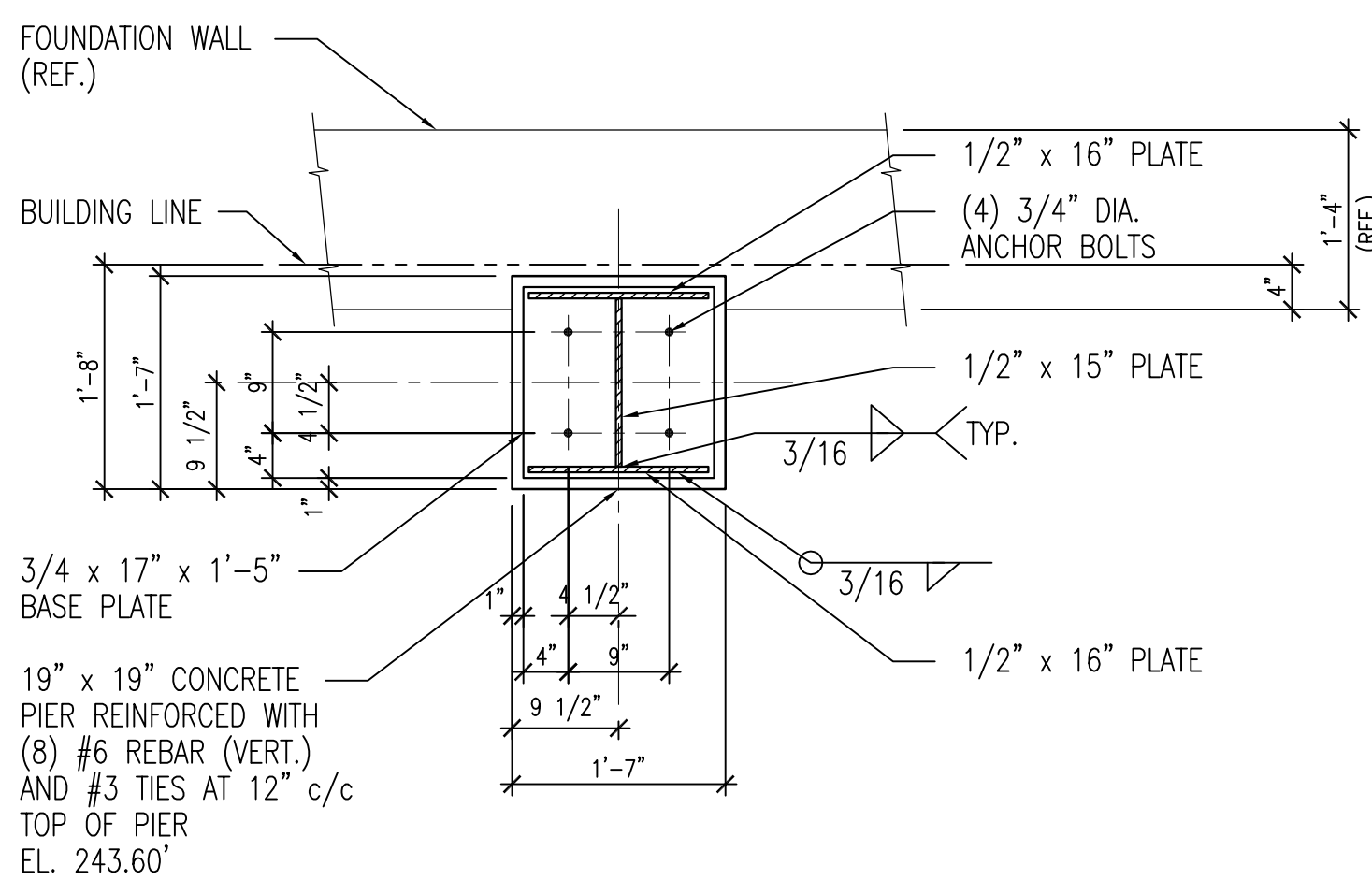
DR.	CK.		
F.M. HORNAY		9-6-16	BIDDING
		5/31/16	CPC REVIEW
			DATE STATUS
			JOB
			ITB No. 4454
			SHEET
			S2
			OF 3



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



SECTION 2
SCALE: 3/4" = 1'-0"



DETAIL 101
SCALE: 3/4" = 1'-0"
TYP. (4) PLACES

STRUCTURAL DESIGN CRITERIA

A. General	
1. Building Code:	2012 Michigan Building Code
2. Risk Category:	II
B. Floor Live Load	
1. General Areas Unless Indicated:	150 psf
C. Roof Live Load	
1. Flat Roof:	20 psf
D. Roof Snow Load	
1. Snow Exposure Factor, Ce:	1.00
2. Thermal Factor, Ct:	1.00
3. Snow Load Importance Factor, Is:	1.00
4. Ground Snow Load, Pg:	25.0 psf
5. Flat Roof Snow Load, P _f :	17.5 psf
6. Low-Slope Minimum Snow Load, P _m :	20.0 psf
7. Snow Drifts and Unbalanced Loads:	As required
E. Wind Design Data	
1. Basic Wind Speed, V:	115 mph
2. Exposure Classification:	B
3. Enclosure Classification:	Partially Enclosed
4. Mean Roof Height, H:	29-ft
5. Wind Directionality Factor, K _d :	0.85
6. Topographic Factor, K _z :	1.00
7. Gust Response Factor, G:	0.85
8. Internal Pressure Coefficient, G _{Cpi} :	0.55
F. Earthquake Design Data	
1. Site Class:	D
2. Seismic Design Category, SDG:	B
3. Mapped Short Period SRA, S _s :	0.094
4. Mapped One Second Period SRA, S ₁ :	0.048
5. Short Period Design SRA, S _s 1:	0.100
6. One Second Period Design SRA, S _s 1:	0.076
7. Seismic Load Importance Factor, I _e :	1.00
8. Approximate Fundamental Period, T _a :	0.33 s
9. Seismic Response Coefficient, C _s :	0.033
10. Basic Seismic Force Resisting System:	Steel System Not Specifically Detailed for Seismic Resistance
11. Response Modification Coefficient, R:	3
12. Analysis Procedure:	Equivalent Lateral Force Procedure

FOUNDATIONS AND EARTHWORK

- Comply with Project Specifications and Drawings.
- Design and install temporary systems for excavation dewatering and excavation bracing as required for proper execution of the Work. Remove temporary systems after construction is completed unless indicated or approved.
- Spread footings are designed to bear on undisturbed soil, compacted fill material, or controlled low strength material (CLSM) with a net bearing capacity of 1,500 psf. Verify bearing capacity of soil at bottom of excavations before constructing footings. If actual bearing capacity is less than the design capacity immediately notify Architect. Increase depth of footings or overexcavate unsuitable soils and replace with compacted fill or CLSM as directed.
- Prepare subgrade and construct building pad in accordance with project specifications. Proof roll subgrade to discover weak or unsuitable soils. Place fill in maximum 8-in lifts and compact to 95% of the maximum dry density determined in accordance with ASTM D1557-02 (Modified Proctor Test). Fill under foundations and backfill in excavations shall be coarse sand, gravel, or crushed stone. Subgrade under slabs-on-grade shall be minimum 4-in. deep, crushed stone placed to a tolerance of +0-in / -3/4-in.
- Do not construct footings or slabs on frozen soils, on frost, or in excavations containing standing water. Keep excavations dry and protect subgrades, footings, and slabs from frost heave.
- Center footings under columns and walls unless detailed otherwise. Top and bottom of footings shall be level. Step footings where it is necessary to change bearing elevations.
- Bear exterior footings, footings adjacent to the building perimeter and footings in areas which will remain unheated during normal occupancy, at a minimum frost depth of 3'-6" below grade.
- Form sides of footings and foundation walls unless conditions permit vertical excavations without sloughing and caving. Do not permit top of trench footings to mushroom. Form surfaces which will be exposed to view.
- Reference architectural, mechanical, electrical, and plumbing drawings for sleeves, inserts, anchors, and other materials to be embedded in foundations.
- Balance backfill on both sides of footings and foundation walls to prevent movement of foundations. Do not backfill against basement walls and earth-retaining walls until wall has attained its design strength and not before supporting floor or roof construction is in place.
- Footings, piers, ties, hairpins, and other foundation details shown on drawings are based on estimated reactions from a generic manufactured building. Submit final reactions from selected building manufacture for evaluation by Engineer-of-Record prior to constructing foundations.

ANCHORAGE TO CONCRETE AND MASONRY

- Comply with the following:
 - Specifications for Structural Concrete (ACI 301-05).
 - Building Code Requirements for Structural Concrete (ACI 318-11).
 - Project Specifications and Drawings.
- Furnish and install anchors of the type and materials indicated in the locations indicated. Substitution of anchor types is not permitted without prior authorization of structural engineer of record.
- Cast-in Anchorage to Concrete and Masonry
 - Carbon-Steel Anchors
 - Headed Anchor Bolts: ASTM F1554, Grade 36
 - Washers: ASTM F436, hardened
 - Plate Washers: ASTM A36
 - Nuts: ASTM A563, heavy hex
 - Galvanizing: ASTM A153
 - Use templates to position anchors. Templates shall maintain alignment, depth, and projection of anchor bolts during concreting and masonry grouting.
- Post-Installed Anchorage to Concrete
 - Post-installed anchorage to concrete is designed by the Strength Design Method of ACI 318 Appendix D using the design-basis anchor. Substitution request for anchor of another manufacturer shall be accompanied by design calculations showing equivalent capacity to the design basis anchor.
 - Locate existing reinforcing bars and embedments by x-ray, electromagnetic, or ultrasonic testing or by chipping. Notify structural engineer of record of reinforcing bars which interfere with the installation of specific anchors and obtain approval to relocate anchors or cut existing reinforcement prior to proceeding with installation.
 - Install anchors in accordance with the Manufacturer's Printed Installation Instructions included in the anchor packaging.
 - Post-installed mechanical anchors shall be Category 1 and qualified for use in cracked and uncracked concrete in accordance with ACI 308.2.
 - Design Basis Anchors:

Expansion Anchor:	Hilti Kwik Bolt TZ
Screw Anchor:	Hilti Kwik HUS EZ
 - Embedment and anchor diameter shall be permanently embossed on exposed end of anchor.
 - Use manufacturer's longest standard embedment compatible with substrate depth unless indicated.
 - At time of installation, concrete shall have attained its specified compressive strength.

CAST-IN-PLACE CONCRETE

- Comply with the following:
 - Specifications for Structural Concrete (ACI 301-10).
 - Building Code Requirements for Structural Concrete (ACI 318-11).
 - Specification for Hot Weather Concreting (ACI 305.1-06).
 - Standard Specification for Cold Weather Concreting (ACI 306.1-80).
 - Guide for Concrete Floor and Slab Construction (ACI 302.1R-04).
 - Guide for Measuring, Mixing, Transporting, and Placing Concrete (ACI 304R-00).
 - Specification for Curing Concrete (ACI 308.1-11).
 - Guide to Formwork for Concrete (ACI 347-04).
 - Structural Welding Code - Reinforcing Steel (AWS D1.4-2011).
 - Placing Reinforcing Bars, Ninth Edition, CRSI
 - Project Specifications and Drawings.
- Quality welders and welding procedures in accordance with AWS D14.
- Concrete
 - Materials

a. Cement:	ASTM C150, Type III
b. Fly Ash:	ASTM C618, Class C
c. Ground-Granulated Blast-Furnace Slag (GGBFS):	ASTM C989
d. Normal Weight Aggregate:	ASTM C33, Class 3S
e. Air-entraining Admixture:	ASTM C260
f. Chemical Admixtures:	ASTM C494
g. Mixing Water:	ASTM C94, potable
 - General concrete mix requirements:
 - Establish mix proportions on the basis of trial mixes or field experience.
 - Cementitious materials may be combination of Portland cement, ground-granulated blast furnace slag and fly ash. Limit percentages by weight of fly ash and GGBFS to 25% of total cementitious material, and combination of fly ash and GGBFS to 40% of total cementitious material.
 - Limit water-soluble chloride-ion content in hardened concrete to 0.15 percent by weight of cement.
 - Maximum coarse aggregate size: 1-in.
 - Concrete Classes:
 - Reinforced concrete exposed to freeze-thaw cycles in moist condition and exposed to deicing chemicals:
 - Exposure Class: F3
 - Compressive Strength, f_c: 5,000 psi
 - Maximum water to cementitious material ratio: 0.40
 - Reinforced concrete exposed to freeze-thaw cycles but not exposed to deicing chemicals:
 - Exposure Class: F2
 - Compressive Strength, f_c: 4,500 psi
 - PCompressive Strength, f_c: 4,000 psi
 - Minimum cementitious material content: 520 pounds per cubic yard
 - Supported floor slabs, slabs-on-metal deck, concrete joists, concrete beams:
 - Exposure Class: F0
 - Compressive Strength, f_c: 4,000 psi
 - Minimum cementitious material content: 520 pounds per cubic yard
 - Normal weight concrete.
- Steel Reinforcement
 - Materials

a. Reinforcing Bars:	ASTM A615, Grade 60
b. Low Alloy Reinforcing Bars:	ASTM A706, Grade 60
c. Welded Wire Fabric:	ASTM A185, as-drawn
 - Fabricate bent bars with minimum of standard hooks and embed in accordance with Concrete Reinforcement Standard Hook Embedment Schedule.
 - Lap reinforcing as shown in accordance with Concrete Reinforcement Lap Splice Schedule. Lap welded wire fabric one wire spacing plus 2-in.
 - Install dowels in column, pier, and wall footings of same size and number as vertical bars. Lap dowels with vertical reinforcement and extend into footing a distance equal to lap splice length. If footing depth is insufficient to develop dowel splice length, terminate end of bar in footing with standard hook.
 - P
 - Wn. Use low alloy reinforcing bars where welding of reinforcement is required or approved.
 - Embedding reinforcement dowels in existing structure:
 - Adhesive: Hilti HIT HY 200
 - Reinforcement Dowels: ASTM A615, Grade 60
 - Install dowels in accordance with the Manufacturer's Printed Installation Instructions included in the adhesive packaging. Installer shall be certified in accordance with ACI/CRSI Adhesive Anchor Installation Program
 - Unless shown, embed reinforcement dowels a minimum of twenty bar diameters.
 - Unless shown, maintain minimum edge distance of six bar diameters.
 - Install anchors in dry concrete with a minimum substrate temperature of 41 degrees. Drill holes with hammer drill using carbide-tipped bit.
 - Concrete cover over reinforcement unless noted:

a. Concrete deposited against earth:	3-in.
b. Formed surfaces exposed to weather or earth:	1-1/2-in. for #5 and smaller. 2-in. for #6 and larger.
c. Slabs, walls, and joists:	1-in.
d. Beams, girders, and columns:	1-1/2-in.
- Miscellaneous Materials
 - Bonding Adhesive: Sika, Armatex 110
 - Expansion/Isolation Joint filler: W.R. Meadows, Ceramarc
 - Semi-rigid joint filler: Epoxy resin with Type A shore durometer hardness of 80
 - Vapor Retarder: ASTM E1745, Class C
 - Fine-Graded Granular Fill: ASTM D448, Size 10, crushed stone
 - Curing Compound: ASTM C309, Type 1, Class B, 18-25% solids, non-dissipating
- Reference architectural, mechanical, electrical, and plumbing drawings and specifications for openings, sleeves, conduits, inserts, anchors, and other materials to be embedded in concrete and for required slab depressions, slopes, equipment pads, curbs, chamfers, joints, and architectural detailing. Obtain written approval of engineer prior to placing openings or sleeves not shown on structural drawings through any structural element.
- Place construction joints as shown on drawings and in locations which least impair strength of structure. Obtain written approval of engineer for construction joints not shown on drawings.
- Saw cut control joints in slabs-on-grade as soon as cutting action will not damage surface. Locate joints in approximately square pattern at a maximum spacing of 12-ft centers unless shown. Submit control joint location plan for approval.
- Install vapor retarder under slabs cast on the ground. Seal joints with manufacturer's standard tape. Cover vapor retarder with 3-in layer of fine graded granular material unless indicated.
- Chamfer exposed edges 3/4-in x 45 degrees.
- Moist cure concrete for minimum of seven days using one of following methods:
 - Absorptive cover kept continuously wet with water.
 - Moisture-retaining cover.
 - Curing compound. Remove compound after curing period when required for application of architectural finishes.

CAST-IN-PLACE CONCRETE (CONTINUED)

- Finish Schedule:

1. Formed surfaces exposed to view and related unformed surfaces:	Rubbed Finish
2. Formed Surfaces not exposed to view:	As-formed Finish
3. Slabs exposed to view:	Trowel Finish
4. Slabs to receive resilient flooring, carpet, ceramic tile, paint, or thin coating:	Trowel Finish
5. Slabs to receive bonded topping:	Scratch Finish
6. Stairs, entry slabs, and exterior ramps:	Broom Finish
- Floor Flatness and Levelness

1. Slabs-on-grade	FF=35; FL=25.
a. Overall values:	FF=25; FL=15.
b. Minimum local values:	FF=24; FL=17.
- Measure floor flatness and levelness in accordance with ASTM E1155 within 24 hours of finishing.
- Where bonding fresh concrete to previously hardened concrete, remove laitance and deleterious substances and intentionally roughen existing surface to 1/4" amplitude. Apply bonding adhesive in accordance with Manufacturer's Printed Installation Instructions included in the product packaging.
- Sample fresh concrete and perform air content, slump tests, unit weight, and concrete temperature tests and cast concrete cylinders for strength tests in accordance with ACI 318. Obtain one composite sample for each day's placement of each concrete class exceeding 5 cubic yards plus one sample for each additional 50 cubic yards or fraction thereof.

LKL engineers ltd.
CONSULTING STRUCTURAL ENGINEERS
2735 N. HOLLAND-SYLVANIA RD. SUITE A-2 TOLEDO, OHIO 43615
(419) 578-0195 FAX (419) 578-2125 LKLengrs@lklengrs.com
LKL JOB No. 16-12310

MARK R. KENNEDY
ENGINEER
No. 35790

This drawing and all information contained herein is the exclusive property of LKL Engineers, Ltd. and is not to be copied or used in any way without the express written consent of LKL Engineers, Ltd. and must be returned upon request. © Copyright 2016

NEW FARMERS MARKET ENCLOSURE
AT ANN ARBOR FARMERS MARKET
315 DETROIT STREET, SECTION 29, CITY OF ANN ARBOR, WASHTENAW COUNTY, MI
FOR ANN ARBOR PARKS & RECREATION DEPARTMENT
301 EAST HURON STREET, ANN ARBOR, MI 48107

DR. F.M. HORNAY CK.

© COPYRIGHT 2016
KOHLER
ARCHITECTURE, INC.
#1627

1118 WEST FRONT STREET
MORRO, MICHIGAN 48161
PHONE: 734-242-6880, FAX: 734-242-6883

9-6-16 BIDDING
5/31/16 CPC REVIEW
DATE STATUS
JOB ITB No. 4454
SHEET S3 OF 3

COPYING THIS DRAWING IS PROHIBITED AND SUBJECT TO PROSECUTION.

PLUMBING SPECIFICATIONS

PART 1 GENERAL

1.01 PURPOSE

THESE OUTLINE SPECIFICATIONS ARE NOT INTENDED TO COVER ALL NECESSARY ITEMS, BUT TO SERVE AS A GUIDE TO FURNISH AND INSTALL A COMPLETE PLUMBING SYSTEM AS DESCRIBED HEREIN.

1.02 SCOPE OF WORK

FURNISH AND INSTALL THE PLUMBING SYSTEMS AS SHOWN ON THE DRAWINGS AND SPECIFIED HEREIN. THIS SHALL INCLUDE BUT NOT BE LIMITED TO THE FOLLOWING:

- A. EXCAVATION AND BACKFILL REQUIRED FOR THE INSTALLATION OF THE PLUMBING SYSTEMS.
- B. CUTTING AND PATCHING REQUIRED FOR THE INSTALLATION OF THE PLUMBING SYSTEMS.
- C. REMOVALS AS REQUIRED AND/OR AS INDICATED.
- D. DOMESTIC WATER SYSTEM INCLUDING PIPING TO ALL FIXTURES OR EQUIPMENT, VALVES, TAPS, ETC.
- E. ALL VALVES, FITTINGS, HANGERS, SLEEVES, ESCUTCHEON PLATES, ANCHORS, GUIDES, ETC., REQUIRED FOR THE PLUMBING SYSTEM INSTALLATION.
- F. CHLORINATION, TESTING, ADJUSTMENT AND CLEANING OF ALL SYSTEMS AND EQUIPMENT.
- G. INSTRUCTION OF OWNERS' PERSONNEL AND OPERATING MANUALS FOR ALL EQUIPMENT.
- H. PERMITS, APPLICATIONS, TESTS AND ANY OTHER FEES RELATED TO THIS WORK.

1.03 CONTRACT DRAWINGS

IN GENERAL, DRAWINGS ARE SCHEMATIC IN NATURE AND ARE INTENDED AS A GUIDE TO THE CONTRACTOR, BUT DO NOT NECESSARILY SHOW ALL DETAILS, OFFSETS, ETC. ALL DRAWINGS ARE TO BE THOROUGHLY INSPECTED. THE CONTRACTOR'S WORK SHALL CONFORM TO THE INFORMATION CONTAINED IN THIS SPECIFICATION AND/OR AS INDICATED IN THE LATEST REVISION OF THE DRAWINGS REFERRED TO THEREIN. THE CONTRACTOR SHALL CONSULT WITH THE ENGINEER REGARDING ALL QUESTIONS ON WHICH HE MAY BE IN DOUBT BEFORE PROCEEDING WITH FABRICATION OF PARTS AFFECTED. THE CONTRACTOR SHALL PREPARE ALL ADDITIONAL DETAIL OR FIELD INSTALLATION DRAWINGS NECESSARY AT HIS OWN EXPENSE. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS INDICATED ON THE ENGINEER'S LAYOUT DRAWINGS AND DETERMINE IF ANY CHANGES ARE REQUIRED IN PIPING RUNS, DRAINS, ETC., TO AVOID INTERFERENCE. MAJOR CHANGES SHALL NOT BE MADE WITHOUT THE APPROVAL OF THE ENGINEER. WHILE THE DRAWINGS ARE TO BE ADHERED TO AS CLOSELY AS POSSIBLE, THE CONTRACTOR HAS THE RIGHT TO VARY THE RUN OR CONDUITS, PIPING AND/OR DUCTS DURING PROGRESS OF THE WORK AS MAY BE FOUND NECESSARY OR DESIRABLE TO AVOID INTERFERENCES. MAJOR REVISIONS SHALL BE VERIFIED WITH THE ENGINEER.

1.04 VERIFICATION

BEFORE RUNNING ANY PIPING, ETC., WITHIN THE BUILDING, THIS CONTRACTOR SHALL ASSURE HIMSELF THAT THEY CAN BE INSTALLED AS CONTEMPLATED WITHOUT TRAPPING OR INTERFERING WITH COLUMNS, BEAMS, PIPING, FIXTURES, ETC. ANY NECESSARY MAJOR DEVIATION SHALL BE REFERRED TO THE ENGINEER FOR ADJUSTMENT BEFORE LINES ARE RUN, AT NO INCREASE IN CONTRACT PRICE. OF NECESSITY, OPENINGS, SUPPORTING STEEL, FIELD-BUILT CURBS, SPACE REQUIREMENTS, ETC., WERE DESIGNED AROUND SPECIFIC PARAMETERS. WHEN THE CONTRACTOR DETERMINES THE MAKE OF EQUIPMENT TO BE PROVIDED FOR THE JOB, IT SHALL BE HIS RESPONSIBILITY TO VERIFY AND COORDINATE UNIT DIMENSIONS WITH THE GENERAL CONTRACTOR AND ALL OTHER INTERESTED CONTRACTORS ON THE JOB. IT SHALL ALSO BECOME THE CONTRACTOR'S RESPONSIBILITY TO CHANGE AS NECESSARY, THROUGH THE ENGINEER, ALL REQUIRED DIMENSIONS SO THAT OPENINGS, SUPPORTING STEEL, CURBS, ELECTRICAL DATA, ETC., WILL FIT THE EQUIPMENT SUPPLIED. ANY ADDITIONAL COST WILL BE THE SOLE RESPONSIBILITY OF THIS CONTRACTOR. IN ADDITION, ELECTRICAL POWER, INTERLOCK AND CONTROL DIAGRAMS AND PIPING ARRANGEMENTS WERE DESIGNED AROUND ONE SPECIFIC MANUFACTURER. IF ADDITIONAL WIRING, PIPING CONTROLS, ETC., IS REQUIRED FOR OTHER EQUIPMENT, THIS CONTRACTOR SHALL INCLUDE THE COST OF THE SAME IN HIS PRICE. DIMENSIONS, ELEVATIONS AND RELATIVE LOCATIONS OF EXISTING EQUIPMENT, SEWERS, PIPES, DUCTS, CONDUITS, ETC., IN PLACE AS SHOWN ON THE DRAWINGS, ARE TAKEN FROM AS-BUILT AND RECORD DRAWINGS AND ARE DEEMED RELIABLE ONLY INsofar AS GENERAL LAYOUT IS CONCERNED. SUCH DIMENSIONS SHALL NOT BE USED FOR LAYOUT DRAWINGS OR DETAILING OF COMPONENTS. THE RESPONSIBILITY FOR CHECKING IN PLACE ITEMS WILL BE THE CONTRACTOR'S. ALL MEASUREMENTS, THE EXACT DETERMINATION OF RELATIVE ELEVATIONS OR LOCATIONS, THE ASCERTAINING OF ACCURACY OF ALL GIVEN ELEVATIONS AND DIMENSIONS AND THE OBTAINING OF ALL NECESSARY ADDITIONAL INFORMATION TO INSURE THE PROPER FIT AND COORDINATION OF ALL CONDUIT EQUIPMENT, DUCTS, AND PIPING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

1.05 SITE VISIT

ALL CONTRACTORS BIDDING THE WORK INDICATED THROUGHOUT THESE CONTRACT DOCUMENTS ARE REQUIRED TO VISIT, AND THOROUGHLY EXAMINE THE PROJECT SITE AND ITS ASSOCIATED CONDITIONS. THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH ALL EXISTING CONDITIONS UNDER WHICH THIS WORK MUST BE PERFORMED. ALL CONTRACTORS SHALL REPORT ANY DISCREPANCIES TO THE ARCHITECT PRIOR TO SUBMITTING A BID PROPOSAL. FAILURE TO DO SO SHALL BE DEEMED AS ACCEPTANCE OF EXISTING CONDITIONS. NO ADDITIONAL COMPENSATION WILL BE CONSIDERED FOR ANY DEVIATIONS OR DISCREPANCIES TO THESE PLANS AFTER A CONTRACTOR HAS BEEN SELECTED.

1.06 GUARANTEE

THE CONTRACTOR GUARANTEES BY HIS ACCEPTANCE OF THE CONTRACT THAT ALL WORK WILL BE FREE FROM DEFECTS IN WORKMANSHIP AND/OR MATERIALS AND THAT ALL APPARATUS WILL DEVELOP CAPACITIES AND CHARACTERISTICS SPECIFIED. SHOULD ANY DEFECTS IN WORKMANSHIP, AND/OR MATERIALS REQUIRE REDESIGN OF ANY PART OF THE ELECTRICAL, MECHANICAL, PLUMBING, OR ARCHITECTURAL LAYOUT, ALL SUCH REDESIGN AND ALL NEW DRAWINGS AND DETAILING REQUIRED HEREOF SHALL, WITH THE APPROVAL OF THE ARCHITECT, BE PREPARED BY THE CONTRACTOR AT HIS OWN EXPENSE. WHERE SUCH APPROVED DEVIATION REQUIRES A DIFFERENT QUALITY AND ARRANGEMENT OF DUCTWORK, PIPING, WIRING, CONDUIT AND/OR EQUIPMENT FROM THAT SPECIFIED OF DETAILED ON THE DRAWINGS WITH THAT APPROVAL OF THE ARCHITECT, THE CONTRACTOR SHALL FURNISH AND INSTALL ALL SUCH MATERIAL AND/OR EQUIPMENT REQUIRED BY THE SYSTEM AT NO ADDITIONAL COST TO THE OWNER.

1.07 SUBMITTALS

AFTER RECEIVING APPROVAL OF EQUIPMENT MANUFACTURERS AND PRIOR TO DELIVERY OF ANY MATERIAL TO JOB SITE AND SUFFICIENTLY IN ADVANCE OF THE REQUIREMENTS TO ALLOW ARCHITECT AMPLE TIME FOR CHECKING, SUBMIT FOR REVIEW DETAILED DIMENSIONED DRAWINGS AND/OR EQUIPMENT CUT SHEETS SHOWING CONSTRUCTION SIZE, ARRANGEMENT, OPERATING CLEARANCES, PERFORMANCE CHARACTERISTICS AND CAPACITY OF MATERIAL AND EQUIPMENT. SHOP DRAWINGS SHALL SHOW THE RATINGS OF ITEMS AND SYSTEMS AND HOW THE COMPONENTS OF AN ITEM AND SYSTEM ARE ASSEMBLED, FUNCTION TOGETHER AND HOW THEY WILL BE INSTALLED ON THE PROJECT. DATA AND SHOP DRAWINGS FOR COMPONENT PARTS OF AN ITEM OR SYSTEM SHALL BE COORDINATED AND SUBMITTED AS A UNIT. IT IS THE INTENT OF THESE CONTRACT DRAWINGS TO HAVE THE MECHANICAL CONTRACTOR PREPARE "AS-BUILT" RECORD DRAWINGS IN ACCORDANCE WITH THESE CONTRACT DOCUMENTS.

1.08 CUTTING, PATCHING & FINISHING

PROVIDE CUTTING AND PATCHING OF ALL MATERIALS NECESSARY FOR THE INSTALLATION AS INDICATED OR SPECIFIED. NEATLY REMOVE AND LEGALLY DISPOSE OF PLUMBING COMPONENTS AND ITEMS NO LONGER IN USE. PROTECT THE STRUCTURE, FURNISHINGS, FINISHES AND MATERIALS ADJACENT TO THE AREA OF CUTTING AND PATCHING. PATCH EXISTING FINISHED SURFACES AND EQUIPMENT USING NEW MATERIALS AND METHODS, TO MATCH ADJACENT WORK, UTILIZING EXPERIENCED INSTALLERS. PATCHING OF FIRE RATED PARTITIONS, CEILING AND OTHER ASSEMBLIES, SHALL MATCH THE RATING OF THE RATED BARRIER WITH MATERIALS LISTED AND IDENTIFIED FOR SUCH USE, AND SHALL COMPLY WITH APPLICABLE REQUIREMENTS OF THE GENERAL TRADES SPECIFICATIONS. IN AREAS WHERE NEW FINISH WORK BY THE GENERAL CONTRACTOR IS NOT INCLUDED IN THE PROJECT, THE CONTRACTOR SHALL REPAIR AND/OR RESTORE FINISHES TO MATCH ADJACENT FINISHES. OPENINGS AROUND PIPING OR IN SLEEVES FOR PIPING PENETRATING FIRE-RATED FLOOR SLABS, WALLS, PARTITIONS, CEILING, OR SMOKE PARTITIONS, SHALL BE SEALED AT BOTH SIDES OF THE PENETRATION. INSULATION SHALL NOT EXTEND THROUGH SLEEVES. PACK OPENINGS WITH CALCIUM SILICATE BLOCK, DOW CORNING 3-6548 RTV SILICON FOAM, 3M CP25 CAULK, OR 303 PUTTY FIRE BARRIER SYSTEM OR MATERIAL HAVING THE SAME FIRE RATING AS THE FLOOR OR WALL PENETRATED. FIBERGLASS IS NOT ACCEPTABLE.

1.09 CONNECTIONS TO EXISTING WORK

PLAN THE INSTALLATION OF NEW WORK AND CONNECTIONS TO EXISTING WORK TO INSURE MINIMUM INTERFERENCE WITH THE REGULAR OPERATION OF THE EXISTING FACILITIES. SUBMIT TO THE ARCHITECT, FOR HIS APPROVAL, A PROGRESS SCHEDULE INDICATING ALL NECESSARY TEMPORARY SHUTDOWNS OF EXISTING SERVICES. ALL SHUTDOWNS SHALL BE MADE AT SUCH TIMES AS WILL NOT INTERFERE WITH REGULAR OPERATION OF THE EXISTING FACILITIES AND ONLY AFTER WRITTEN APPROVAL FROM THE ARCHITECT.

1.10 NEW WORK

UNLESS OTHERWISE NOTED, ALL WORK INDICATED THROUGHOUT THESE DRAWINGS SHALL BE CONSIDERED TO BE NEW WORK AND SHALL BE INCLUDED AS AN INTEGRAL PART OF THIS CONTRACT.

1.11 CLOSE-OUT

CONTRACTOR SHALL PROVIDE FIELD-TESTING, CHECKOUT AND SYSTEM DEMONSTRATIONS TO OWNER TO ASSURE PROPER PERFORMANCE AND ADJUSTMENT OF ITEMS PROVIDED UNDER THE CONTRACT. REMOVE ALL DEBRIS CREATED BY THE CONSTRUCTION WORK AND CLEAN ALL EQUIPMENT, AIR DEVICES, ETC., INSIDE AND OUTSIDE. PROVIDE HARDBOUND BINDER WHICH INCLUDES: COPIES OF EACH SHOP DRAWING, PREVENTATIVE MAINTENANCE PROCEDURES, OPERATION AND INSTRUCTION MANUALS, LITERATURE SUPPLIED WITH PLUMBING EQUIPMENT, AND A LIST OF ALL CONTRACTOR'S PURCHASE ORDERS WITH SUPPLIERS, NAMES, ADDRESSES AND PHONE NUMBERS, FOR ALL MATERIALS. PROVIDE AT LEAST 2 HOURS OF INSTRUCTION TO PERSONNEL SELECTED BY THE OWNER, TO FAMILIARIZE THEM WITH THE LOCATION OF SIGNIFICANT EQUIPMENT, TRAIN THEM ON EQUIPMENT FUNCTIONS, REVIEW MAINTENANCE PROCEDURES AND COORDINATE INFORMATION AVAILABLE IN THE CLOSE-OUT BINDER.

1.12 REFERENCED STANDARDS

2012 MICHIGAN PLUMBING CODE
NFPA-NATIONAL FIRE PROTECTION ASSOCIATION

PART 2 PRODUCTS

2.01 GENERAL

THE MANUFACTURERS REFERENCED THROUGHOUT THIS OUTLINE SPECIFICATION ARE INCLUDED AS A BASIS OF DESIGN. SUBMISSION OF ALTERNATE MANUFACTURERS OF SIMILAR EQUIPMENT IS SUBJECT TO ENGINEER APPROVAL. UNITS OF EQUIPMENT, OTHER THAN THOSE LISTED AS THE BASIS OF DESIGN, MUST BE PROVEN TO BE PHYSICALLY ACCEPTABLE, IN ADDITION TO MEETING ALL PERFORMANCE AND EQUIPMENT SPECIFICATIONS. LIABILITY OF NON-CONFORMANCE SHALL LIE WITH THE CONTRACTOR/SUBMITTER.

2.02 PIPING

A. DOMESTIC WATER - ABOVEGROUND

- 1. 2" AND SMALLER: CROSS-LINKED POLYETHYLENE (PEX-A) TUBING AND ASTM F1960 COLD EXPANSION FITTINGS. THE USE OF PEX-B OR PEX-C IS NOT PERMISSIBLE.
- 2. 3" AND SMALLER: TYPE "L" HARD TEMPER COPPER:
 - a. WITH LEAD-FREE SOLDERED JOINTS AND WROUGHT STANDARD WEIGHT PRESSURE RATED FITTINGS.
 - b. WITH COPPER PRESS FITTINGS, WHICH SHALL CONFORM TO THE MATERIAL AND SIZING REQUIREMENTS OF ASME B16.18 OR ASME B16.22. O-RINGS FOR COPPER PRESS FITTINGS SHALL BE EPDM.

2.03 VALVES

A. DOMESTIC WATER PIPING

- 1. BALL: 125 PSI, LEAD-FREE BRONZE BODY, TEFLON TRIM, WATTS #LF86000 WITH EXTENDED HANDLE SLEEVE FOR INSULATION.
- 2. CHECK: 125 PSI, LEAD-FREE BRONZE BODY AND TRIM, APOLLO #F101-LF.
- 3. GATE: 125 PSI, LEAD-FREE BRONZE BODY AND TRIM, APOLLO #F101-LF.
- 4. BUTTERFLY: 150 PSI, CAST IRON BODY WITH TAPPED LUGS, EPDM TRIM, GRINNELL SERIES 8000.

B. APPROVED MANUFACTURERS

- 1. WATTS, APOLLO, CRANE, GRINNELL, NORDSTROM, NIBCO, STOCKHAM, SMITH, MILWAUKEE.

2.05 PLUMBING FIXTURES

A. GENERAL: THE CONTRACTOR SHALL FURNISH, INSTALL, AND CONNECT ALL PLUMBING FIXTURES, SPECIALTIES AND TRIM AS SHOWN ON THE DRAWINGS AND AS HEREINAFTER DESCRIBED. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATION, ROUGH-IN DIMENSIONS, MOUNTING HEIGHTS, ETC., OF FIXTURES WITH THE PLUMBING DRAWINGS, ARCHITECTURAL DRAWINGS AND THE MANUFACTURER'S SPECIFICATIONS.

B. FIXTURE SETTING: FIXTURES SHALL BE SET IN A NEAT, FINISHED, AND UNIFORM MANNER. MAKE THE CONNECTIONS TO ALL FIXTURES AT RIGHT ANGLES TO THE WALL, UNLESS OTHERWISE DIRECTED.

C. FIXTURE SCHEDULE: REFER TO THE FIXTURE SCHEDULE ON DRAWINGS FOR ADDITIONAL REQUIREMENTS.

D. APPROVED MANUFACTURERS:

- 1. HOSE BIBBS: WOODFORD, NIBCO, WATTS, ZURN

PART 3 EXECUTION

A. ALL EQUIPMENT INSTALLATION PROCEDURES SHALL BE BASED ON FUNDAMENTAL ENGINEERING AND CONSTRUCTION PRINCIPLES IN CONFORMANCE WITH ALL APPLICABLE CODES, STANDARDS AND ORDINANCES.

B. THE PLUMBING CONTRACTOR SHALL INSTALL ALL PLUMBING EQUIPMENT IN CONFORMANCE WITH MANUFACTURER ISSUED INSTRUCTIONS AND RECOMMENDATIONS.

C. THE PLUMBING CONTRACTOR SHALL NOT KNOWINGLY INSTALL WORK THAT IS IN ERROR.

D. PROVIDE ONE (1) YEAR WARRANTY ON ALL LABOR AND MATERIALS UNLESS NOTED OTHERWISE.

E. THE PLUMBING CONTRACTOR IS RESPONSIBLE FOR ALL PERMITS AND FEES REQUIRED FOR HIS WORK.

F. THE PLUMBING CONTRACTOR SHALL PROVIDE AS-BUILT DRAWINGS OF HIS COMPLETED WORK.

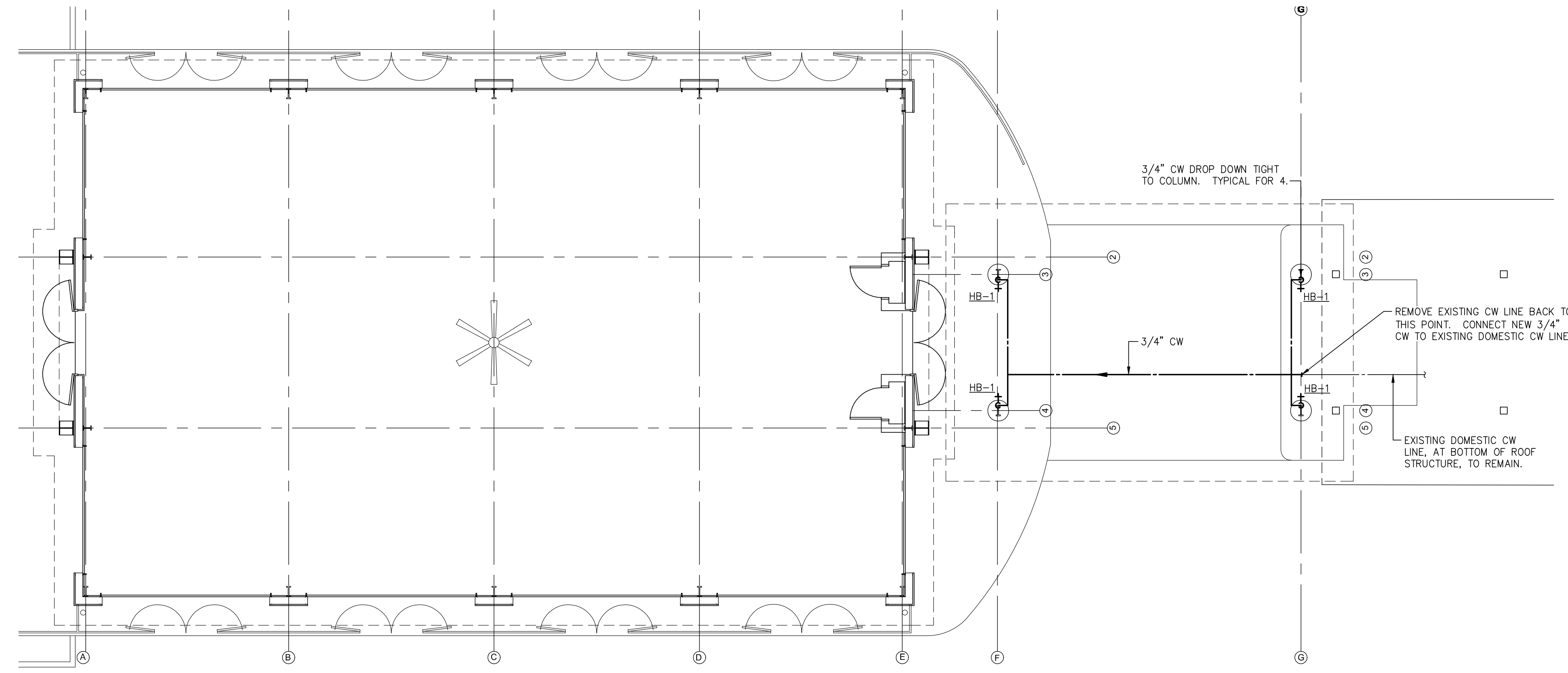
G. THE SYSTEMS REPRESENTED IN THESE CONTRACT DOCUMENTS HAVE THE INTENT OF PROVIDING OF ENERGY-EFFICIENT, SAFETY AND COMFORT FOR THE PROPOSED FACILITY.

H. THE PLUMBING CONTRACTOR SHALL COORDINATE HIS WORK WITH ALL OTHER TRADES ON THE PROJECT.

I. ALL MATERIALS AND EQUIPMENT INSTALLED SHALL FULLY COMPLY WITH THE SAFE DRINKING WATER ACT OF 1974, INCLUDING PUBLIC LAW 111-380, COMMONLY REFERRED TO AS THE "NO LEAD LAW".

J. PROCEDURES FOR FLUSHING AND DISINFECTION

- 1. PROCEDURES SHALL MEET THE REQUIREMENTS OF AWWA C651 AND C652 AS WELL AS ALL APPLICABLE LOCAL REGULATIONS.
- 2. DISINFECTION AND FLUSHING SHALL BE COMPLETED WITHIN THREE WEEKS PRIOR TO WHOLE OR PARTIAL BENEFICIAL OCCUPANCY. IF BENEFICIAL OCCUPANCY OF ANY PART OF THE BUILDING IS DELAYED MORE THAN TWO WEEKS BUT LESS THAN FOUR WEEKS AFTER DISINFECTION, FLUSHING OF ALL FIXTURES SHALL AGAIN BE COMPLETED. IF BENEFICIAL OCCUPANCY OF ANY PART OF THE BUILDING IS DELAYED FOUR WEEKS OR MORE AFTER DISINFECTION, THE NEED FOR DISINFECTION AND FLUSHING SHALL BE DETERMINED BY A RISK ASSESSMENT CONDUCTED BY THE WATER PROGRAM TEAM / OWNER.
- 3. CONFIRMATION THAT THE BUILDING WATER SYSTEM PERFORMANCE MEETS DESIGN PERFORMANCE PARAMETERS INDICATED IN THE CONTRACT DOCUMENTS.



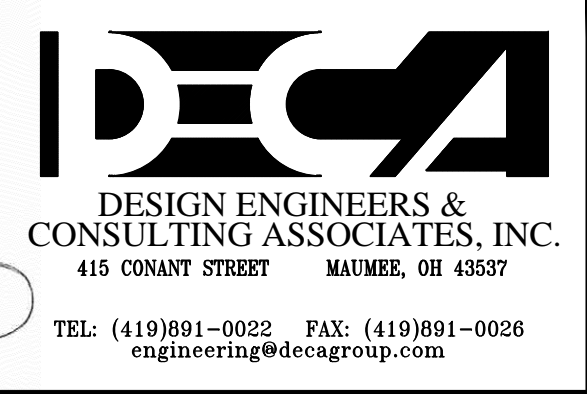
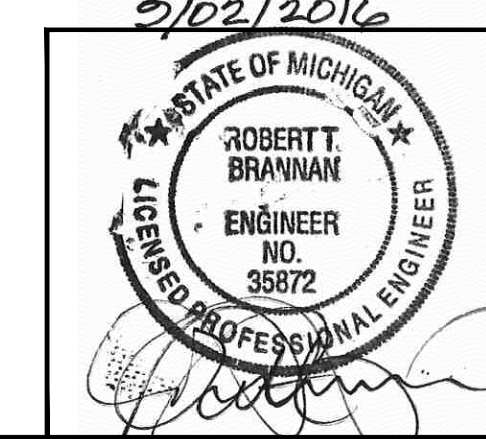
PARTIAL PLUMBING PLAN
SCALE: 1/8" = 1'-0"

PLUMBING FIXTURE SCHEDULE						
DESCRIPTION	SYMBOL	CW	HW	WASTE	VENT	SPECIFICATIONS
HOSE BIBB	HB-1	3/4"	---	---	---	WOODFORD #24P-3/4, WITH BRASS EXTERIOR FINISH, WHEEL HANDLE, 3/4" INLET AND 3/4" HOSE THREAD WITH VACUUM BREAKER.

GENERAL NOTES:

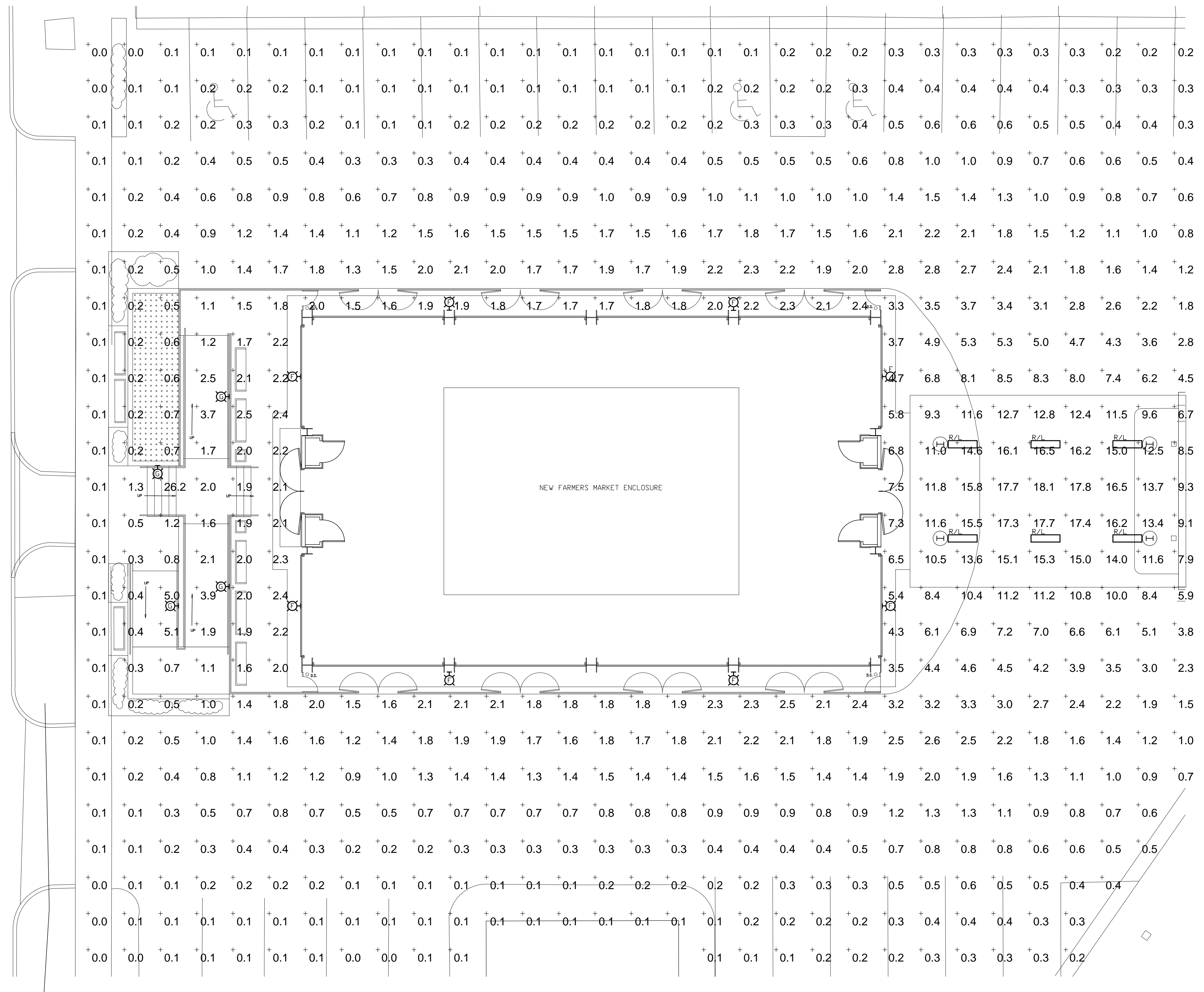
- 1. DOMESTIC WATER FIXTURE SUPPLY PIPING, SIZED AS NOTED ON THE DRAWINGS, SHALL EXTEND UNDIMINISHED TO WITHIN 30" FROM THE POINT OF CONNECTION TO THE PLUMBING FIXTURE.
- 2. EXTEND INDIVIDUAL DOMESTIC WATER DISTRIBUTION LINES TO FIXTURES AS REQUIRED. LINES SHALL BE SIZED AS INDICATED IN THE PLUMBING FIXTURE SCHEDULE.
- 3. INSTALL SHUT-OFF VALVES AT ALL DOMESTIC WATER FIXTURE SUPPLY CONNECTIONS.
- 4. PROVIDE ALL HANGERS, SUPPORTS AND MISCELLANEOUS STEEL REQUIRED FOR THE PROPER INSTALLATION OF ALL PIPING AND EQUIPMENT.
- 5. COORDINATE PIPING AND EQUIPMENT LOCATIONS WITH ALL OTHER TRADES.
- 6. MAINTAIN REQUIRED MANUFACTURERS' CLEARANCES ON ALL EQUIPMENT.

S:\15\15136\dwg\15136P1.dwg 09/02/16 13:18:50 mwhite

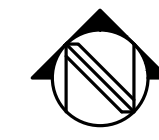


DR.	MPW	CK.	---
© COPYRIGHT 2016 KOHLER ARCHITECTURE, INC. #1627			
9/06/16 BIDDING		8/25/16 REVIEW	
DATE		STATUS	
JOB		ITB No. 4454	
SHEET		P-1	
1		1	

S:\15\15136\dwg\15136E-PM.dwg 08/31/16 15:36:48 jheller



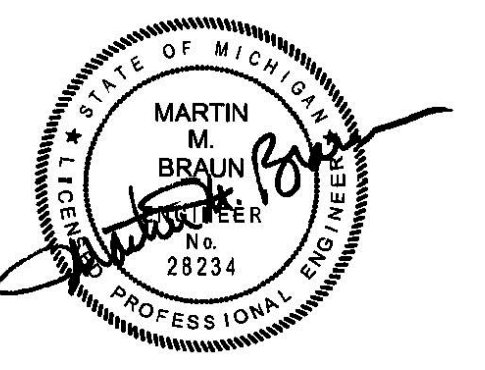
ELECTRICAL SITE PHOTOMETRIC PLAN
SCALE: 1/8" = 1'-0"



FIXTURE SCHEDULE

MARK	LAMP CATEGORY	LAMP QTY/TYP	VOLTS	DESCRIPTION	MFR. AND CATALOG SERIES
R/L	FLUOR	3-32W-TB 3500K	120	REMOVE AND RELOCATE EXISTING 48" BY 12" SURFACE MOUNTED, VAPORTIGHT, ENCLOSED AND GASKETED, CUSTOM MOUNTING BRACKETS, UL WET LOCATION LISTED, FIBERGLASS HOUSING, HIGH GLOSS BAKED ENAMEL WHITE FINISH, IMPACT RESISTANT 50% DR ACRYLIC PRISMATIC LENS, 15% UP-LIGHT, STAINLESS STEEL LATCHES, SPECULAR ALUMINUM REFLECTOR, -20 DEGREE F RAPID START ELECTRONIC BALLAST, INTERNAL SLOW-BLOW FUSE, NO MOUNTING HOLES INTO LAMP/BALLAST COMPARTMENT. CLEAN AND RE-LAMP UPON RELOCATION. M.H. APPROX. 14'6"	ORIGINALLY SPECIFIED AS: INTEL-ENERGY SERIES CLS-HIF-4N-33218-3S1-20 DEG-SF-CB -WP-120VOLT
F	LED	27W - 4000K 2300 LUMENS	120	OUTDOOR LOW PROFILE WALL SCONCE, CAST ALUM. HOUSING, INTEGRAL ELECTRONIC DRIVER, DARK BRONZE FINISH. TYPE 2 DISTRIBUTION, M.H. 11'0" AFF.	LITHONIA DSXWLED-10C-700-40K-T2M -DDBXD-REV OR EQUAL BY PHILIPS OR COOPER
G	LED	8W - 4000K 310 LUMENS	120	OUTDOOR STEP LIGHT, FLUSH MOUNTED, 12 INCH WIDE BRASS COVER WITH BLACK MILLIGROOVE TRIM FOR LOW GLARE, WIDE DISTRIBUTION, WET LOCATION LISTED, INTEGRAL ELECTRONIC DRIVER, BRUSHED BRASS FINISH. M.H. 18" AFF.	WINONA STEP13-WL9L-LST2A-WHT40K-REV OR EQUAL BY PHILIPS OR COOPER

09-02-2016



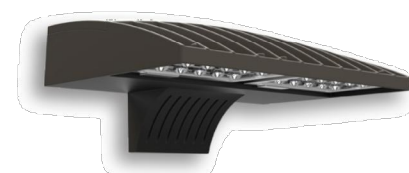
DECA
DESIGN ENGINEERS & CONSULTING ASSOCIATES, INC.
415 CONANT STREET MAUMER, OH 43057
TEL: (419)891-0022 FAX: (419)891-0026
engineering@decagroup.com

NEW FARMERS MARKET ENCLOSURE
AT ANN ARBOR FARMERS MARKET
310 DETROIT STREET, SECTION 25, CITY OF ANN ARBOR, WASHTENAW COUNTY, MI
FOR ANN ARBOR PARKS & RECREATION DEPARTMENT SERVICES
301 EAST HURON STREET, ANN ARBOR, MI 48107

KOHLER
ARCHITECTURE, INC.
1118 WEST FRONT STREET
MONROE, MICHIGAN 48161
PHONE: 734-242-6880, FAX: 734-242-6883

DR.	DECA	CK.	MMB
© COPYRIGHT 2016 KOHLER ARCHITECTURE, INC. #1627			
5/31/16		CPC REVIEW	
DATE		STATUS	
JOB ITB No. 4454			
SHEET E-PM1			
1 3			

COPYING THIS DRAWING IS PROHIBITED AND SUBJECT TO PROSECUTION.



D-Series Size 1 LED Wall Luminaire



Catalog Number
Notes
Type

Hit the Tab key or mouse over the page to see all interactive elements.

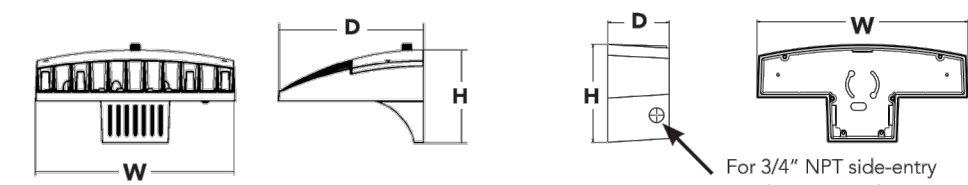
d-series

Specifications Luminaire

Width: 13-3/4" (34.9 cm)
Depth: 10" (25.4 cm)
Height: 6-3/8" (16.2 cm)

Back Box (BBW, ELCW)

Width: 13-3/4" (34.9 cm)
Depth: 4" (10.2 cm)
Height: 6-3/8" (16.2 cm)



Introduction

The D-Series Wall luminaire is a stylish, fully integrated LED solution for building-mount applications. It features a sleek, modern design and is carefully engineered to provide long-lasting, energy-efficient lighting with a variety of optical and control options for customized performance.

With an expected service life of over 20 years of nighttime use and up to 74% in energy savings over comparable 250W metal halide luminaires, the D-Series Wall is a reliable, low-maintenance lighting solution that produces sites that are exceptionally illuminated.

Ordering Information

EXAMPLE: DSXW1 LED 20C 1000 40K T3M MVOLT DDBTXD

Series	LEDs	Drive Current	Color temperature	Distribution	Voltage	Mounting	Control Options	Other Options	Finish (required)
DSXW1 LED	10C 10 LEDs (one engine) 20C 20 LEDs (two engines)	350 350mA 530 530mA 700 700mA 1000 1000mA (1A)	30K 3000K 40K 4000K 50K 5000K AMBPC Amber phosphor converted	T2S Type II Short T2M Type II Medium T3S Type III Short T3M Type III Medium T4M Type IV Medium TFTM Throw Medium ASVDF Asymmetric diffuse	MVOLT 120 1 208 1 240 1 277 1 347 2 480 2	Shipped included (blank) Surface mounting bracket BBW Surface-mounted back box (for conduit entry) 1	Shipped installed PE Photoelectric cell, button type 1 DMG 0-10V dimming driver (no controls) PIR 180° motion/ambient light sensor, <15' mtg Int 1 PIRH 180° motion/ambient light sensor, 15-30' mtg Int 1 ELCW Emergency battery backup (includes external component enclosure) 1	Shipped separately SF Single fuse (120, 277 or 347V) 1 DF Double fuse (208, 240 or 480V) 1 HS House-side shield 1 SPD Separate surge protection 1 BSW Bird-deterrent spikes WG Wire guard VDL Diffused drop lens	DDBXD Dark bronze DBLXD Black DNAXD Natural aluminum DWHXD White DSSXD Sandstone DDBTXD Textured dark bronze DDBLXD Textured black DNATXD Textured natural aluminum DWHGXD Textured white DSSTXD Textured sandstone

- NOTES**
- MVOLT driver operates on any line voltage from 120-277V (50/60 Hz). Specify 120, 208, 240 or 277 options only when ordering with fusing (SF, DF options), or photocontrol (PE option).
 - Only available with 20C, 700mA or 1000mA. Not available with PIR or PIRH.
 - Back box ships installed on fixture. Cannot be field installed. Cannot be ordered as an accessory.
 - Photocontrol (PE) requires 120, 208, 240, 277 or 347 voltage option. Not available with motion/ambient light sensors (PIR or PIRH).
 - PIR specifies the Sensor Switch SBGR-10-GDP control; PIRH specifies the Sensor Switch SBGR-6-GDP control; see Motion Sensor Guide for details. Includes ambient light sensor. Not available with "PE" option (button type photocontrol). Dimming driver standard. Not available with 20 LED/1000 mA configuration (DSXW1 LED 20C 1000).
 - Cold weather (20C) rated. Not compatible with conduit entry applications. Not available with BBW mounting option. Not available with fusing. Emergency components located in back box housing. Emergency mode IES files located on product page at www.lithonia.com
 - Single fuse (SF) requires 120, 277 or 347 voltage option. Double fuse (DF) requires 208, 240 or 480 voltage option. Not available with ELCW.
 - Also available as a separate accessory; see Accessories information.
 - See the electrical section on page 3 for more details.

Accessories

Ordered and shipped separately.	
DSXW1SU	House-side shield (see per light engine)
DSXW1SWU	Bird-deterrent spikes
DSXW1WGU	Wire guard accessory
DSXW1VGU	Vandal guard accessory



One Lithonia Way • Conyers, Georgia 30012 • Phone: 800.279.8041 • Fax: 770.918.1209 • www.lithonia.com
 © 2013-2014 Acuity Brands Lighting, Inc. All rights reserved.



One Lithonia Way • Conyers, Georgia 30012 • Phone: 800.279.8041 • Fax: 770.918.1209 • www.lithonia.com
 © 2013-2014 Acuity Brands Lighting, Inc. All rights reserved.



One Lithonia Way • Conyers, Georgia 30012 • Phone: 800.279.8041 • Fax: 770.918.1209 • www.lithonia.com
 © 2013-2014 Acuity Brands Lighting, Inc. All rights reserved.

DSXW1-LED Rev: 9/17/14

FIXTURE TYPE "F"

Performance Data

Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown, within the tolerances allowed by Lighting Facts. Actual performance may differ as a result of end-user environment and application. Actual wattage may differ by +/- 8% when operating between 120-480V +/- 10%. Contact factory for performance data on any configurations not shown here.

LEDs	Drive Current (mA)	System Watts	Dist. Type	30K				40K				50K				AMBER							
				Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW
10C (10 LEDs)	530mA	20W	T2S	1,843	1	0	1	92	1,956	1	0	1	98	1,729	1	0	1	86	1,264	0	0	1	63
			T2M	1,756	1	0	1	88	1,864	1	0	1	93	1,648	1	0	1	82	1,205	0	0	1	60
			T3S	1,822	0	0	1	91	1,934	0	0	1	97	1,710	0	0	1	86	1,250	0	0	1	63
			T3M	1,804	1	0	1	90	1,914	1	0	1	96	1,693	1	0	1	85	1,237	0	0	1	62
			T4M	1,767	1	0	1	88	1,876	1	0	1	94	1,658	0	0	1	83	1,212	0	0	1	61
			TFTM	1,837	0	0	1	92	1,950	0	0	1	98	1,724	0	0	1	86	1,260	0	0	1	63
	700mA	27W	ASVDF	1,642	1	0	1	82	1,743	1	0	1	87	1,541	1	0	1	77	1,127	0	0	1	56
			T2S	2,272	1	0	1	84	2,409	1	0	1	89	2,423	1	0	1	90	1,544	0	0	1	57
			T2M	2,165	1	0	1	80	2,296	1	0	1	85	2,307	1	0	1	85	1,472	0	0	1	55
			T3S	2,247	1	0	1	83	2,382	1	0	1	88	2,394	1	0	1	89	1,527	0	0	1	57
			T3M	2,224	1	0	1	82	2,358	1	0	1	87	2,370	1	0	1	88	1,512	0	0	1	56
			T4M	2,179	1	0	1	81	2,310	1	0	1	86	2,322	1	0	1	86	1,481	0	0	1	55
1000mA	40W	TFTM	2,265	1	0	1	84	2,401	1	0	1	89	2,413	1	0	1	89	1,539	0	0	1	57	
		ASVDF	2,025	1	0	1	75	2,147	1	0	1	80	2,158	1	0	1	80	1,376	1	0	1	51	
		T2S	3,011	1	0	1	75	3,190	1	0	1	80	3,202	1	0	1	80	2,235	1	0	1	58	
		T2M	2,870	1	0	1	72	3,040	1	0	1	76	3,051	1	0	1	76	2,190	1	0	2	55	
		T3S	2,978	1	0	1	74	3,155	1	0	1	79	3,166	1	0	1	79	2,210	1	0	2	57	
		T3M	2,948	1	0	1	74	3,123	1	0	1	78	3,134	1	0	1	78	2,187	1	0	2	56	
530mA	36W	T4M	2,888	1	0	1	72	3,059	1	0	1	76	3,071	1	0	1	77	2,143	1	0	2	55	
		TFTM	3,002	1	0	1	75	3,180	1	0	1	80	3,192	1	0	1	80	2,228	1	0	2	57	
		ASVDF	2,684	1	0	1	67	2,843	1	0	1	71	2,854	1	0	1	71	1,991	1	0	2	51	
		T2S	3,649	1	0	1	101	3,876	1	0	1	108	3,429	1	0	1	95	2,504	1	0	1	70	
		T2M	3,478	1	0	1	97	3,694	1	0	1	103	3,267	1	0	1	91	2,387	1	0	1	66	
		T3S	3,609	1	0	1	100	3,833	1	0	1	106	3,390	1	0	1	94	2,477	1	0	1	69	
20C (20 LEDs)	700mA	T3M	3,572	1	0	1	99	3,794	1	0	1	105	3,356	1	0	1	93	2,451	1	0	2	68	
		T4M	3,500	1	0	2	97	3,717	1	0	2	103	3,288	1	0	2	91	2,402	1	0	1	67	
		TFTM	3,638	1	0	1	101	3,864	1	0	1	107	3,418	1	0	1	95	2,496	1	0	1	69	
		ASVDF	3,252	1	0	2	90	3,454	1	0	2	96	3,056	1	0	2	85	2,232	1	0	1	62	
		T2S	4,502	1	0	1	96	4,776	1	0	1	102	4,294	1	0	1	102	3,065	1	0	1	65	
		T2M	4,290	1	0	1	91	4,552	1	0	1	97	4,569	1	0	1	97	2,921	1	0	1	62	
1000mA	74W	T3M	4,452	1	0	1	95	4,723	1	0	2	100	4,241	1	0	2	101	3,031	1	0	1	64	
		T4M	4,407	1	0	2	94	4,675	1	0	2	99	4,693	1	0	2	100	3,000	1	0	1	64	
		TFTM	4,488	1	0	2	95	4,761	1	0	2	101	4,279	1	0	2	102	3,055	1	0	1	65	
		ASVDF	4,012	1	0	2	85	4,257	1	0	2	91	4,273	1	0	2	91	2,722	1	0	1	59	
		T2S	5,963	1	0	1	80	6,327	1	0	1	84	6,351	1	0	1	85	4,429	1	0	1	61	
		T2M	5,683	1	0	2	76	6,029	1	0	2	80	6,052	1	0	2	81	4,221	1	0	2	58	
DSXW1-LED	74W	T3M	5,896	1	0	2	79	6,256	1	0	2	83	6,280	1	0	2	84	4,380	1	0	2	60	
		T4M	5,837	1	0	2	78	6,193	1	0	2	83	6,216	1	0	2	83	4,335	1	0	2	59	
		TFTM	5,719	1	0	2	76	6,067	1	0	2	81	6,090	1	0	2	81	4,248	1	0	2	58	
		T4M	5,944	1	0	2	79	6,307	1	0	2	84	6,330	1	0	2	84	4,415	1	0	2	60	
		ASVDF	5,314	1	0	2	71	5,638	2	0	2	75	5,660	2	0	2	75	3,947	1	0	2	54	

Performance Data

Lumen Ambient Temperature (LAT) Multipliers

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

Ambient	32°F	Lumen Multiplier
0°C	32°F	1.02
10°C	50°F	1.01
20°C	68°F	1.00
25°C	77°F	1.00
30°C	86°F	1.00
40°C	104°F	0.98

Electrical Load

LEDs	Drive Current (mA)	System Watts	Current (A)					
			120	208	240	277	347	480
10C	350	14W	0.13	0.07	0.06	0.06	-	-
	530	20W	0.19	0.11	0.09	0.08	-	-
	700	27W	0.25	0.14	0.13	0.11	-	-
	1000	40W	0.37	0.21	0.19	0.16	-	-
20C	350	25W	0.23	0.13	0.12	0.10	-	-
	530	36W	0.33	0.19	0.17	0.14	-	-
	700	47W	0.44	0.25	0.22	0.19	0.15	0.11
	1000	75W	0.69	0.40	0.35	0.30	0.23	0.17

Projected LED Lumen Maintenance

Data references the extrapolated performance projections for the DSXW1 LED 20C 1000 platform in 25°C ambient, based on 10,000 hours of LED testing (tested per IESNA LM-80-08 and projected per IESNA TM-21-11).

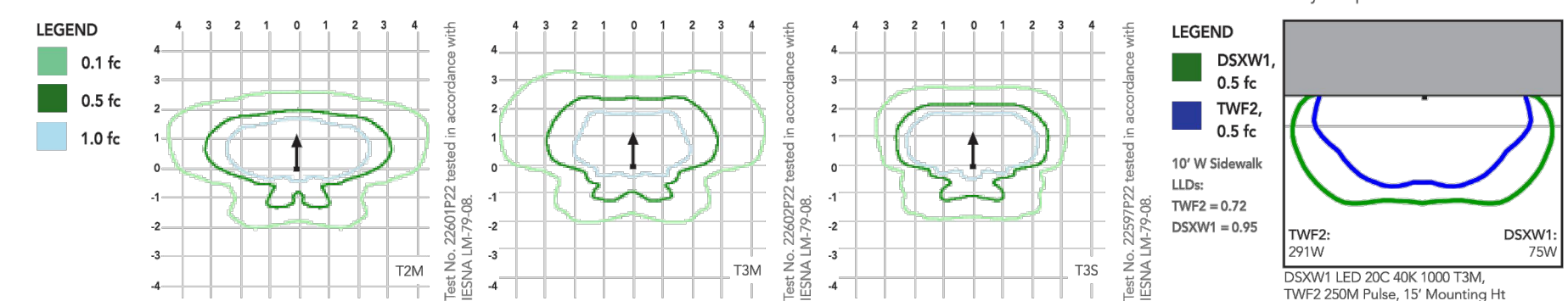
To calculate LMF, use the lumen maintenance factor that corresponds to the desired number of operating hours below. For other lumen maintenance values, contact factory.

Operating Hours	0	25,000	50,000	100,000
Lumen Maintenance Factor	1.0	0.95	0.93	0.88

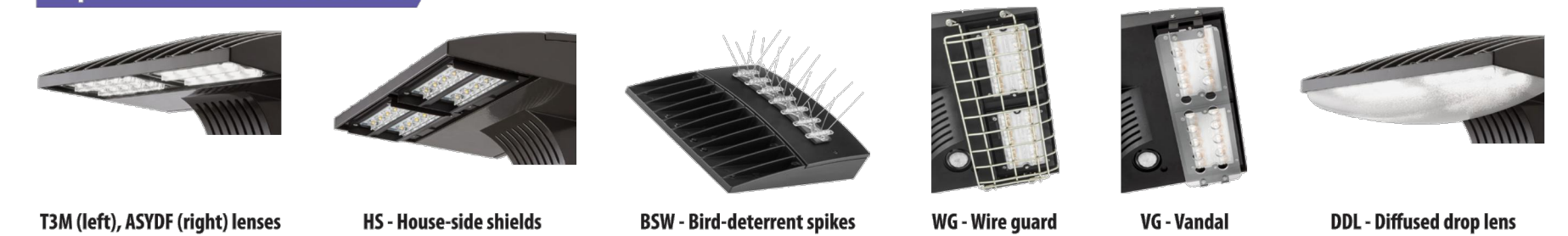
Photometric Diagrams

To see complete photometric reports or download .ies files for this product, visit Lithonia Lighting's D-Series Wall Size 1 homepage.

Isofootcandle plots for the DSXW1 LED 20C 1000 40K. Distances are in units of mounting height (15').



Options and Accessories




FEATURES & SPECIFICATIONS

- INTENDED USE**
The energy savings, long life and easy-to-install design of the D-Series Wall Size 1 make it the smart choice for building-mounted doorway and pathway illumination for nearly any facility.
- CONSTRUCTION**
Two-piece die-cast aluminum housing has integral heat sink fins to optimize thermal management through conductive and convective cooling. Modular design allows for ease of maintenance. The LED driver is mounted to the door to thermally isolate it from the light engines for low operating temperature and long life. Housing is completely sealed against moisture and environmental contaminants (IP65).
- FINISH**
Exterior parts are protected by a zinc-infused Super Durable TGIC thermostat powder coat finish that provides superior resistance to corrosion and weathering. A tightly controlled multi-stage process ensures a minimum 3 mils thickness for a finish that can withstand extreme climate changes without cracking or peeling. Available in textured and non-textured finishes.
- OPTICS**
Precision-molded proprietary acrylic lenses provide multiple photometric distributions tailored specifically to building mounted applications. Light engines are available in 3000 K (80 min. CR), 4000 K (70 min. CR) or 5000 K (70 CR) configurations.
- ELECTRICAL**
Light engine(s) consist of 10 high-efficiency LEDs mounted to a metal-core circuit board to maximize heat dissipation and promote long life (L80/100,000 hrs at 25°C). Class 1 electronic drivers have a

- power factor >90%, THD <20%, and a minimum 2.5KV surge rating. When ordering the SPD option, a separate surge protection device is installed within the luminaire

SPECIFICATIONS STEP



11.50"

5.50"

Exposed fasteners for Wet Location Only

Ribbed design with matte black finish reduces glare

2.125" box min.

LED module with concealed optic

Integral driver

CROSS SECTION

Steel City H4BD or equivalent (by others)

Ribbed design with matte black finish reduces glare

STEP 13

9-LONG

Type:

Project:

Qty:

Construction
Die-cast housing with solid aluminum, brass, or stainless steel faceplate. Step13-9 is a surface mount step light that mounts over a Steel City 2-1/8" deep, rectangular box H4BD or equivalent (by others). Interior option faceplate mounts with no visible fasteners.

Source
Light source consists of six powerful LEDs available in five white color temperatures and six colored LED choices.

Optics
A concealed optic provides a long light distribution for illumination of large areas.

Electrical
Integral electronic drivers are multi volt input 120-277V, and available in standard or 0-10V dimming. Non-dimming units consume 8.04W. Dimming units consume 18W.

Environment
ETL / cETL listed dry location or optional wet location.

Finish
Recessed surfaces have a ribbed design with matte black finish to reduce glare. Faceplates are available in five metal finishes with protective clear coat or one of seven polyester powder coat painted finishes. A primer only finish is also available for field painting.

Warranty
5-year limited warranty. Complete warranty terms located at www.acuitybrands.com/CustomerResources/terms_and_conditions.aspx

Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Assembled in America (Buy American Act Compliant)

Size	Dist.	Lumens	Temp.	LPW
9-LONG	Long	310	8.04	38.6

Performance data based on WHT30K non dimming.

Lighting facts
See page 3 for lighting facts labels.

CATALOG NUMBER

Example: STEP13 INT 9LONG L LST2A WHT30K MVOLT BA

Series	Environment	Length	Distribution	Source	Color Temperature
STEP13 Step 13	WL Wet Location INT Interior	9LONG 9 inch nominal length	L Long	LST2A LED Step 2	WHT27K White (27K) BLU Blue WHT30K White (30K) GRN Green WHT35K White (35K) RED Red WHT40K White (40K) CYN Cyan WHT50K White (50K) RDO Red-Orange AMB Amber

Voltage	Driver	Finish	Special	
MVOLT Multi Volt 120V thru 277V	(Blank) Standard Driver DMD Dimming Driver	BA Brushed Aluminum BB Brushed Brass BSS Brushed Stainless Steel PB Polished Brass PSS Polished Stainless Steel	ABP Antique Brass Paint BSP Brushed Brass Paint LBPS Light Bronze Paint Smooth LSP Light Silver PDP Pale Gold SGB Semi Gloss Black SGW Semi Gloss White PRM Primer Only CMP Custom Paint Finish CMT Custom Metal Finish	MDD* Modification / Consult Factory

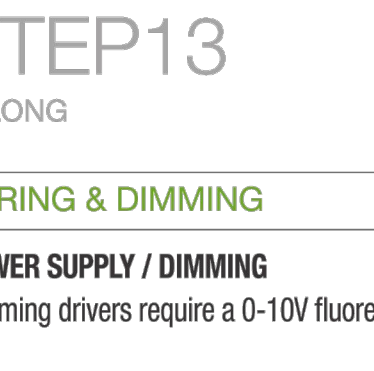
Describe Modification:

Notes

- *Available by modification only. Consult factory.

FIXTURE TYPE "G"

SPECIFICATIONS STEP



11.50"

5.50"

Exposed fasteners for Wet Location Only

Ribbed design with matte black finish reduces glare

2.125" box min.

LED module with concealed optic

Integral driver

CROSS SECTION

Steel City H4BD or equivalent (by others)

Ribbed design with matte black finish reduces glare

STEP13

9-LONG

Type:

Project:

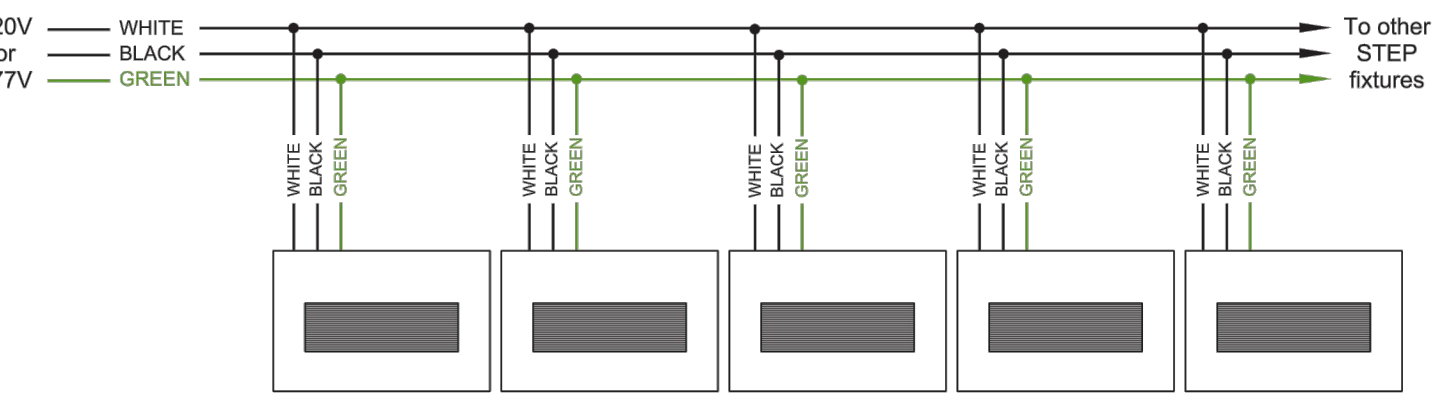
Qty:

WIRING & DIMMING

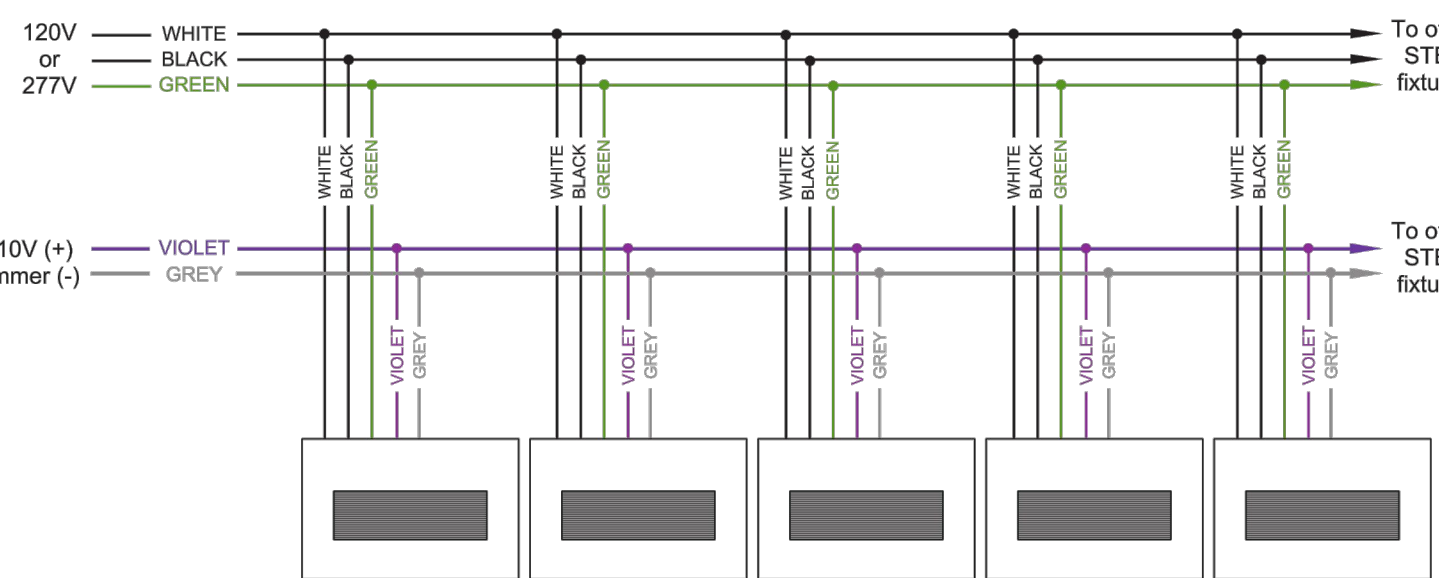
POWER SUPPLY / DIMMING
Dimming drivers require a 0-10V fluorescent-type dimming control.

Read all instructions before installation. Do not make live connections!


NON-DIMMING INSTALLATIONS
Connect STEP WHITE wire to power NEUTRAL.
Connect STEP BLACK wire to power HOT.
Connect STEP GREEN wire to power GROUND.



DIMMING INSTALLATIONS
The integral dimming driver is designed to the 0-10V IEC dimming specification 60929 and is compatible with common 0-10V dimmers and dimming systems. Do NOT connect line voltage to dimming input wires.
Connect STEP WHITE wire to power NEUTRAL.
Connect STEP BLACK wire to power HOT.
Connect STEP VIOLET wire to POSITIVE INPUT of Dimming Control.
Connect STEP GREY wire to NEGATIVE INPUT of Dimming Control.



SPECIFICATIONS STEP



11.50"

5.50"

Exposed fasteners for Wet Location Only

Ribbed design with matte black finish reduces glare

2.125" box min.

LED module with concealed optic

Integral driver

CROSS SECTION

Steel City H4BD or equivalent (by others)

Ribbed design with matte black finish reduces glare

STEP13

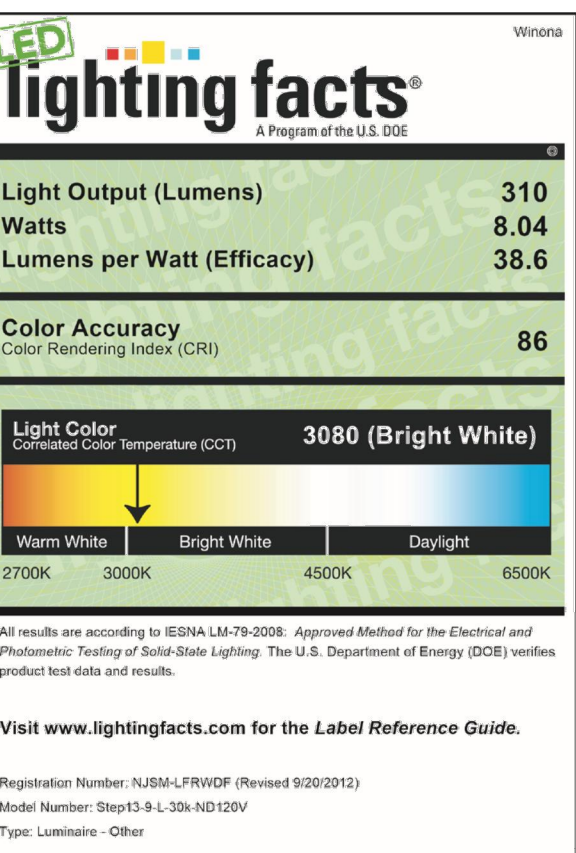
9-LONG

Type:

Project:

Qty:

LIGHTING FACTS



Light Output (Lumens) 310
Watts 8.04
Lumens per Watt (Efficacy) 38.6

Color Accuracy (Color Rendering Index, CRI) 86

Light Color (Correlated Color Temperature, CCT) 3080 (Bright White)

2700K 3000K 3500K 4000K 4500K 5000K

Visit www.lightingfacts.com for the Label Reference Guide.

Registration Number: NLSM-LF-9101P (Revised 9/20/2013)
Model Number: Step13-9-L-35K-ND120V
Type: Luminaire - Other

S:\15\15136\dwg\15136E-PM.dwg 08/31/16 15:38:18 jheller

09-02-2016





DESIGN ENGINEERS & CONSULTING ASSOCIATES, INC.
415 CONANT STREET MAUMEE, OH 43537
TEL: (419)891-0022 FAX: (419)891-0026
engineering@decagroup.com

NEW FARMERS MARKET ENCLOSURE
AT ANN ARBOR FARMERS MARKET
315 DETROIT STREET, SECTION 25, CITY OF ANN ARBOR, WASHTENAW COUNTY, MI
FOR ANN ARBOR PARKS & RECREATION DEPARTMENT SERVICES
301 EAST HURON STREET, ANN ARBOR, MI 48107



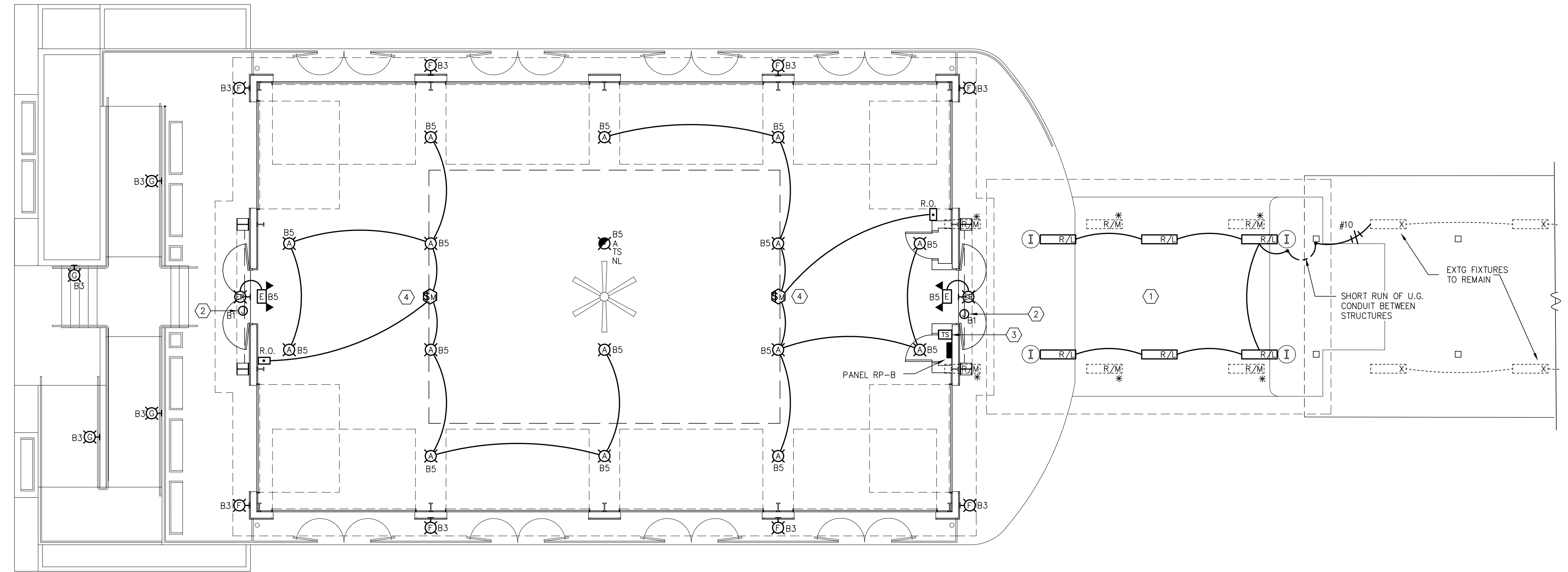
1118 WEST FRONT STREET
ANN ARBOR, MICHIGAN 48106
PHONE: 734-242-6880, FAX: 734-242-6883

DR. DECA CK. MMB

© COPYRIGHT 2016 KOHLER ARCHITECTURE, INC. #1627

COPYING THIS DRAWING IS PROHIBITED AND SUBJECT TO PROSECUTION.

DATE	5/31/16	CPC REVIEW	
STATUS			
JOB	ITB No. 4454		
SHEET	E-PM3		
	3		3



ELECTRICAL LIGHTING PLAN
SCALE: 1/8" = 1'-0"



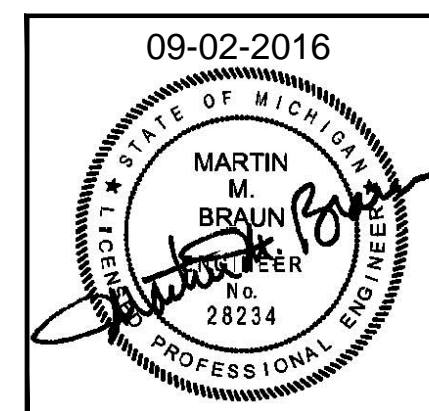
PLAN NOTES

- ① NEW EXTERIOR CANOPY SHALL BE ILLUMINATED WITH FIXTURES REMOVED FROM A SECTION OF CANOPY REMOVED BY THE OWNER OR GENERAL TRADES. E.C. SHALL CAREFULLY REMOVE THE LIGHT FIXTURES, STORE, PROTECT, CLEAN, RE-LAMP AND RE-INSTALL IN A FASHION SIMILAR TO THE EXISTING INSTALLATION. EXISTING 120 VOLT LIGHTING CIRCUIT SHALL BE EXTENDED FROM THE EXISTING CANOPY TO THE NEW CANOPY VIA A NEW UNDERGROUND CONDUIT AND #10 AWG CONDUCTORS. NEW CONDUIT SHALL BE ROUTED DOWN AN EXISTING COLUMN AND BACK UP A NEW COLUMN. COORDINATE THE EXACT LOCATION WITH THE GENERAL TRADES.
- ② PROVIDE FLUSH BOX IN WALL ABOVE DOOR FOR INTERNALLY ILLUMINATED SIGN. SEE ARCHITECTURAL ELEVATIONS AND SIGN DETAILS. SIGN ASSUMED AT 600 VA MAX AT 120 VOLTS, COMPLETE WITH INTEGRAL DISCONNECT SWITCH PER MEC/NEC 600.6
- ③ FOUR ZONE PROGRAMMABLE DIGITAL TIMER WITH 120 VOLT 20 AMPERE CONTACTS. MOUNT ABOVE PANELS. ZONES SHALL BE CONNECTED FOR:
 - EXTERIOR LIGHTS (CIRCUIT B3)
 - EXTERIOR SIGNS (CIRCUIT B1)
 - INTERIOR NIGHT LIGHT (CIRCUIT B5TS)
 - SPARE
- ④ OCCUPANCY/PHOTO SENSORS SHALL BE BOX MOUNTED AND SUSPENDED FROM STRUCTURE AT APPROXIMATELY 11 FEET AFF. COORDINATE EXACT PLACEMENT WITH ARCHITECT AND MANUFACTURER'S RECOMMENDATIONS FOR OPTIMUM COVERAGE. PHOTOSENSOR TO FACE DOWN, AND PROVIDE 0-10V DIMMING SIGNAL TO ASSOCIATED FIXTURES. PROVIDE LIGHTING CIRCUIT WITH ADDITIONAL 2#18 TRN FOR DIMMING SIGNAL. ALL CONNECTIONS PER MANUFACTURER'S RECOMMENDATIONS.

FIXTURE SCHEDULE

MARK	LAMP CATEGORY	LAMP QTY/TYPE	VOLTS	DESCRIPTION	MFR. AND CATALOG SERIES
R/L	FLUOR	3-32W-T8	120	REMOVE AND RELOCATE EXISTING 48" BY 12" SURFACE MOUNTED, VAPORTIGHT, ENCLOSED AND GASKETED, CUSTOM MOUNTING BRACKETS, UL WET LOCATION LISTED, FIBERGLASS HOUSING, HIGH GLOSS BAKED ENAMEL WHITE FINISH, IMPACT RESISTANT 50% DR ACRYLIC PRISMATIC LENS, 15% UP-LIGHT, STAINLESS STEEL LATCHES, SPECULAR ALUMINUM REFLECTOR, -20 DEGREE F RAPID START ELECTRONIC BALLAST, INTERNAL SLOW-BLOW FUSE, NO MOUNTING HOLES INTO LAMP/BALLAST COMPARTMENT. CLEAN AND RE-LAMP UPON RELOCATION. M.H. APPROX. 14'6"	ORIGINALLY SPECIFIED AS: INTEL-ENERGY SERIES CLS-HF-4N-332T8-3S1-20 DEG-SF-CB -WP-120VOLT
A	LED	59W - 4000K 6500 LUMENS	120	16" DIA. DECORATIVE PENDANT, PRISMATIC GLASS SHADE, 3/8" CONDUIT STEM SUSPENDED, SLOPE CEILING SURFACE MOUNTED CANOPY/BOX, GALVANIZED OR GLOSS ENAMEL PAINT FINISH TRIM FOR FIXTURE AND STEM AS SELECTED BY ARCHITECT FROM MANUFACTURER'S STANDARD COLORS. CUT STEMS FOR FIXTURE MOUNTED AT 11 FEET A.F.F. TO BOTTOM INTEGRAL 0-10V DIMMABLE DRIVER.	PREXL16LEDLX-65L-40K-DS10-1-HM-PR16-DR16-CN-CW-REV OR ARCHITECT APPROVED EQUAL
E	LED HALOGEN	INCLUDED	120	COMBINATION EXIT/EGRESS LIGHT, WALL OR CEILING MOUNTED, SINGLE OR DOUBLE FACE AS REQUIRED, 6-INCH RED LETTERS IN WHITE STENCIL FACE, POLYCARBONATE HOUSING, ARROWS AS SHOWN, WITH TWO HI-INTENSITY ADJUSTABLE FLOOD LIGHT HEADS, UNIVERSAL MOUNTING CANOPY WITH BUILT-IN 90 MINUTE EXTRA CAPACITY BATTERY BACKUP AND OUTDOOR WEATHER PROOF REMOTE FLOODLIGHT HEAD WHERE SHOWN ON PLAN. M.H. 8'0" UNO	LITHONIA #LHQM-SW3R-HO/ELA-NX-H0606 SURELITE LPXH-70R-WH-DH / 616W-REV OR EQUAL BY CHLORIDE
F	LED	27W - 4000K 2300 LUMENS	120	OUTDOOR LOW PROFILE WALL SCONCE, CAST ALUM. HOUSING, INTEGRAL ELECTRONIC DRIVER, DARK BRONZE FINISH. TYPE 2 DISTRIBUTION, M.H. 11'0" AFF.	LITHONIA DSXWLED-10C-700-40K-12M -DOBXD-REV OR EQUAL BY PHILIPS OR COOPER
G	LED	8W - 4000K 310 LUMENS	120	OUTDOOR STEP LIGHT, FLUSH MOUNTED, 12 INCH WIDE BRASS COVER WITH BLACK MILLIGROOVE TRIM FOR LOW GLARE, WIDE DISTRIBUTION, WET LOCATION LISTED, INTEGRAL ELECTRONIC DRIVER, BRUSHED BRASS FINISH. M.H. 18" AFG.	WINONA STEP13-WL9L-LST2A-WHT40K-REV OR EQUAL BY PHILIPS OR COOPER

S:\15\15136\dwg\15136E1.1.dwg 09/02/16 8:29:52 mbraun

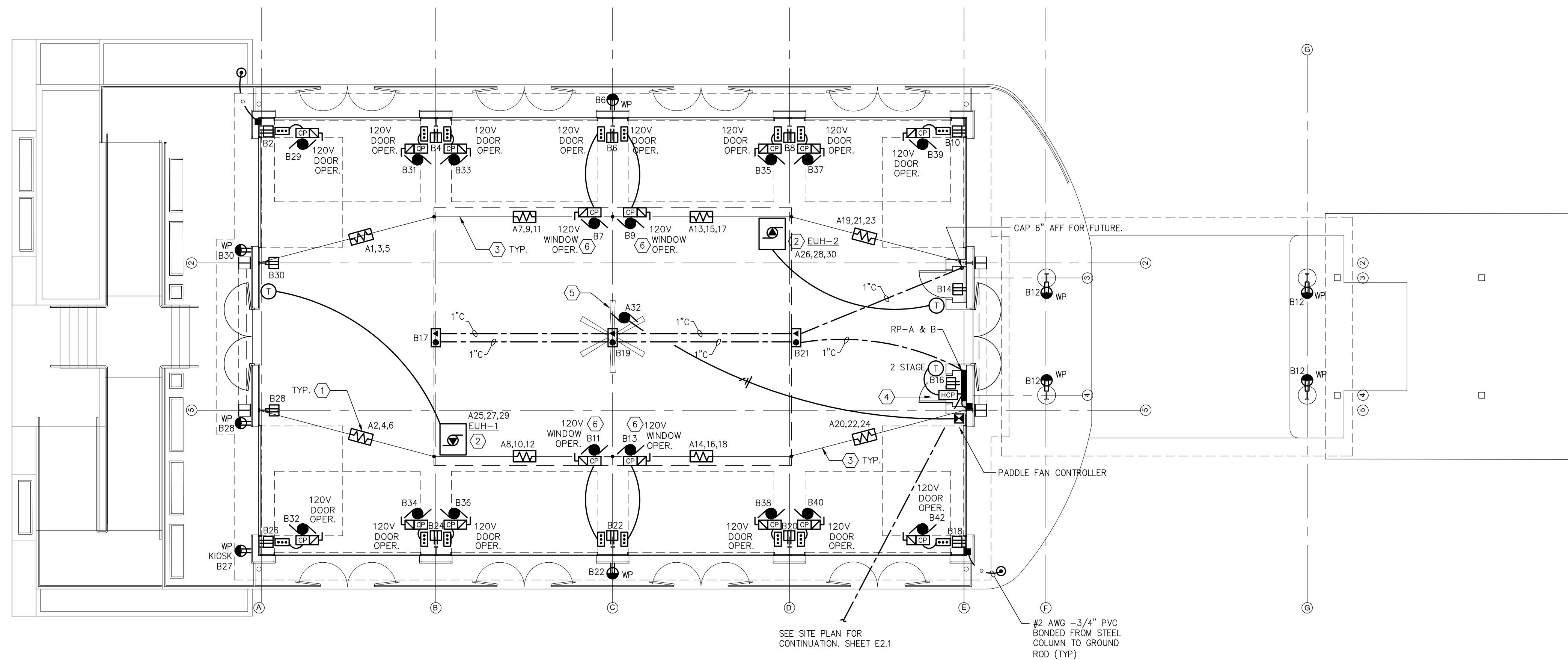


DECA
DESIGN ENGINEERS & CONSULTING ASSOCIATES, INC.
415 CONANT STREET MAUMEE, OH 43537
TEL: (419)891-0022 FAX: (419)891-0026
engineering@decagroup.com

NEW FARMERS MARKET ENCLOSURE
AT ANN ARBOR FARMERS MARKET
310 DETROIT STREET, SECTION 25, CITY OF ANN ARBOR, WASHTENAW COUNTY, MI
FOR ANN ARBOR PARKS & RECREATION DEPARTMENT SERVICES
301 EAST HURON STREET, ANN ARBOR, MI 48107

KOHLER ARCHITECTURE, INC.
1118 WEST FRONT STREET
MORRO, MICHIGAN 48161
PHONE: 734-242-6880, FAX: 734-242-6883

DR.	DECA	CK.	MMB
© COPYRIGHT 2016 KOHLER ARCHITECTURE, INC. #1627			
COPYING THIS DRAWING IS PROHIBITED AND SUBJECT TO PROSECUTION.			
9/06/16	BIDDING	8/25/16	REVIEW
DATE	STATUS	JOB #1627 ITB No. 4454	
SHEET E1.1		1 4	

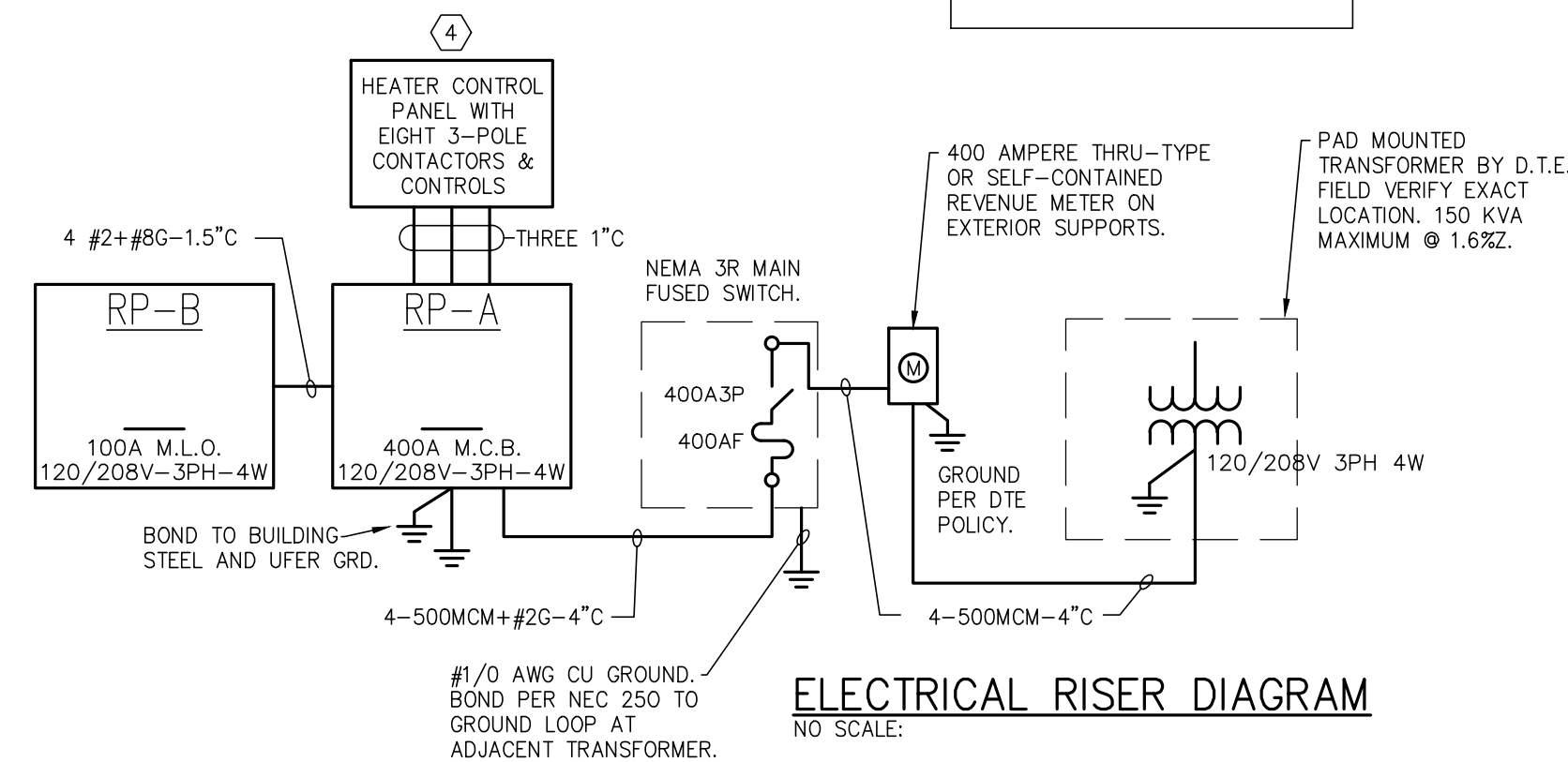


ELECTRICAL POWER & SYSTEMS PLAN

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

SHEET NOTES

- ① 6 KW 208 VOLT 3 PHASE INFRARED HEATER WITH SAFETY GRILLE. BERKO MODEL XRM6083-WG60 SERIES. PROVIDE TWO POINT HANGING SUSPENSION AT 14 FEET AFF MINIMUM TO BOTTOM, VIA GALVANIZED STRUT AUXILIARY SUPPORTS ABOVE. COORDINATE EXACT HEATER LOCATION AND SUPPORTS WITH OVERHEAD DOOR TRACKS AND LIGHT FIXTURES TO MAINTAIN MINIMUM MANUFACTURER'S RECOMMENDED CLEARANCES. FEED EACH WITH 3/16"X1/2" C FROM RP-A VIA HEATER CONTROL PANEL (HCP).
- ② 15 KW 208 VOLT 3 PHASE SUSPENDED ELECTRIC UNIT HEATER WITH INTEGRAL DISCONNECT, CONTROL RELAY AND REMOTE WALL MOUNTED MATCHING THERMOSTAT; BERKO MODEL HUAA2024-DS25 SERIES. MOUNT AS HIGH AS POSSIBLE, BUT BELOW THE CLERESTORY GLASS. FEED EACH WITH 3/16"X1/2" C FROM RP-A.
- ③ SUSPEND STRUT VIA THREADED ROD FROM STRUCTURE ABOVE AND TO COLUMNS AT EAST AND WEST WALLS. LOCATE AT APPROXIMATELY 15 FEET AFF TO MISS LIGHT FIXTURES. STRUT SHALL BE SIMILAR TO UNISTRUT P1001 SERIES, SIZED FOR THE WEIGHT AND SPAN OF THE INSTALLED EQUIPMENT. COMPLETE WITH A SAFETY FACTOR OF 2.5.
- ④ HEATER CONTROL PANEL BY BERKO OR EQUAL, COMPLETE WITH 30 AMPERE 3-POLE CONTACTOR FOR EACH RADIANT HEATER, 24 VOLT CONTROL TRANSFORMER, HOA SELECTOR SWITCH AND TWO PILOT LIGHT LIGHTS, ONE FOR EACH STAGE. AUTO CONTROL FROM ADJACENT 2-STAGE THERMOSTAT. CONNECT EVERY OTHER HEATER TO A STAGE. LOCATE ABOVE PANEL RP-A.
- ⑤ MACROAIR AIRVOLUTION HVLS FAN OR ARCHITECT APPROVED EQUAL. 8'-0" DIAMETER, 54,000 CFM MAXIMUM DISPLACEMENT (FORWARD), 35,000 CFM DISPLACEMENT (REVERSE), 3,600 SQUARE FEET MAXIMUM AFFECTED AREA, 120 VOLT, 1 PHASE, 11.6 MAXIMUM AMP DRAW, 15 AMP RECOMMENDED FUSE. FAN SHALL BE MOUNTED MINIMUM 12'-0" ABOVE FINISH FLOOR TO BOTTOM. FURNISH WITH WALL MOUNTED DIGITAL TOUCH PAD CONTROLLER. INSTALL PER MANUFACTURER'S WRITTEN INSTRUCTIONS.
- ⑥ CLERESTORY STRUCTURE, MOTORIZED WINDOW OPERATORS, AND ASSOCIATED ELECTRICAL CIRCUITS, DEVICES AND CONTROL WIRING, ARE INCLUDED IN AN ALTERNATE BID ITEM. SEE FORM OF PROPOSAL.
- ⑦ CAREFULLY ARRANGE PANELS WITHIN CLOSET TO PROVIDE PROPER WORKING CLEARANCE PER MEC/NEC 110.26. AT THE CONTRACTOR'S OPTION, PANELS RP-A AND RP-B MAY BE COMBINED INTO A SINGLE 84 CIRCUIT PANEL WITH COMMON 400 AMPERE INTERIOR. MAXIMUM REACH HEIGHT TO ANY BREAKER HANDLE IS LIMITED TO 79" PER MEC/NEC 404.8.



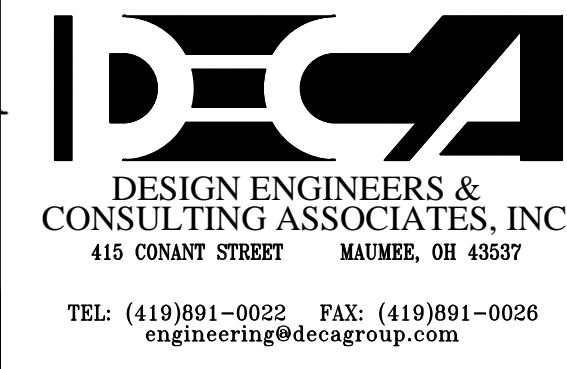
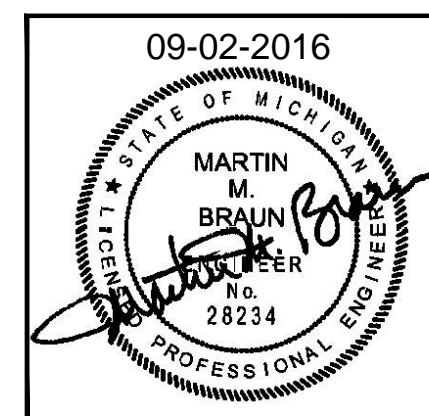
ELECTRICAL RISER DIAGRAM
NO SCALE

PANELBOARD SCHEDULE												
PANEL: RP-A		NOTES:										
MAINS: 400A M.C.B.		□ GFCI BREAKER		□ ARC FAULT		□ 22_KAIC RATING						
VOLTS: 120/208V-3ø-4W-SN		□ 30 MILLIAMPERE EQUIPMENT		□ SWITCHED NEUTRAL		□ NON-CONSEQUENT LOAD						
MOUNTING: SURFACE		□ GROUND FAULT TRIP		□ MOTOR OPERATED		□ TIMER CONTROLLED						
□ SHUNT TRIP												
LOAD DESCRIPTION	NOTES	VOLT AMPS	C.B. AMP P	A	B	C	C.B. AMP P	VOLT AMPS	NOTES	LOAD DESCRIPTION		
1 RADIANT HTR 1	②	2000	25 3	4000			3 25	2000	②	RADIANT HTR 5	2	
3		2000	25 3		4000		3 25	2000	②		4	
5		2000	25 3			4000	3 25	2000	②		6	
7 RADIANT HTR 2	②	2000	25 3	4000			3 25	2000	②	RADIANT HTR 6	8	
9		2000	25 3		4000		3 25	2000	②		10	
11		2000	25 3			4000	3 25	2000	②		12	
13 RADIANT HTR 3	②	2000	25 3	4000			3 25	2000	②	RADIANT HTR 7	14	
15		2000	25 3		4000		3 25	2000	②		16	
17		2000	25 3			4000	3 25	2000	②		18	
19 RADIANT HTR 4	②	2000	25 3	4000			3 25	2000	②	RADIANT HTR 8	20	
21		2000	25 3		4000		3 25	2000	②		22	
23		2000	25 3			4000	3 25	2000	②		24	
25 EUH 1		5000	60 3	10000			3 60	5000		EUH 2	26	
27		5000	60 3		10000		3 60	5000			28	
29		5000	60 3			10000	3 60	5000			30	
31 SPARE		0	20 1	1400			1 15	1400		HVLS FAN	32	
33 SPARE		0	20 1		0		1 20	0		SPARE	34	
35 SPARE		0	20 1		0	0	1 20	0		SPARE	36	
37 SPARE		0	60 3	11060			3 100	11060		RP-B	38	
39		0	60 3		9320		3 100	9320			40	
41		0	60 3			10380	3 100	10380			42	
TOTAL LOAD:		110160					38460	35320	36380		TOTAL AMPS:	306.0
							105%	98%	99%			

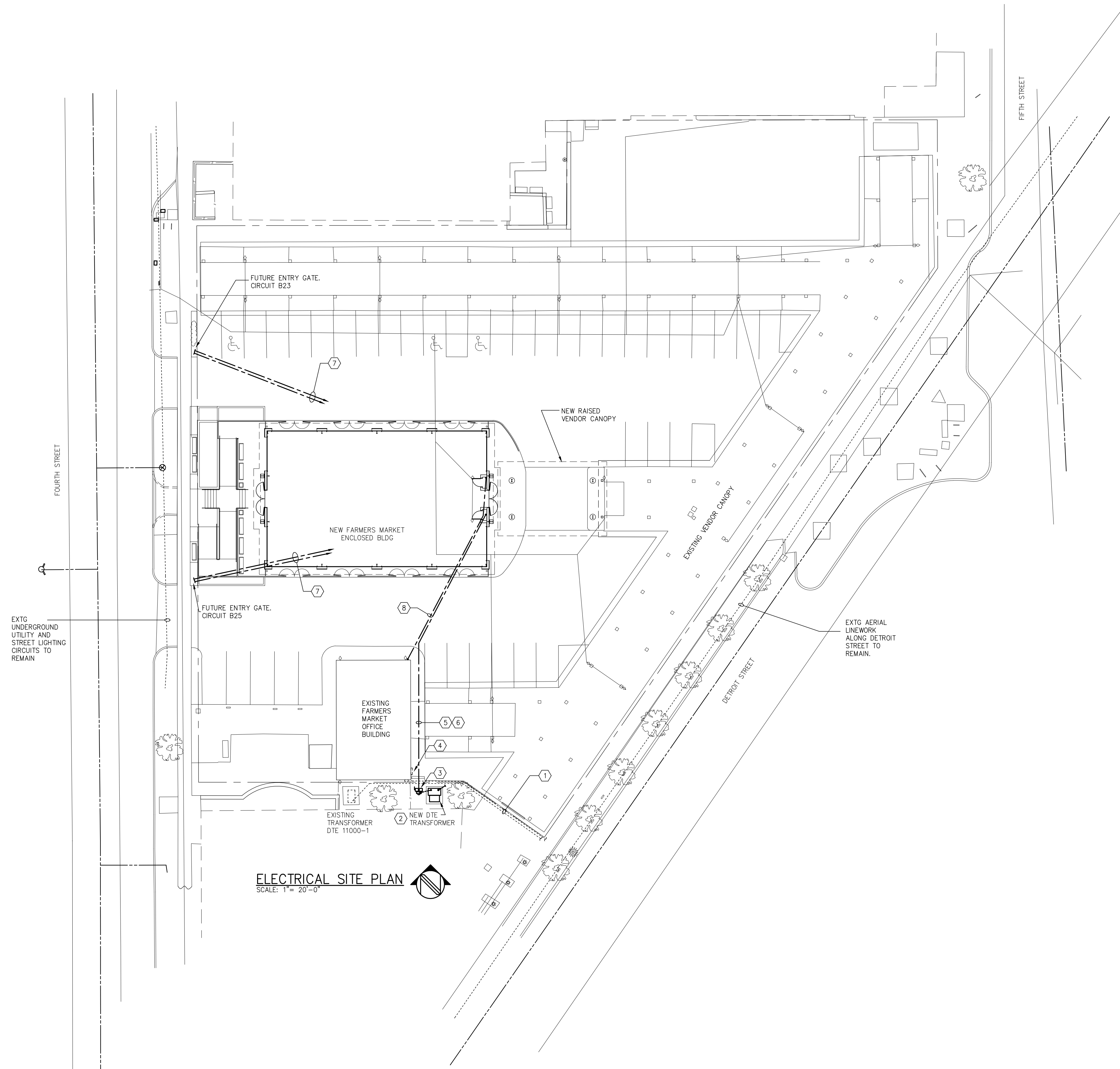
PANELBOARD SCHEDULE												
PANEL: RP-B		NOTES:										
MAINS: 100A M.L.O.		□ GFCI BREAKER		□ ARC FAULT		□ 22_KAIC RATING						
VOLTS: 120/208V-3ø-4W-SN		□ 30 MILLIAMPERE EQUIPMENT		□ SWITCHED NEUTRAL		□ NON-CONSEQUENT LOAD						
MOUNTING: SURFACE		□ GROUND FAULT TRIP		□ MOTOR OPERATED		□ TIMER CONTROLLED						
□ SHUNT TRIP												
LOAD DESCRIPTION	NOTES	VOLT AMPS	C.B. AMP P	A	B	C	C.B. AMP P	VOLT AMPS	NOTES	LOAD DESCRIPTION		
1 EXTERIOR SIGNS	②	1200	20 1	1560			1 20	360		NORTH WALL	2	
3 EXTERIOR LTS	②	300	20 1		660		1 20	360		NORTH WALL	4	
5 INTERIOR LTS		1000	20 1			1540	1 20	540		NORTH WALL + EXT.	6	
7 WINDOW OPERATOR		1200	20 1	1560			1 20	360		NORTH WALL	8	
9 WINDOW OPERATOR		1200	20 1		1560		1 20	360		NORTH WALL	10	
11 WINDOW OPERATOR		1200	20 1			1920	1 20	720		EAST CANOPY	12	
13 WINDOW OPERATOR		1200	20 1	1560			1 20	360		N.E. CLOSET	14	
15 SPARE		0	20 1		360		1 20	360		S.E. CLOSET	16	
17 FLOOR BOX WEST		360	20 1			720	1 20	360		SOUTH WALL	18	
19 FLOOR BOX CENTER		360	20 1	720			1 20	360		SOUTH WALL	20	
21 FLOOR BOX EAST		360	20 1		900		1 20	540		SOUTH WALL + EXT.	22	
23 EXTERIOR GATE		500	20 1			860	1 20	360		SOUTH WALL	24	
25 EXTERIOR GATE		500	20 1	860			1 20	360		SOUTH WALL	26	
27 EXTERIOR KIOSK		500	20 1		1040		1 20	540		WEST WALL + EXT.	28	
29 DOOR OPERATOR		1200	20 1			1740	1 20	540		WEST WALL + EXT.	30	
31 DOOR OPERATOR		1200	0 1	2400			1 20	1200		DOOR OPERATOR	32	
33 DOOR OPERATOR		1200	0 1		2400		1 20	1200		DOOR OPERATOR	34	
35 DOOR OPERATOR		1200	0 1			2400	1 20	1200		DOOR OPERATOR	36	
37 DOOR OPERATOR		1200	0 1	2400			1 20	1200		DOOR OPERATOR	38	
39 DOOR OPERATOR		1200	0 1		2400		1 20	1200		DOOR OPERATOR	40	
41 SPARE		0	0 1			1200	1 20	1200		DOOR OPERATOR	42	
TOTAL LOAD:		30760					11060	9320	10380		TOTAL AMPS:	85.4
							108%	91%	101%			

"RP-A" LOAD SUMMARY				
LOAD TYPE	CONNECTED VA	DEMAND FACTOR	DEMAND VA	
LIGHTING LOAD	NEC 230.42	1300	125.00%	1625
SIGNS	NEC 220.14F	1200	125.00%	1500
DEDICATED RECEPTACLE	NEC 220.14A	1500	100.00%	1500
GENERAL RECEPTACLE	NEC 220.14I	7560	PER NEC 220.44	7560
DOOR/WINDOW OPERATORS	NEC 220.60	19200	50.00%	9600
HVAC EQUIPMENT	NEC 220.60	79400	100.00%	79400
TOTAL KVA	110160		101185	
TOTAL AMPS @ 208 VOLT-3PHASE	306		281	

S:\15\15136\dwg\15136E1.2.dwg 09/02/16 8:40:30 mbraun



DR.	CK.		
DECA	MMB		
© COPYRIGHT 2016 KOHLER ARCHITECTURE, INC. #1627		9/06/16	BIDDING
COPYING THIS DRAWING IS PROHIBITED AND SUBJECT TO PROSECUTION.		8/16/16	REVIEW
		DATE	STATUS
		JOB	ITB No. 4454
		SHEET	E1.2
			2

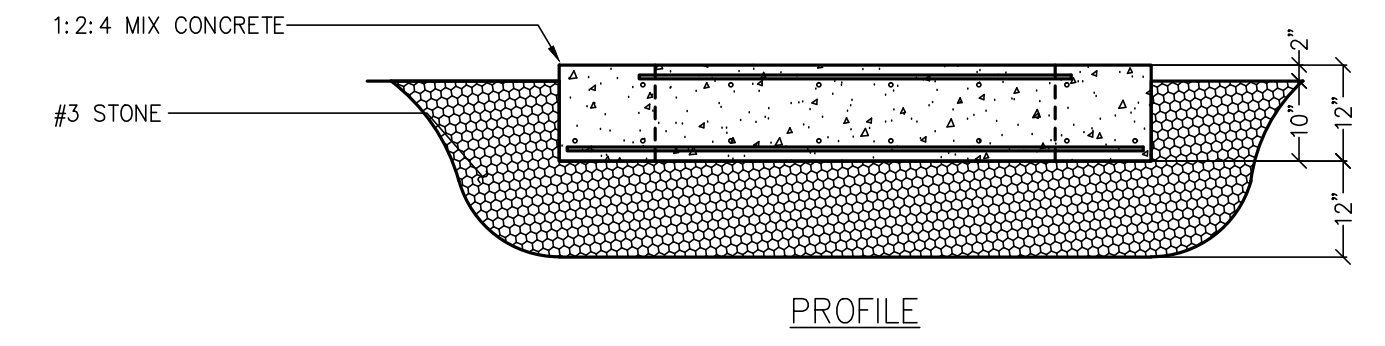
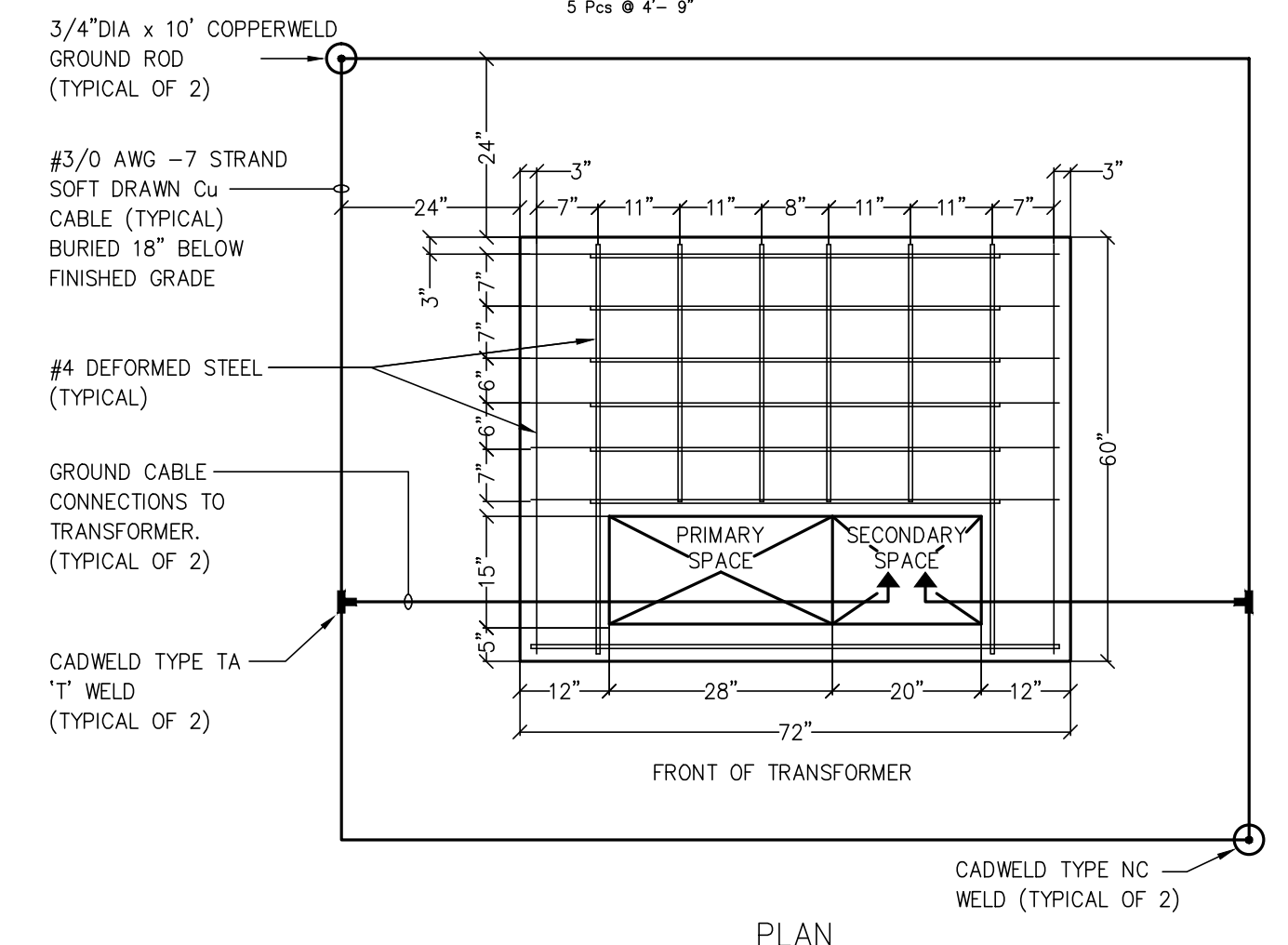


ELECTRICAL SITE PLAN
SCALE: 1" = 20'-0"

- PLAN NOTES**
- ASSUMED LOCATION OF UNDERGROUND PRIMARY AND SECONDARY SERVICE CONDUITS. EXERCISE **EXTREME** CAUTION EXCAVATING IN THIS AREA. CALL 811 (MICHIGAN MISS DIG) TO LOCATE UNDERGROUND UTILITIES BEFORE BEGINNING WORK.
 - NEW TRANSFORMER BY D.T.E. CONCRETE PAD WITH 4" DIA. UG LONG SWEEP RGS ELBOW AND GROUND RING BY E.C. D.T.E. WILL UN-COVER AND CONNECT TO EXISTING SPARE UG CONDUIT AT THIS LOCATION IN ORDER TO SERVE NEW PAD MOUNTED TRANSFORMER.
 - PROVIDE GALVANIZED STEEL SUPPORTS WITH CONCRETE FOUNDATION FOR NEW BACK-TO-BACK THRU-TYPE REVENUE METER AND NEW 400 AMPERE NEMA 3R FUSED MAIN SWITCH. COORDINATE EXACT LOCATION WITH OWNER AND D.T.E. REVENUE METER SOCKET BY E.C. PER UTILITY COMPANY STANDARDS. GROUND SOCKET PER UTILITY COMPANY STANDARDS. GROUND MAIN SERVICE DISCONNECT TO TRANSFORMER GROUND LOOP.
 - EXISTING 600 AMPERE SINGLE PHASE METER AND C/T CABINET FOR EXISTING OFFICE BUILDING TO REMAIN WITHOUT CHANGE.
 - NEW UNDERGROUND FEEDER TO NEW BUILDING. SEE SINGLE LINE DIAGRAM FOR CONDUIT AND WIRE SIZES. ROUTE UNDER PRESENT SIDEWALK AREA, AVOIDING EXISTING BUILDING AND CANOPY FOUNDATIONS. CAREFULLY EXCAVATE ALONG BUILDING AS EXISTING UNDERGROUND UTILITIES ARE NOT COMPLETELY KNOWN. CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING OR REPLACING ANY UTILITY LINE DAMAGED BY THE NEW WORK, TO THE SATISFACTION OF THE OWNER. REMOVE AND REPLACE CONCRETE SIDE WALK DISTURBED BY THE NEW WORK, TO MATCH EXISTING CONDITIONS. SEE GENERAL TRADES SPECIFICATIONS.
 - AT THE CONTRACTOR'S OPTION, THIS UNDERGROUND FEEDER MAY BE INSTALLED VIA DIRECTLY BORED CONDUIT INSTALLATION, BUT CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COORDINATION AND FIELD INVESTIGATION TO ACCOMPLISH SUCH. CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING OR REPLACING ANY UTILITY LINE DAMAGED BY THE NEW WORK, TO THE SATISFACTION OF THE OWNER.
 - PROVIDE 1" UG PVC CONDUIT FOR POWER AND A SEPARATE 1" PVC CONDUIT FOR COMMUNICATIONS, STUBBED BELOW GRADE FOR FUTURE TRAFFIC GATE AND CONTROLLER. FIELD VERIFY EXACT LOCATION FOR CONDUIT STUBS WITH OWNER. POWER CONDUIT SHALL BE ROUTED TO PANELBOARD. COMMUNICATIONS CONDUIT SHALL BE ROUTED TO NORTH CLOSET, AND STUBBED 6" AFF.
 - PROVIDE 2" UG PVC FROM NEW BUILDING NORTH CLOSET, TO JUST OUTSIDE EXISTING OFFICE BUILDING. STUB & CAP 6" AFF EACH END FOR FUTURE COMMUNICATIONS.

BILL OF MATERIALS (APPROX.)

STEEL #4 DEFORMED:	CONCRETE: 1:1 CU. Yds. 1:2-4 MIX
7 Pcs @ 5'-10"	#3 STONE: 1.2 CU. YD.
6 Pcs @ 4'-5"	
8 Pcs @ 2'-8"	
5 Pcs @ 4'-9"	

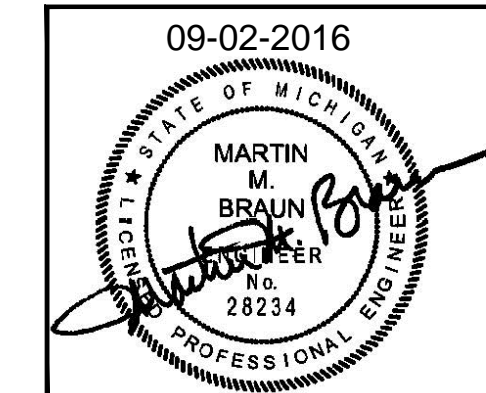


- TRANSFORMER PAD NOTES:**
- CONDUITS SHALL NOT PROJECT ABOVE PAD.
 - CONCRETE TO BE 3000psi STRENGTH BY 7 DAYS. USE PORTLAND CEMENT TYPE 3 OR 3A.
 - 48" CLEARANCES MUST BE MAINTAINED ON BOTH SIDES AND REAR OF PAD. 72" CLEARANCE MUST BE MAINTAINED IN FRONT OF PAD.
 - REINFORCING RODS ARE TO BE #4 DEFORMED STEEL AND HAVE A MINIMUM COVER OF 2".

TYPICAL PAD MOUNTED TRANSFORMER CONCRETE PAD DETAIL
NO SCALE - PROVIDE PER UTILITY COMPANY STANDARDS

S:\15\15136\dwg\15136E2.1.dwg 09/02/16 8:45:56 mbraun

3 WORKING DAYS BEFORE YOU DIG CALL MISS DIG 1-800-482-7171 FOR THE LOCATION OF UNDERGROUND FACILITIES



DECA
DESIGN ENGINEERS & CONSULTING ASSOCIATES, INC.
415 CONANT STREET MAUMEE, OH 43537
TEL: (419)891-0022 FAX: (419)891-0026
engineering@decagroup.com

NEW FARMERS MARKET ENCLOSURE AT ANN ARBOR FARMERS MARKET
310 DETROIT STREET, SECTION 25, CITY OF ANN ARBOR, WASHTENAW COUNTY, MI
FOR ANN ARBOR PARKS & RECREATION DEPARTMENT SERVICES
301 EAST HURON STREET, ANN ARBOR, MI 48107

KOHLER ARCHITECTURE, INC.
1118 WEST FRONT STREET
ANN ARBOR, MICHIGAN 48106
PHONE: 734-242-6880, FAX: 734-242-6883

DR.	DECA	CK.	MMB
© COPYRIGHT 2016 KOHLER ARCHITECTURE, INC. #1627			
COPYING THIS DRAWING IS PROHIBITED AND SUBJECT TO PROSECUTION.			
9/06/16	BIDDING	8/25/16	REVIEW
DATE	STATUS	ITB No. 4454	
JOB		SHEET	E2.1
			3
			4

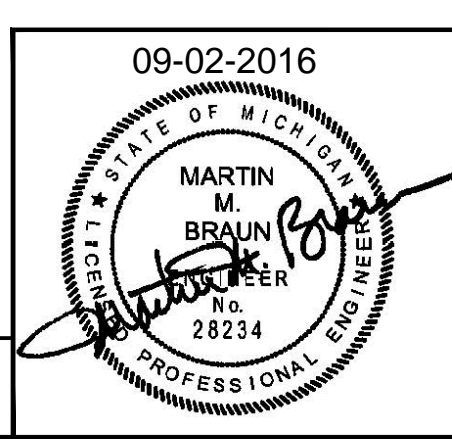
S:\15\15136\dwg\15136E1.dwg 09/02/16 9:02:45 mbramb

ELECTRICAL SPECIFICATIONS

A SCOPE OF WORK: FURNISH AND INSTALL ALL LABOR, MATERIALS, TOOLS, ETC., TO PROVIDE A COMPLETE AND OPERATIONAL ELECTRICAL INSTALLATION... Q FUSES: FUSES SHALL BE DUAL-ELEMENT, TIME-DELAY, REJECTION STYLE, CLASS RK-5 FOR FUSES UP TO 600 AMPERES... R STARTERS: STARTERS: PROVIDE A MANUAL STARTER, WITH OVERLOAD, PILOT LIGHT, TOGGLE SWITCH OPERATOR... S LIGHT FIXTURES: FURNISH AND INSTALL THE LIGHT FIXTURES AS INDICATED ON THE PLANS AND SCHEDULES... T LIGHTING CONTROLS: WHERE DIMMING OF LED FIXTURES IS INDICATED ON THE DRAWINGS OR SPECIFIED HEREIN... U WIRING DEVICES: DEVICES SHALL BE COMMERCIAL GRADE... V SERVICE ENTRANCE: SELECTED SWITCHBOARDS, PANELBOARDS OR SAFETY SWITCHES... W SUPPORTS: FURNISH AND INSTALL ALL REQUIRED MISCELLANEOUS STEEL SUPPORTS FOR MOUNTING OF PANELS, RACEWAYS, FIXTURES, CABINETS, BOXES... X ELECTRICAL SITE WORK: COORDINATE ALL EXTERIOR WORK WITH AFFECTED UTILITIES AND THE OWNER... Y TELEPHONE: FURNISH AND INSTALL THE EMPTY RACEWAYS AS INDICATED FOR THE OWNER'S TELEPHONE SYSTEM... Z GROUNDING: GROUND AND BOND ALL METAL RACEWAYS, BOXES, FIXTURES, ENCLOSURES, ETC., PER NEC ARTICLE 250... A12 PANEL A, CIRCUIT 12

ELECTRICAL LEGEND

Table listing electrical symbols and their corresponding descriptions. Includes symbols for abbreviations (A12, AFF, AFG, etc.), wire types (solid, dashed, dotted), conduit types (concealed, homerun), and specific equipment like switches, starters, and motor heaters.



DECA DESIGN ENGINEERS & CONSULTING ASSOCIATES, INC. 415 CONANT STREET MAUMER, OH 43037 TEL: (419)891-0022 FAX: (419)891-0026 engineering@decagroup.com

NEW FARMERS MARKET ENCLOSURE at ANN ARBOR FARMERS MARKET 316 DETROIT STREET, SECTION 25, CITY OF ANN ARBOR, WASHTENAW COUNTY, MI FOR ANN ARBOR PARKS & RECREATION DEPARTMENT SERVICES 301 EAST HURON STREET, ANN ARBOR, MI 48107

KOHLER ARCHITECTURE, INC. 1118 WEST FRONT STREET ANN ARBOR, MICHIGAN 48106 PHONE: 734-242-6880 FAX: 734-242-6883

Project metadata table with columns for DR (DECA), CK (MMB), copyright (© COPYRIGHT 2016 KOHLER ARCHITECTURE, INC. #1627), dates (9/06/16, 8/25/16), and sheet numbers (E3.1, 4).