KEAST COMMONS RESTORATION

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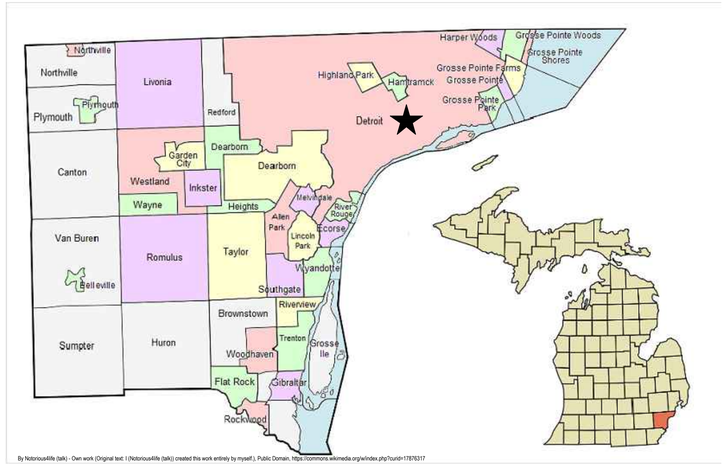

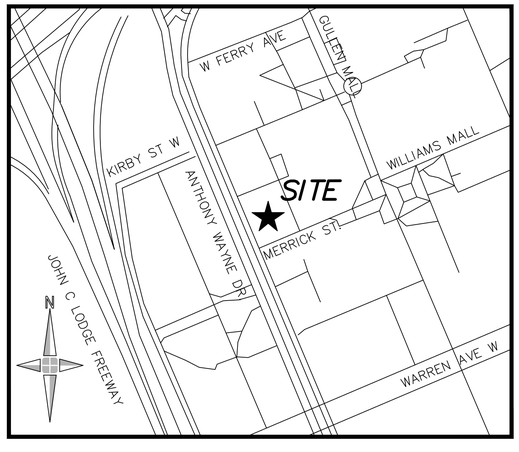

LOCATION MAP

SHEET INDEX

SHEETS BY OTHERS

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05-07-2025	100% DD
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Developed For:

Wayne State University

FACILITIES AND PLANNING MANAGEMENT

5454 Cass
Detroit, MI 48202

COVER

WSU Keast Commons

City of Detroit
Wayne County
MICHIGAN

Date:	05.07.25
Scale:	NA
Sheet:	G-000
Project:	20572.10D

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GENERAL NOTES

1. ALL CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH THE CURRENT STANDARDS, SPECIFICATIONS AND GENERAL CONDITIONS OF WAYNE STATE UNIVERSITY AND ANY OTHER AGENCIES HAVING JURISDICTION.
2. UTILITY INFORMATION SHOWN ON THESE PLANS WAS OBTAINED FROM UTILITY OWNERS AND THEREFORE MAY NOT BE ACCURATE OR COMPLETE. THE CONTRACTOR SHALL VERIFY AND OBTAIN ANY INFORMATION NECESSARY REGARDING THE PRESENCE OF UNDERGROUND UTILITIES WHICH MIGHT HAVE AN IMPACT ON THIS PROJECT, AND SHALL BE RESPONSIBLE FOR ANY DAMAGE TO ANY PUBLIC OR PRIVATE UTILITIES WHETHER THEY ARE SHOWN OR NOT ON THE PLANS.
3. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY LOCATIONS AND ELEVATIONS OF EXISTING UTILITIES AT PROPOSED CONNECTIONS AND/OR CROSSINGS, AND TO NOTIFY THE ENGINEER OF ANY DISCREPANCIES TO THESE PLANS.
4. 72 HOURS PRIOR TO EXCAVATION, THE CONTRACTOR SHALL CONTACT MISS DIG AT (800) 482-7171 FOR THE LOCATION OF UNDERGROUND GAS AND CABLE FACILITIES, AND SHALL ALSO NOTIFY REPRESENTATIVES OF OTHER UTILITIES LOCATED IN THE VICINITY OF THE WORK.
5. ALL PERMITS REQUIRED SHALL BE OBTAINED BY THE CONTRACTOR. ALL PERMIT FEES, BONDS, AND INSURANCE REQUIRED BY THE ISSUING AGENCIES SHALL BE PROVIDED BY THE CONTRACTOR, AND MUST BE KEPT CURRENT. THE CONTRACTOR IS RESPONSIBLE FOR ALL OTHER FEES, INSPECTION COSTS, ETC., AND SHALL ADHERE TO ALL REQUIREMENTS SET FORTH IN SAID PERMITS.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SECURING ALL WORK AREAS TO ENSURE THE SAFETY OF ALL OCCUPANTS, VISITORS, PEDESTRIANS, WORKERS, ETC. THE CONTRACTOR SHALL REPAIR AND MAINTAIN ALL CONSTRUCTION FENCING AS NECESSARY.
7. THE CONTRACTOR SHALL PROVIDE FOR CONTROLLED ACCESS TO THE SITE FOR USE BY THE VARIOUS WORK FORCES, EMERGENCY VEHICLES, OCCUPANTS, VISITORS, ETC. THROUGHOUT CONSTRUCTION. THIS ACCESS MUST PROVIDE FOR THE REMOVAL OF MUD FROM VEHICLES TIRES. ROADWAYS AND DRIVEWAYS SHALL BE MAINTAINED OPEN FOR EMERGENCY VEHICLES AT ALL TIMES. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE RESIDENTS AND BUSINESSES WHOSE DRIVEWAYS ARE AFFECTED BY THEIR SCHEDULE 24 HOURS IN ADVANCE. CONTRACTOR SHALL SCHEDULE CONSTRUCTION AT NON-PEAK USE HOURS AND SHALL MINIMIZE DRIVEWAY CLOSURE BY EXPEDITING CONSTRUCTION.
8. THE CONTRACTOR SHALL PROVIDE NECESSARY SIGNS, BARRICADES, AND LIGHTS TO PROTECT THE TRAFFIC AND THE WORK AS DIRECTED BY THE PLANS OR BY THE AGENCY WITH JURISDICTION. ALL TRAFFIC CONTROLS SHALL BE IN ACCORDANCE WITH THE MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MMUTCD).
9. THE CONTRACTOR IS REQUIRED TO CONFINE CONSTRUCTION ACTIVITIES TO THE LIMITS OF THE SITE AS SHOWN ON THE CONSTRUCTION PLANS. ANY DAMAGE OR DISRUPTION TO ADJACENT SITES IS THE RESPONSIBILITY OF THE CONTRACTOR TO CORRECT IMMEDIATELY. NO OFF-SITE WORK SHALL BE PERFORMED OUTSIDE OF PUBLIC RIGHTS-OF-WAY OR DEDICATED EASEMENTS WITHOUT PRIOR WRITTEN APPROVAL OF THE PROPERTY OWNER.
10. GREAT CARE SHALL BE TAKEN TO AVOID DAMAGE TO VEGETATION OUTSIDE THE CLEARING AND GRUBBING LIMITS. NO DRIVING OR PARKING OF VEHICLES AND/OR STORAGE OF MATERIALS AND SUPPLIES SHALL BE PERMITTED OUTSIDE THE LIMITS OF CONSTRUCTION.
11. ALL ELEVATIONS ON THESE PLANS ARE ON THE CITY OF DETROIT DATUM.
12. THE PROTECTION OF EXISTING TREES, AS REQUIRED, SHALL BE SOLELY THE CONTRACTOR'S RESPONSIBILITY.
13. ALL CONSTRUCTION SHALL HAVE INSPECTION PROVIDED BY WAYNE STATE UNIVERSITY (WSU). THE CONTRACTOR SHALL CONTACT WSU 48 HOURS BEFORE THE START OF CONSTRUCTION.
14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DUST CONTROL, AND SHALL PROVIDE ALL NECESSARY MATERIAL AND EQUIPMENT TO KEEP DUST IN CHECK AT ALL TIMES. THE CONTRACTOR SHALL RESPOND IMMEDIATELY TO ANY AND ALL COMPLAINTS. DUST CONTROL SHALL BE INCIDENTAL TO THE PROJECT.
15. DURING CONSTRUCTION, THE CONTRACTOR MAY ENCOUNTER SPRINKLER HEADS, PIPING, LIGHTING AND BURIED ELECTRICAL CABLE, MAILBOXES, FENCES, SIGNS, ETC., THAT MAY OR MAY NOT BE INDICATED ON THESE PLANS. THE CONTRACTOR SHALL REPLACE AND/OR RESTORE ALL COMPONENTS OF SUCH SYSTEMS. ALL DISTURBED AREAS SHALL BE RESTORED TO THEIR ORIGINAL CONDITION, MINIMUM STANDARD REQUIREMENTS, OR AS SPECIFIED HEREIN; WHICHEVER IS MORE STRINGENT.
16. ROADWAY, DRIVEWAY, AND PARKING AREA FINAL RESTORATION SHALL BE PERFORMED WITH SURFACE AND BASE MATERIALS MATCHING EITHER THE EXISTING MATERIALS IN QUALITY AND THICKNESS, PER MINIMUM REQUIREMENTS, OR PER THE FOLLOWING; WHICHEVER IS MORE STRINGENT:
    A. ASPHALT ROADWAYS - HEAVY DUTY ASPHALT - 2" MDOT 4C OVER 6" MDOT 2C
    B. ASPHALT DRIVEWAYS - STANDARD DUTY ASPHALT - 2" MDOT 4C OVER 2" MDOT 2C
    C. GRAVEL ROAD AND DRIVEWAYS - 8" MDOT 21AA GRAVEL
    D. CONCRETE ROADS - 8" 4000 PSI CONCRETE
    E. CONCRETE DRIVEWAYS - 6" 4000 PSI CONCRETE
17. ALL LOT MARKERS AND MONUMENT POINTS DISTURBED DURING CONSTRUCTION SHALL BE REPLACED BY A REGISTERED LAND SURVEYOR AT THE EXPENSE OF THE CONTRACTOR.
18. FINAL CLEANUP AND RESTORATION SHALL CONSIST OF FINE GRADING OF CONSTRUCTION AREAS, REMOVAL OF CONSTRUCTION SIGNS, ETC. TOPSOIL SHALL BE SPREAD OVER ALL DISTURBED AREAS, FOLLOWED BY SEED, FERTILIZER AND EROSION MAT OR STRAW MULCH, OR AS FURTHER REQUIRED BY THE LANDSCAPING PLANS AND SPECIFICATIONS. ALL REQUIRED RESTORATION ITEMS NOT SPECIFICALLY IDENTIFIED AS A PAY ITEM SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.
19. THE UTILITY POLES SHOWN ON THESE DRAWINGS ARE INTENDED TO SHOW ONLY THE LOCATION OF EXISTING POLES. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE QUANTITY AND DIRECTION OF OVERHEAD LINES. THE COST FOR SUPPORTING AND RELOCATING POLES SHALL BE INCIDENTAL TO THE PROJECT.
20. THE MEANS AND METHODS OF CONTROLLING GROUNDWATER AND DEWATERING ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. ALL COST ASSOCIATED WITH DEWATERING
21. ANY AND ALL CONSTRUCTION ACTIVITIES NOT TO OBSTRUCT ANY HYDRANT, BUILDING WATER CONNECTION, OR PATH OF EGRESS.
SHALL BE INCIDENTAL TO THE CONTRACT.
22. AT DISCRETION OF THE CONSULTANT, CAD BASE FILES CAN BE PROVIDED TO CONTRACTOR ON A CASE BY CASE BASIS

DEMOLITION NOTES

1. REFER TO THE GENERAL NOTES FOR ADDITIONAL REQUIREMENTS AND RESPONSIBILITIES.
2. WITH THE EXCEPTION OF AN AMOUNT OF EXCAVATED MATERIALS SUFFICIENT FOR BACKFILLING AND CONSTRUCTION OF FILLS AS CALLED FOR ON THE PLANS AND AS INDICATED BELOW, ALL BROKEN CONCRETE, STONE AND EXCESS EXCAVATED MATERIALS SHALL BE DISPOSED OF BY THE CONTRACTOR. THE CONTRACTOR WILL BE REQUIRED TO OBTAIN THEIR OWN DISPOSAL GROUND, AND WILL RECEIVE NO ADDITIONAL COMPENSATION FOR DISPOSING OF ANY OF THE EXCESS MATERIALS. MATERIALS ACCEPTABLE TO THE ENGINEER MAY BE DISPOSED OF ON-SITE AT THE CONTRACTORS EXPENSE IN A MANNER APPROVED IN ADVANCE BY THE ENGINEER.
3. THE EDGE OF EXISTING PAVEMENT SHALL BE CLEANED OF EARTH AND OTHER FOREIGN MATERIAL BEFORE ADJACENT POURS ARE PLACED.
4. ALL BULKHEADING AND/OR SEWER PIPE REMOVAL NECESSITATED BY THE REMOVAL OF DRAINAGE STRUCTURES SHALL BE INCLUDED IN THE STRUCTURE REMOVAL.
5. STREET SIGNS IN THE WAY OF CONSTRUCTION WILL BE REMOVED AND RESET IMMEDIATELY IN A TEMPORARY LOCATION, AS APPROVED BY ENGINEER.
6. THE CONTRACTOR SHALL PROTECT ALL EXISTING SIGNS AND POSTS SCHEDULED TO REMAIN, AS DIRECTED BY THE ENGINEER.
7. ALL UNDERGROUND UTILITIES NOT INDICATED FOR REMOVAL SHALL BE PROTECTED THROUGHOUT CONSTRUCTION.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL PRIVATE PROPERTY (INCLUDING BUILDINGS AND FOUNDATIONS) THROUGHOUT CONSTRUCTION AND SHALL MAINTAIN SAFE PEDESTRIAN ACCESS AT ALL TIMES.
9. THE REMOVAL OF PAVEMENT, CURBS AND WALKS SHALL INCLUDE ALL REQUIRED SAWCUTTING. CURB REMOVAL IS INCIDENTAL TO PAVEMENT REMOVAL.

UTILITY NOTES

1. REFER TO THE GENERAL NOTES FOR ADDITIONAL REQUIREMENTS AND RESPONSIBILITIES.
2. ALL TRENCHES WITHIN A ONE ON ONE SLOPE OF PAVEMENT SHALL BE BACKFILLED WITH SAND (MDOT CLASS II MINIMUM) AND MECHANICALLY COMPACTED IN NOT MORE THAN 9" LAYER TO 95% MAXIMUM DRY DENSITY PER MODIFIED PROCTER COMPACTION TEST ASTM D-1557. COMPACTED SAND BACKFILL SHALL ALSO BE PROVIDED FOR ALL SEWER TRENCHES LOCATED UNDER, OR WITHIN, THREE FEET OF PAVEMENT.
3. THE COST OF ALL TREE, STUMP, FOUNDATION AND/OR STRUCTURE REMOVAL AND DISPOSAL NOT INCLUDED IN THE PROPOSAL SHALL BE CONSIDERED INCIDENTAL AND INCLUDED IN THE PRICE BID FOR WATERMAIN, SANITARY SEWER, STORM SEWER, AND PAVING WORK.
4. A MINIMUM VERTICAL CLEARANCE OF 18 INCHES IS REQUIRED AT UTILITY CROSSINGS (MEASURED FROM THE OUTSIDE OF PIPE TO THE OUTSIDE OF PIPE). POSITIVE PROVISIONS SHALL BE MADE TO ENSURE THAT ALL UTILITY TRENCHES ARE FREE DRAINING DURING ALL PHASES OF CONSTRUCTION.
5. THE REQUIRED BEDDING FOR SEWER PIPE SHALL CONSIST OF A MAXIMUM 3/4 INCH DIAMETER CRUSHED STONE.
6. THE MINIMUM SLOPE FOR A BUILDING LEAD IS 1%. LEADS SHALL ONLY BE CONNECTED TO THE MAIN LINE WITH WYES.
7. ALL STORM SEWER PIPE SHALL BE CONSTRUCTED WITH RUBBER GASKET (PREMIUM) JOINTS.
8. THE CONTRACTOR SHALL COORDINATE THE REMOVAL OF ALL UTILITY LINES AND STRUCTURES, AS OUTLINED ON THE DEMOLITION PLAN, WITH THE INSTALLATION OF UTILITY IMPROVEMENTS.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CHECKING GRADE MODIFICATIONS INDICATED ON THE FINISHED LANDSCAPE PLAN, AND COORDINATE THE ACTUAL FINISH GRADE OF FIRE HYDRANTS, GATE VALVE CASTINGS, MANHOLES, YARD DRAINS, CLEAN OUTS AND OTHER UTILITY STRUCTURES. ENSURE THAT ALL FINISH GRADING IS PERFORMED IN A MANNER THAT ACCOMPLISHES THE PROJECT DESIGN OBJECTIVES AND PROVIDES FOR POSITIVE DRAINAGE OF ALL AREAS. ANY SUBSTANTIAL GRADE CHANGES WHICH MAY CAUSE FUNCTIONAL PROBLEMS SHALL BE REPORTED PROMPTLY TO THE ENGINEER WHO SHALL EVALUATE THE CONDITIONS AND PROVIDED CORRECTIONAL RECOMMENDATIONS TO THE OWNER FOR FINAL DETERMINATION.
10. CONTRACTOR SHALL BE REQUIRED TO COORDINATE THE INSTALLATION OF GAS, ELECTRIC, PHONE, CABLE, SPRINKLERS ETC., IN SUCH A MANNER THAT WILL FACILITATE THEIR PROPER INSTALLATION PRIOR TO PLACING THE PAVEMENT MATERIALS. ENSURE THAT ALL REQUIRED PIPES, CONDUITS, CABLES AND SLEEVES ARE PROPERLY PLACED AND THAT THE TRENCHES ARE PROPERLY BACKFILLED AND COMPACTED.
11. THE CONTRACTOR SHALL REMOVE UTILITIES, WHICH HAVE BEEN ABANDONED IN PLACE, AS REQUIRED TO COMPLETE INSTALLATION OF NEW UTILITIES. WHENEVER ABANDONED UTILITIES ARE CUT, CONTRACTOR SHALL COMPLETELY CAP BOTH ENDS TO PREVENT THE INFILTRATION OF SOILS.
12. NO CONNECTION MAY BE MADE TO ANY EXISTING WATER MAIN UNTIL THE NEW MAIN HAS PASSED ALL PRESSURE AND BACTERIOLOGICAL TESTING.
13. ROADWAY, DRIVEWAY AND PARKING AREA CROSSINGS SHALL BE TEMPORARILY CONDITIONED IMMEDIATELY AFTER CROSSING BY PLACING 8" OF MDOT 22A GRAVEL OR SLAG AGGREGATE, AND SHALL BE MAINTAINED IN GOOD, DUST FREE CONDITION UNTIL PAVEMENT RESTORATION IS MADE.

PAVING AND GRADING NOTES

1. REFER TO THE GENERAL NOTES FOR ADDITIONAL REQUIREMENTS AND RESPONSIBILITIES.
2. THE PAVING CONTRACTOR SHALL BE REQUIRED TO COORDINATE THE INSTALLATION OF GAS, ELECTRIC, PHONE, CABLE, SPRINKLERS, ETC. IN SUCH A MANNER THAT WILL FACILITATE THEIR PROPER INSTALLATION PRIOR TO PLACING THE PAVEMENT MATERIALS. ENSURE THAT ALL REQUIRED PIPES, CONDUITS, CABLES AND SLEEVES ARE PROPERLY PLACED AND THAT THE TRENCHES ARE PROPERLY BACKFILLED AND COMPACTED.
3. BUTT JOINTS SHALL BE PLACED AT ALL LOCATIONS WHERE AN EXISTING ASPHALT PAVEMENT SURFACE IS BEING DISTURBED BY REMOVALS AND/OR THE INSTALLATION OF NEW ASPHALT PAVEMENT.
4. ALL PAVEMENT AREAS SHOULD BE CLEARED AND GRUBBED BY REMOVING SURFACE VEGETATION, TOPSOIL, DEBRIS AND OTHER DELETERIOUS MATERIALS.
5. THE PLACEMENT OF THE FINAL ASPHALT LIFT SHALL BE DELAYED UNTIL THE MAJORITY OF THE CONSTRUCTION ACTIVITIES HAVE BEEN COMPLETED, OR AS APPROVED BY THE OWNER. A BOND COAT OF SS-1H EMULSION SHALL BE APPLIED (AT A RATE OF 0.10 GALLONS/S.Y.D.) BETWEEN THE LEVELING AND WEARING COURSE WHEN 48 HOURS HAVE ELAPSED BETWEEN PLACEMENTS.
6. THE FINAL SUB-GRADE SHALL BE THOROUGHLY PROOF-ROLLED UNDER THE OBSERVATION OF THE SOILS ENGINEER.
7. PROPOSED AGGREGATE BASE SHALL EXTEND A MINIMUM OF 1 FOOT BEYOND THE PAVEMENT EDGE/BACK OF CURB.
8. ALL TRENCHES WITHIN A ONE ON ONE SLOPE OF PAVEMENT SHALL BE BACKFILLED WITH SAND (MDOT CLASS II MINIMUM) AND MECHANICALLY COMPACTED IN NOT MORE THAN 9" LAYER TO 95% MAXIMUM DRY DENSITY PER MODIFIED PROCTER COMPACTION TEST ASTM D-1557.
9. NO FROZEN MATERIAL SHALL BE PERMITTED AS BACKFILL UNDER ANY ROADWAY, DRIVEWAY OR PARKING AREA.
10. PRIOR TO THE START OF ANY FILLING, THE CONTRACTOR SHALL REMOVE ALL TOPSOIL AND ALL OTHER UNACCEPTABLE SOIL FROM THE FILL AREAS, AND PROPERLY BACKFILL WITH ACCEPTABLE SOIL.
11. BARRIER FREE SIGNAGE SHALL BE PLACED IN FRONT OF EVERY DESIGNATED BARRIER FREE STALL. THE CONTRACTOR SHALL COORDINATE STANDARD AND VAN ACCESSIBILITY SIGNAGE AS INDICATED ON THE PLANS.
12. ALL BARRIER FREE RAMPS TO BE A.D.A. COMPLIANT.
13. GENERAL GRADING REQUIREMENTS ARE AS FOLLOWS:
    A. FINISH GRADE AT EXISTING BUILDING SHALL MATCH BRICK LEDGES, DOORWAYS OR BASEMENT WINDOWS
    B. MAINTAIN POSITIVE DRAINAGE AWAY FROM ALL BUILDING (± 2%)
    C. SIDEWALK CROSS SLOPE <2% UNLESS OTHERWISE NOTED (EXCLUDING RAMPS)
    D. PAVEMENT SLOPES (1.0% MINIMUM, 4.0% MAXIMUM) UNIFORMLY BETWEEN FINISH GRADE ON PLANS
    E. LAWN AREAS ± 1% MINIMUM TO 25% (BERMS) MAXIMUM
14. ALL PROPOSED GRADES ARE AT THE GUTTER UNLESS OTHERWISE NOTED. SEE DETAILS FOR FACE OF CURB, TOP OF CURB AND ASPHALT ADJUSTMENTS.
15. REFER TO ARCHITECTURAL PLANS TO COORDINATE ALL:
    A. WATER SUPPLY, METERING, SPRINKLER AND FDC PIPING, DESIGN AND COORDINATION
    B. BUILDING SEWER, BUILDING DRAIN DESIGN AND CONNECTIONS TO CLEAN OUTS AND ROOF CONNECTORS
    C. GAS, ELECTRIC AND COMMUNICATION SERVICES AND LIGHTING DETAILS AND COORDINATION.
    D. ALL BUILDING ACCESS WALKS AND ENTRY DETAILS, INCLUDING SUPPORTED SLABS
    E. ALL WORK TO CONSTRUCT THE BUILDING AND ALL ITEMS CONNECTED TO IT
16. PRIOR TO THE PLACEMENT OF ANY BASE ASPHALT OR LEVELING COURSE, THE CURBS SHALL BE PARTIALLY BACKFILLED AND THE SUB-GRADE SHALL BE PROOF-ROLLED UNDER THE SUPERVISION OF THE SOILS ENGINEER.
17. ALL SIDEWALK AND PATHWAYS IN ANY PUBLIC R.O.W. SHALL BE INSPECTED BY THE AGENCY WITH JURISDICTION.

EROSION CONTROL NOTES

1. REFER TO THE GENERAL NOTES FOR ADDITIONAL REQUIREMENTS AND RESPONSIBILITIES.
2. ALL EROSION AND SEDIMENTATION CONTROL WORK SHALL CONFORM TO THE CURRENT STANDARDS AND SPECIFICATIONS OF XXXXXXXXXXXXXX.
3. ANY EROSION AND SEDIMENTATION FROM WORK ON THIS SITE SHALL BE CONTAINED WITHIN THE WORK AREA AND NOT ALLOWED TO COLLECT ON ANY OFF-SITE AREAS OR IN WATERWAYS. (WATERWAYS INCLUDE BOTH NATURAL AND MAN-MADE OPEN DITCHES, STREAMS, STORM DRAINS, LAKES, PONDS AND WETLANDS)
4. THE CONTRACTOR SHALL APPLY TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES AS DIRECTED ON THESE PLANS AND WHENEVER OTHERWISE REQUIRED BY THE WORK. THE CONTRACTOR SHALL REMOVE TEMPORARY MEASURES AS SOON AS PERMANENT STABILIZATION OF SLOPES, DITCHES, AND OTHER CHANGES HAVE BEEN ACCOMPLISHED.
5. SOIL EROSION CONTROL PRACTICES WILL BE ESTABLISHED IN EARLY STAGES OF CONSTRUCTION BY THE CONTRACTOR. SEDIMENTATION CONTROL PRACTICES WILL BE APPLIED AS A PERIMETER DEFENSE AGAINST ANY TRANSPORTING OF DIRT OUT OF THE WORK AREA.
6. THE CONTRACTOR SHALL PRESERVE NATURAL VEGETATION AS MUCH AS POSSIBLE.
7. PROTECT ALL EXISTING TREES, INCLUDING THEIR BRANCHES AND ROOTS, FROM DAMAGE DUE TO THIS WORK UNLESS SPECIFICALLY IDENTIFIED FOR REMOVAL.
8. VEGETATION STABILIZATION OF ALL DISTURBED AREAS SHALL BE ESTABLISHED WITHIN 15 DAYS OF COMPLETION OF FINAL GRADING.
9. THE CONTRACTOR SHALL SWEEP THE EXISTING STREETS SURROUNDING THE PROJECT SITE ONCE A WEEK, OR AS DIRECTED BY THE ENGINEER OR INSPECTOR. STREET SCRAPING SHALL BE PERFORMED IN CONJUNCTION WITH THIS SWEEPING ON AN AS NEEDED BASIS.
10. THE SEDIMENT CONTROL FENCING INDICATED ON THIS PLAN IS NOT INTENDED TO SHOW THE EXACT LOCATION OF THE FENCE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE REQUIRED TO CONTAIN SEDIMENT.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING COMPLIANCE WITH ALL APPLICABLE NPDES REGULATIONS, INCLUDING: INSPECTION, RESTORATION, AND RECORD KEEPING REQUIREMENTS.
12. THE CONTRACTOR IS RESPONSIBLE FOR ON-GOING MAINTENANCE OF ALL SOIL EROSION CONTROLS AS INDICATED BY THESE PLANS.
13. CONSTRUCTION ACTIVITIES (INCLUDING INSTALLATION OF PIPE AND ASSOCIATED VALVES, STRUCTURES, BACK FILLING, SURFACE RESTORATION, AND REMOVAL OF EXCESS EXCAVATED MATERIAL) SHALL BE ACCOMPLISHED IN ONE CONTINUOUS OPERATION.
14. PAVEMENT AND/OR VEGETATION SHALL NOT BE STRIPPED FROM AN AREA UNLESS CONSTRUCTION ACTIVITIES ARE TO COMMENCE IN THAT AREA WITHIN THE NEXT THREE DAYS.
15. IF FOR ANY REASON PERMANENT STABILIZATION CAN NOT BE PROVIDED WITHIN 15 DAYS OF THE COMPLETION OF PIPE LAYING OPERATIONS, TEMPORARY STABILIZATION SHALL BE PROVIDED AT ALL DISTURBED AREAS. TEMPORARY STABILIZATION SHALL FURTHERMORE BE PROVIDED DURING THE NON-GROWING SEASON (OCTOBER 1 THROUGH APRIL 20) FOR ALL AREAS TO BE SEEDED.
16. TEMPORARY STABILIZATION SHALL CONSIST OF EITHER SMALL GRAIN STRAW OR GRASS HAY SPREAD AT THE RATE OF 1.5 TO 2 TONS PER ACRE, OR MULCH BLANKETS, WHICH SHALL BE ANCHORED IN PLACE TO PREVENT DISPLACEMENT FROM WIND AND RAIN. TEMPORARY STABILIZATION SHALL BE REPAIRED AS OFTEN AS NECESSARY, AS DETERMINED BY THE AGENCY WITH JURISDICTION.
17. ALL DEWATERING SHALL BE ACCOMPLISHED IN A MANNER THAT WILL NOT CONTRIBUTE TO DEPOSITION OF SEDIMENT IN ROAD DITCHES OR OPEN WATER.
18. THIS PROJECT SHALL BE CONSTRUCTED IN COMPLIANCE WITH PART 91 OF ACT 451 OF 1994, AS AMENDED.
19. SEDIMENT CONTROL FENCING SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND SEVERAL TIMES DURING PROLONGED STORM EVENTS. IF THE FENCE IS SAGGING, OR SOIL HAS REACHED ONE HALF OF THE HEIGHT OF THE FABRIC, THE SOIL BEHIND THE FABRIC SHALL BE REMOVED AND DISPOSED OF IN A STABLE AREA OF THE SITE. IF WATER IS SEEPING UNDER THE FENCE, OR THE FABRIC IS DECOMPOSED OR OTHERWISE INEFFECTIVE, THE FENCE SHALL BE REMOVED AND PROPERLY REINSTALLED AS INDICATED ON THESE PLANS.
20. MUD MAT ENTRANCES SHALL BE INSPECTED IMMEDIATELY AFTER EACH STORM RAINFALL. THE SURROUNDING ROADS SHALL ALSO BE INSPECTED AT THIS TIME FOR EVIDENCE THAT MUD IS BEING TRACKED OFF OF THE SITE. MAINTENANCE SHALL INCLUDE THE INSTALLATION OF ADDITIONAL LAYERS OF STONE WHEN THE ORIGINAL STONE BECOMES COVERED WITH MUD. ALL SEDIMENT DROPPED OR TRACKED ONTO PUBLIC RIGHT-OF-WAYS SHALL BE REMOVED IMMEDIATELY BY SWEEPING AND SCRAPING (AS MAY BE REQUIRED BY THE ENGINEER).
21. SEDIMENT INLET FILTERS SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND SEVERAL TIMES DURING PROLONGED STORM EVENTS. THE FILTERS SHALL BE CLEANED PERIODICALLY THROUGHOUT CONSTRUCTION TO AVOID CLOGGING. FILTERS THAT CANNOT BE MAINTAINED BY CLEANING SHALL BE COMPLETELY REPLACED.

EROSION CONTROL SEQUENCE

1. INSTALL MUD MATS, SILT FENCE AND INLET FILTERS AT ALL EXISTING LOCATIONS AS SHOWN AND AS REQUIRED TO ACHIEVE ON-SITE CONTAINMENT.
2. INSTALL STORM SEWER AND ALL ASSOCIATED STORM WATER IMPROVEMENTS AS SHOWN ON PLANS. IMMEDIATELY INSTALL INLET FILTERS AT ALL CATCH BASINS.
3. ROUGH GRADE THE PROJECT "WORK AREA" AS NEEDED.
5. INSTALL WATER/IRRIGATION AS SHOWN ON PLANS.
6. INSTALL OTHER UTILITIES (GAS, ELECTRIC, PHONE, CABLE, ETC.) AND/OR ALL NEEDED CONDUITS AND SLEEVES.
7. INSTALL PAVEMENT BACKFILL AND SEED & MULCH ALL DISTURBED AREAS.
8. CLEAR ALL ACCUMULATED SILT AND REMOVE ALL EROSION CONTROL DEVICES.
9. INSTALL LANDSCAPING MATERIALS AS INDICATED PER PLANS & RE-SEED, FERTILIZE AND MULCH ALL DISTURBED AREAS.

GENERAL LEGEND

	EXISTING	PROPOSED
STORM SEWER	STM	
SANITARY SEWER	SAN	
WATER MAIN	W	
GAS MAIN	GAS	G
UNDERGROUND ELECTRIC LINES	UGE	UGE
UNDERGROUND TELEPHONE LINES	UGT	UGT
UNDERGROUND CABLE TELEVISION LINES	CTV	CTV
OVERHEAD LINES		
PUBLIC LIGHTING LINES	PLD	
STEAM LINES	STEAM	
FENCE LINE	X	X
PROJECT PHASE LIMIT LINE		
CONCRETE CURB AND GUTTER (STANDARD)		
CONCRETE CURB AND GUTTER (REVERSED)		
THICKENED SLAB CURB/WALK		
STORM MANHOLE		
CATCH BASIN		
YARD BASIN		
INLET BASIN		
END SECTION		
ROOF/DOWN SPOUT		
OVERFLOW/OUTLET STRUCTURE		
STORM CLEAN OUT		
SANITARY MANHOLE		
SANITARY CLEAN OUT		
SANITARY RISER		
SANITARY PUMP STATION	P.S.	

	EXISTING	PROPOSED
GATE VALVE		
FIRE HYDRANT		
STOP BOX AND VALVE		
FDC CONNECTION		
WATER METER		
POST INDICATOR VALVE		
WELL HEAD		
IRRIGATION CONTROL BOX		
LAWN IRRIGATION HEAD		
GAS VALVE		
GAS MANHOLE		
GAS RISER		
GAS METER		
ELECTRIC MANHOLE		
ELECTRIC RISER		
ELECTRIC METER		
ELECTRIC TRANSFORMER		
LIGHT POLE		
TELEPHONE MANHOLE		
TELEPHONE RISER		
TELEPHONE CROSS BOX		
CABLE RISER		
TRAFFIC CONTROL BOX		
AIR CONDITIONER		
PUBLIC LIGHTING MANHOLE		
UTILITY POLE		

	EXISTING	PROPOSED
GUY WIRE ANCHOR		
UTILITY FLAG		
SIGN POST		
GUARD POST/BOLLARD		
FENCE POST		
PAY PHONE		
PARKING METER		
RESIDENTIAL MAILBOX		
U.S. MAILBOX		
BLDG CORNER (FIELD LOCATED)		
TREE		
WETLAND FLAG		
SPOT ELEVATION	150.23	XXX.XX
SOIL BORING		
ASPH.	ASPHALT	
CONC.	CONCRETE	
A.C.	AIR CONDITIONER	
G.P.	GUARD POST	
C.L.F.	CHAIN-LINK FENCE	
D.L.	DOOR LEDGE	
F.F.	FINISHED FLOOR	
O.H.	OVERHANG	
F.I.	FOUND IRON	
S.I.	SET IRON	
F.I.P.	FOUND IRON PIPE	
M. R.	MEASURED RECORD	
F.M.	FOUND MONUMENT	
S.N.	SET NAIL	

DEMOLITION LEGEND

- REMOVE UTILITY STRUCTURE
- REMOVE UTILITY PIPE
- ABANDON UTILITY PIPE
- CUT AND BULKHEAD UTILITY PIPE
- REMOVE BUILDING
- REMOVE CONCRETE PAVEMENT
- REMOVE ASPHALT PAVEMENT
- REMOVE SIDEWALK

PAVING AND GRADING HATCH LEGEND

- COMPACTED SAND BACKFILL (CSB)
- AGGREGATE MATERIAL
- ASPHALT PAVEMENT
- CONCRETE PAVEMENT

EROSION CONTROL LEGEND

- DRAINAGE AREA (XX.XX)
- SEDIMENT INLET FILTER
- MUD MAT ENTRANCE
- CHECK DAM
- SEDIMENT CONTROL FENCE
- DRAINAGE AREA LINE

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Designer:	FS, MOH
Quality Control:	FS
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GENERAL NOTES

WSU Keast Commons

City of Detroit
Wayne County
MICHIGAN

Date:	05.07.25
Scale:	NA
Sheet:	C-100
Project:	20572.10D

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LEGEND – EXISTING

- SECTION LINE
- E/ PAVEMENT
- CURB
- E/ GRAVEL
- CL ROAD
- E/ WALK
- RAILROAD
- E/ BRICK
- MISC. LINE
- FENCE
- GUARD RAIL
- WALL
- BLDG. LINE
- OVERHEAD WIRES
- RAILING
- OVERHANG LINE
- T/ BANK
- B/ BANK
- CL DITCH/STREAM
- SHRUB LINE
- TREE LINE
- WATER EDGE
- WETLAND LINE
- STORM LINE
- SAN. LINE
- WATER LINE
- GAS LINE
- UG ELEC. LINE
- UG TELE. LINE
- UG CABLE TV LINE
- PAINT STRIPE
- COMBINED SEWER
- PLD LINE
- STEAM LINE
- ELECTRIC OVERHEAD
- TELEPHONE OVERHEAD
- SAN. MH
- C.O. SAN. CLEAN OUT
- SAN. RISER
- SAN. PUMP STATION
- COMB. MH
- GATE VALVE
- HYDRANT
- WATER VALVE
- WATER METER
- POST INDICATOR VALVE
- WELL HEAD
- FDC CONNECTION
- IRRIGATION CONTROL BOX
- STORM MH
- CATCH BASIN
- BEEHIVE CB
- CULVERT E.S.
- ROOF/DOWN SPOUT
- OVERFLOW/OUTLET STRUCTURE
- O.C. STORM CLEAN OUT
- ROUND CB
- LIGHT POLE
- UTILITY POLE
- ELEC. TRANS.
- AIR CONDITIONER
- ELEC. MH
- ELEC. METER
- ELEC. RISER
- TRAFFIC CONTROL BOX
- STEAM MH
- PUBLIC LIGHTING MH
- MANHOLE
- SIGN
- PROT. POST/GUARD POST
- GUY
- DECIDUOUS TREE
- CONIFEROUS TREE
- DEAD TREE
- UTILITY FLAG
- BLDG. CORNER (FIELD LOCATED)
- HANDICAP PARKING
- WETLAND FLAG
- BUSH/SHRUB
- PARKING METER
- RESIDENTIAL MAILBOX
- U.S. MAILBOX
- 000.00+00.0 EXISTING ELEVATION
- MISC. TOPO. SHOT
- SURVEY CONTROL POINT
- FOUND IRON
- FOUND NAIL
- F. CUT CROSS
- SECTION COR.
- FENCE POST
- BENCHMARK
- FOUND PIPE
- FOUND MON.
- ASPH. ASPHALT
- CONC. CONCRETE
- A.C. AIR CONDITIONER
- SOIL BORING
- MONITORING WELL
- LAWN IRRIG. HEAD
- CENTERLINE R.R. TRACK
- G.P. GUARD POST
- C.L.F. CHAIN-LINK FENCE
- D.L. DOOR LEDGE
- F.F. FINISHED FLOOR
- O.H. OVERHANG
- F.I. FOUND IRON
- S.I. SET IRON
- F.I.P. FOUND IRON PIPE
- M. MEASURED
- R. RECORD
- F.M. FOUND MONUMENT
- S.N. SET NAIL
- CMP CORREGATED METAL PIPE
- RCP REINFORCED CONCRETE PIPE
- G.L. GROUND LIGHT
- TELE. RISER
- TELE. MH
- TELE. CROSS BOX
- CABLE RISER
- PAY PHONE
- GAS METER
- GAS RISER
- GAS VALVE
- GAS MH

BENCH MARK DATA

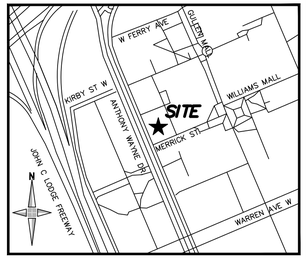
CITY OF DETROIT DATUM

SITE BENCH MARK NO. 1
SET CHISELED "+" IN EASTERLY BOLT OF LIGHT POLE BASE ON NORTH SIDE OF KEAST COMMONS PARK APPROXIMATELY 9' EAST OF ANTHONY WAYNE DRIVE (3RD ST.) BEING 18' SOUTH OF A SOUTHWEST 9 STORY BUILDING CORNER.
ELEV=152.00'

SITE BENCH MARK NO. 2
TOP OF MAG NAIL IN CONCRETE CURB ON NORTH SIDE OF KEAST COMMONS PARK APPROXIMATELY 130' EAST OF EAST RIGHT OF WAY OF ANTHONY WAYNE DRIVE (3RD ST.) BEING 74 FEET EAST OF A SOUTHEAST 9 STORY BUILDING CORNER.
ELEV=149.98'

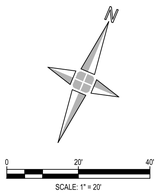
SITE BENCH MARK NO. 3
ARROW ON HYDRANT (YEAR 2008) LOCATED ON THE SOUTH SIDE OF KEAST COMMONS PARK APPROXIMATELY 260' EAST OF ANTHONY WAYNE DRIVE (3RD ST.).
ELEV=152.21'

SITE BENCH MARK NO.4
ARROW ON HYDRANT (YEAR 2008) LOCATED ON THE SOUTH SIDE OF KEAST COMMONS PARK APPROXIMATELY 80' EAST OF ANTHONY WAYNE DRIVE (3RD ST.).
ELEV=151.77



LOCATION MAP

(NOT TO SCALE)



NOTES:

- AT&T, CABLE, DETROIT PUBLIC LIGHTING, AND ITC UTILITY MAPS WERE NOT AVAILABLE AT TIME OF SURVEY.
- GAS & WATER LEAD LOCATIONS SHOULD BE CONSIDERED AS APPROXIMATE.
- THE FOLLOWING RECORDS WERE UTILIZED FOR THE REPRESENTATION OF UNDERGROUND UTILITIES IN THIS DRAWING.

  WATER, SANITARY, & STORM
  –CITY OF DETROIT GIS RECORDS, SENT ON MARCH 3, 2025
  –CITY OF DETROIT SEWER MAP NUMBER S–30–B REVISED THRU 12–31–03.
  –CITY OF DETROIT WATER MAP NUMBER 20–L REVISED THRU 1–19–01.

  GAS
  –DTE GAS COMPANY RECORD DATED MARCH 07, 2025.

  ELECTRIC
  –DTE ELECTRIC FACILITY MAP #340–314, DATED MARCH 10, 2025.

  STEAM
  –THE DETROIT EDISON CO. STEAM DISTRIBUTION SYSTEM MAPS 12–10, 12–11, DATED MARCH 28, 1994 AND SENT ON MARCH 15, 2025.

  FIBER OPTIC
  –WAYNE STATE UNIVERSITY MISS DIG RECORD SENT ON MARCH 26, 2025. LINE IS APPROXIMATE PER RECORD.
- THIS PARCEL IS LOCATED WITHIN A FEDERALLY DESIGNATED FLOOD HAZARD AREA ZONE "X" (AREA DETERMINED TO BE OUTSIDE OF THE 0.2% ANNUAL CHANCE FLOODPLAIN) IN ACCORDANCE WITH THE FEDERAL INSURANCE RATE MAP, PANEL NUMBER 26163C0280E EFFECTIVE DATE 02/12/2012.
- TREE SIZES AND SPECIES ARE THE BEST ESTIMATION OF THE FIELD SURVEYOR. SPECIFIC QUESTIONS REGARDING INDIVIDUAL TREES SHOULD BE DIRECTED TO A QUALIFIED FORESTER.
- NO TITLE COMMITMENT POLICY WAS PROVIDED, THEREFORE EASEMENTS MAY EXIST THAT ARE NOT SHOWN.
- NO BOUNDARY SURVEY WAS PERFORMED BY GIFFELS–WEBSTER ENGINEERS, INC. AT TIME OF SURVEY.
- NO CERTIFICATION CAN BE MADE AS TO LIMITS OF OWNERSHIP.
- SCHEDULE OF STRUCTURE LIST ON SHEET 2.

UTILITY STATEMENT

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE.

(R) = UTILITY SHOWN FROM RECORDS OR PLANS, & FIELD LOCATED WHERE POSSIBLE.

PRIOR TO THE PLANNED BUILDING IMPROVEMENTS, AND/ OR CONSTRUCTION, THE RESPECTIVE UTILITY COMPANIES MUST BE NOTIFIED TO STAKE THE PRECISE LOCATION OF THEIR UTILITIES.

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EXISTING CONDITIONS

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City of Detroit
Wayne County
MICHIGAN

Date:	05.07.25
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Sheet:	C-200
Project:	20572.10D

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LEGEND – EXISTING

SECTION LINE	SAN. MH	GAS METER	MISC. TOPO. SHOT
E/ PAVEMENT	C.O. SAN. CLEAN OUT	GAS RISER	SURVEY CONTROL POINT
CURB	SAN. RISER	GAS VALVE	FOUND IRON
E/ GRAVEL	SAN. PUMP STATION	GAS MH	FOUND NAIL
CL ROAD	COMB. MH	TELE. RISER	F. CUT CROSS
E/ WALK	GATE VALVE	TELE. MH	SECTION COR.
RAILROAD	HYDRANT	TELE. CROSS BOX	FENCE POST
E/ BRICK	WATER VALVE	CABLE RISER	BENCHMARK
MISC. LINE	WATER METER	PAY PHONE	FOUND PIPE
FENCE	POST INDICATOR VALVE		FOUND MON.
GUARD RAIL	WELL HEAD	MANHOLE	ASPH. ASPHALT
WALL	FDC CONNECTION	SIGN	CONC. CONCRETE
BLDG. LINE	IRRIGATION CONTROL BOX	PROT. POST/GUARD POST	A.C. AIR CONDITIONER
OVERHEAD WIRES	STORM MH	GUY	G.P. GUARD POST
RAILING	CATCH BASIN	DECIDUOUS TREE	C.L.F. CHAIN–LINK FENCE
OVERHANG LINE	BEEHIVE CB	CONIFEROUS TREE	D.L. DOOR LEDGE
T/ BANK	CULVERT E.S.	DEAD TREE	F.F. FINISHED FLOOR
B/ BANK	ROOF/DOWN SPOUT	UTILITY FLAG	O.H. OVERHANG
CL DITCH/STREAM	OVERFLOW/OUTLET STRUCTURE	BLDG. CORNER (FIELD LOCATED)	F.I. FOUND IRON
SHRUB LINE	C.O. STORM CLEAN OUT	HANDICAP PARKING	S.I. SET IRON
TREE LINE	ROUND CB	WETLAND FLAG	F.I.P. FOUND IRON PIPE
WATER EDGE	LIGHT POLE	BUSH/SHRUB	M. MEASURED
WETLAND LINE	UTILITY POLE	PARKING METER	R. RECORD
STORM LINE	ELEC. TRANS.	RESIDENTIAL MAILBOX	F.M. FOUND MONUMENT
SAN. LINE	AIR CONDITIONER	U.S. MAILBOX	S.N. SET NAIL
WATER LINE	ELEC. MH	EXISTING ELEVATION	CMP CORREGATED METAL PIPE
GAS LINE	ELEC. METER		RCP REINFORCED CONCRETE PIPE
UG ELEC. LINE	ELEC. RISER	SOIL BORING	G.L. GROUND LIGHT
UG TELE. LINE	TRAFFIC CONTROL BOX	MONITORING WELL	L.S. LANDSCAPE
UG CABLE TV LINE	STEAM MH	LAWN IRRIG. HEAD	
PAINT STRIPE	PUBLIC LIGHTING MH	CENTERLINE R.R. TRACK	
COMBINED SEWER			
PLD LINE			
STEAM LINE			
ELECTRIC OVERHEAD			
TELEPHONE OVERHEAD			

SCHEDULE OF STRUCTURES

STRUCTURE	TYPE	SIZE OF PIPE	RIM	DROP	INVERT	DIRECTION	COMMENTS
267	TELEPHONE MANHOLE	T/DEBRIS	148.62	-5.54	143.08	CABLES NW / NE / SE	
275	COMBINATION MANHOLE	8"	147.48	-5.00	142.48	SOUTHWEST	NO OTHER PIPES VISIBLE / FLOW UNCLEAR
		8"		-5.01	142.47	SOUTHEAST	
		8"		-5.05	142.43	NORTHEAST	
276	COMBINATION MANHOLE	8"	147.62	-5.23	142.39	SOUTHWEST	NO OTHER PIPES VISIBLE / FLOW UNCLEAR
		8"		-5.25	142.37	NORTHEAST	
		10"		-5.03	142.59	SOUTHEAST	
292	COMBINATION MANHOLE	6"	148.08	-5.19	142.89	SOUTH	NO OTHER PIPES VISIBLE/FLOW UNCLEAR
		8"		-7.23	140.85	SOUTHWEST	
		T/8"		-7.12	140.96	SOUTHEAST	PIPE SLANTING DOWN
298	ROUND CATCH BASIN		150.01				UNABLE TO DROP / CONSTRUCTION FABRIC
327	ROUND CATCH BASIN	8"	148.99	-4.00	144.99	WEST	24" DIAMETER CONCRETE STRUCTURE
		T/DEBRIS		-4.09	144.90		NO OTHER PIPES VISIBLE / FLOWS WEST
328	STORM MANHOLE	8"	148.73	-3.75	144.98	EAST	E TO #327
		8"		-3.75	144.98	NORTHEAST	NE TO #329
		T/WATER		-4.80	143.93		NO OTHER PIPES VISIBLE / NO FLOW
		T/DEBRIS		-7.22	141.51		
329	ROUND CATCH BASIN	8"	149.17	-4.10	145.07	SOUTHWEST	TO #328 / DRY / NO OTHER PIPES VISIBLE
		6"		-4.00	145.17	WEST	
330	STORM MANHOLE	12" OPENING	149.59	-4.62	144.97		12" DIAMETER OPENING TO LARGER STRUCTURE BELOW
		T/DEBRIS		-13.90	135.69		NO OTHER PIPES VISIBLE / FLOW UNCLEAR
331	ELECTRIC MANHOLE	BOTTOM	149.61	-7.71	141.90	CABLES NE / SW	
332	ROUND CATCH BASIN	T/DEBRIS	149.35	-4.08	145.27		24" DIAMETER CONCRETE STRUCTURE / FULL OF DEBRIS NO PIPES VISIBLE
333	ROUND CATCH BASIN	12"	149.92	-4.00	145.92	NORTHEAST	
		8"		-4.32	145.60	NORTH	
		6"		-4.06	145.86	NORTHWEST	
		10"		-9.96	139.96	NORTHWEST	TO #490
		12"		-15.61	134.31	WEST	
		T/WATER		-15.61	134.31		NO OTHER PIPES VISIBLE / FLOWS WEST
340	CATCH BASIN	12"	147.91	-5.20	142.71	SOUTHEAST	TO #350 / NO OTHER PIPES VISIBLE / FLOWS SE
348	PUBLIC LIGHTING MANHOLE	T/DEBRIS	148.35	-3.09	145.26	CABLES NW / E / S / SW	
349	STEAM MANHOLE	T/PIPE	148.36	-8.02	140.34	NORTHWEST / SOUTHEAST	
		T/DEBRIS		-9.86	138.50		
350	CATCH BASIN	12"	148.25	-5.83	142.42	NORTHWEST	NO OTHER PIPES VISIBLE / FLOW UNCLEAR
		T/12"		-3.90	144.35	SOUTHEAST	BULKHEADED WITH CAP
351	ELECTRIC MANHOLE	T/DEBRIS	148.34	-10.05	138.29	NO WIRES VISIBLE	HEAVILY RECESSED ON WEST SIDE
354	GATE VALVE MANHOLE	T/PIPE	148.36	-5.58	142.78	SOUTHWEST / NORTHEAST	
		T/VALVE		-4.04	144.32		
367	CATCH BASIN		148.14				DID NOT DROP, OUT OF SCOPE
368	CATCH BASIN						DID NOT DROP, OUT OF SCOPE
369	PUBLIC LIGHTING MANHOLE	BOTTOM	148.56	-7.85	140.71	CABLES NW / NE / SW	
370	CATCH BASIN	12"	148.40	-5.58	142.82	NORTHWEST	TO #875
		T/12"		-4.45	143.95	SOUTHEAST	BULKHEADED / NO OTHER PIPES VISIBLE / NO FLOW
377	PUBLIC LIGHTING MANHOLE	BOTTOM	148.24	-4.95	143.29	CABLES NW / SE / SW	
379	ELECTRIC MANHOLE	BOTTOM	148.40	-10.30	138.10	CABLES NW / SE	
400	PUBLIC LIGHTING MANHOLE	T/DEBRIS	149.28	-6.49	142.79	CABLES NW / SE	
401	PUBLIC LIGHTING MANHOLE		148.91				DID NOT DROP / CAR PARKED ON TOP
412	PUBLIC LIGHTING MANHOLE		149.47				DID NOT DROP / CAR PARKED ON TOP
437	CATCH BASIN		147.71				DID NOT DROP, OUT OF SCOPE
452	TELEPHONE MANHOLE	BOTTOM	149.44	-10.60	138.84	CABLES NW / SE	
488	COMBINATION MANHOLE	T/18"	149.44	-15.39	134.05	NORTHEAST	
		18"		-17.60	131.84	SOUTHWEST	BROKEN PIPE / FLOWS SW?
		T/WATER		-19.15	130.29		FULL OF WATER / NO OTHER PIPES VISIBLE
489	GATE VALVE MANHOLE	T/PIPE	149.39	-5.26	144.13	NE / SW	
		T/VALVE		-3.84	145.55		
490	ROUND CATCH BASIN	10"	149.28	-9.16	140.12	NORTHEAST	
		10"		-9.62	139.66	SOUTHEAST	
		T/WATER		-8.75	140.53		
		T/DEBRIS		-10.23	139.05		NO OTHER PIPES VISIBLE / NO FLOW
505	COMBINATION MANHOLE	15"	149.84	-9.29	140.55	NORTH	
		8"		-13.93	135.91	NORTHWEST	
		18"		-16.81	133.03	NORTHEAST / SOUTHWEST	CENTERLINE CHANNEL FLOWS SW
506	COMBINATION MANHOLE	18"	149.47	-13.65	135.82	NORTHEAST	
		15"		-13.55	135.92	NORTHWEST	DEBRIS IN PIPE
		18"		-13.96	135.51	SOUTH	NO OTHER PIPES VISIBLE / FLOWS SOUTH
507	ROUND CATCH BASIN	10"	149.53	-8.13	141.40	SOUTHWEST	TO #490
		8-10"		-7.83	141.70	SOUTHEAST	TO FIELD
		T/WATER		-8.18	141.35		
		T/DEBRIS		-8.58	140.95		NO OTHER PIPES VISIBLE / FLOWS SW
527	CATCH BASIN	12" OPENING	148.47	-4.20	144.27		12" DIAMETER OPENING TO LARGER STRUCTURE BELOW
		T/DEBRIS		-11.67	136.80		NO OTHER PIPES VISIBLE / FLOW UNCLEAR
528	COMBINATION MANHOLE	18"	149.09	-14.10	134.99	NORTHEAST / SOUTHWEST	CENTERLINE CHANNEL FLOWS SW
529	COMBINATION MANHOLE	8-10"	149.30	-13.24	136.06	NORTHWEST	
		10"		-7.50	141.80	NORTHEAST	
		8"		-6.37	142.93	NORTH	
		18"		-14.14	135.16	NORTHEAST / SOUTHWEST	CENTERLINE CHANNEL FLOWS SW
530	ELECTRIC MANHOLE	T/DEBRIS	148.74	-6.86	141.88	CABLES NE / SW	
585	ROUND CATCH BASIN		149.25				DID NOT DROP, OUT OF SCOPE
785	ROUND CATCH BASIN	4"	149.16	-4.73	144.43	WEST	
		T/DEBRIS		-4.73	144.43		NO OTHER PIPES VISIBLE / DRY
875	CATCH BASIN	12"	148.00	-4.65	143.35	SOUTHEAST	TO #370 / NO OTHER PIPES VISIBLE / FLOWS SE
876	TELEPHONE MANHOLE	BOTTOM	148.38	-8.85	139.53	CABLES NW /SE	

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SCHEDULE OF STRUCTURES

WSU Keast Commons

City of Detroit
Wayne County
MICHIGAN

Date:	05.07.25
Scale:	NA
Sheet:	C-201
Project:	20572.10D

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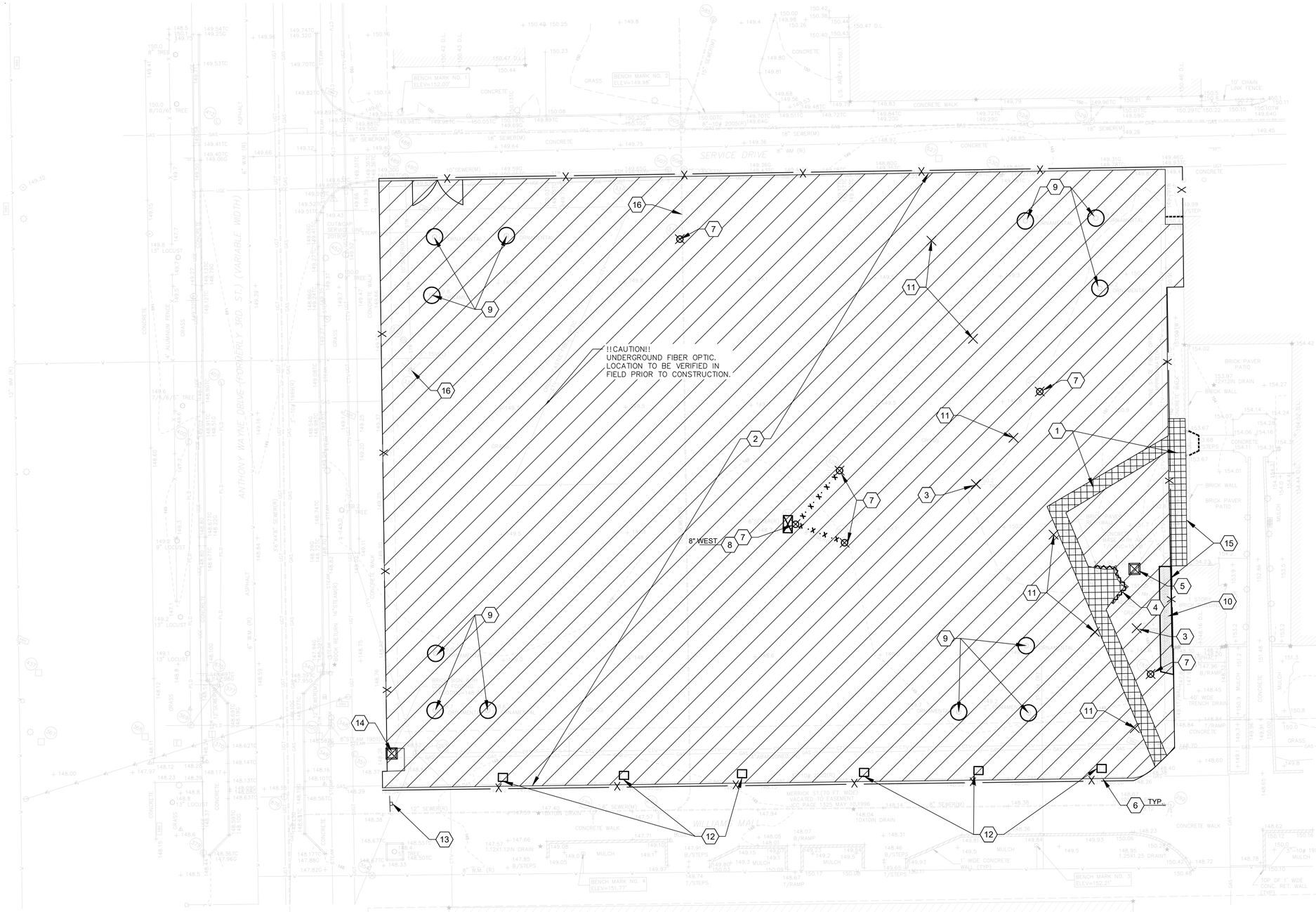
DEMOLITION PLAN - NOTES

1. SEE SHEET C-1.0 FOR ADDITIONAL PROJECT NOTES AND LEGEND INFORMATION.
2. SITE CLEARING INCLUDES THE REMOVAL AND DISPOSAL OF ANY OF THE FOLLOWING MATERIALS: SURFACE DEBRIS, PLANT LIFE, GRASS, TREES, SHRUBS, ROOT SYSTEMS, AND TOPSOIL. DISPOSAL SHALL COMPLY WITH LOCAL AND STATE LAWS AND ORDINANCES.
3. THE CONTRACTOR SHALL REMOVE AND STOCKPILE ALL STREET SIGNS WITHIN LIMITS OF CONSTRUCTION AND REPLACE ALL STREET SIGNS IN THEIR ORIGINAL LOCATION AT END OF CONSTRUCTION. SIGNS TO BE RELOCATED SHALL BE INSTALLED PER MMUTCD STANDARDS AND REQUIRE APPROVAL BY THE ENGINEER.
4. TOP OF CAST ELEVATION OF ALL EXISTING UTILITY STRUCTURES LOCATED WITHIN THE RIGHT-OF-WAY SHALL BE ADJUSTED AS REQUIRED TO MATCH THE FINISHED GRADE OF NEW PAVING.
5. SIDEWALK AND PAVING TO BE REMOVED WITHIN THE RIGHT-OF-WAY SHALL BE SCHEDULED AND COORDINATED WITH NEW PAVING TO MINIMIZE INCONVENIENCE TO PEDESTRIAN AND VEHICULAR TRAFFIC.
6. THE CONTRACTOR SHALL CLEAN ALL NEW CATCH BASINS, DRAIN INLETS AND DRAIN LINES IMMEDIATELY AFTER THEY HAVE BEEN INSTALLED. ALL NEW AND EXISTING CATCH BASINS, DRAIN INLETS AND DRAIN LINES SHALL BE CLEANED IMMEDIATELY PRIOR TO PROJECT COMPLETION.
7. PROVIDE SEDIMENT CONTROL AT ALL STRUCTURES TO PREVENT SILT/DEBRIS FROM ENTERING INTO UNDERGROUND STRUCTURES. SEDIMENT CONTROL SHALL REMAIN IN SERVICE AND BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION. SEE THE SESC PLAN FOR DETAILS.



DEMOLITION LEGEND

- REMOVE EXISTING LIGHT POLE
- REMOVE STRUCTURE
- CLEAR VEGETATION
- REMOVE CONCRETE
- OPEN CUT REMOVE PIPE
- CUT AND BULKHEAD PIPE
- ABANDON PIPE
- REMOVE RETAINING WALL
- REMOVE GRAVEL
- CONSTRUCTION FENCING
- PEDESTRIAN BARRICADE
- REMOVE AND SALVAGE ART
- SALVAGE TREE
- REMOVE EXISTING CEDARS

DEMOLITION PLAN - KEY NOTE LEGEND

1. REMOVE AND DISPOSE OF CONCRETE PAVEMENT, TYPICAL
2. CLEAR AREA OF GRASS, BRUSH AND/OR DEBRIS, TYPICAL
3. REMOVE AND DISPOSE OF EXISTING TREE, STUMP OR SHRUB, TYPICAL
4. EXISTING RETAINING WALL TO BE REMOVED
5. SALVAGE AND RELOCATE EXISTING SCULPTURE AND SIGN. CONCRETE BASE/FOUNDATION TO BE REMOVED.
6. INSTALL 6' HIGH CONSTRUCTION FENCE WITH WINDSCREEN. LOGOS ON WINDSCREEN TO BE COORDINATED WITH WAYNE STATE
7. REMOVE EXISTING DRAINAGE STRUCTURE.
8. CUT AND BULKHEAD OUTLET PIPE. SEE DETAIL 3/C-701
9. EXISTING TREE TO BE REMOVED FOR TRANSPLANT, SAFELY STORED ON SITE, AND HEALTH MAINTAINED UNTIL READY FOR FINAL PLANTING LOCATION.
10. REMOVE EXISTING CEDARS
11. REMOVE AND SALVAGE EXISTING LIGHT POLE AND FIXTURES. POLES AND FIXTURES TO BE RETURNED TO WSU MAINTENANCE YARD.
12. EXISTING LIGHT POLES TO BE PROTECTED, MAINTAINED, AND OPERATIONAL. CHECK ELECTRICAL PLANS
13. PROPOSED "NO CONSTRUCTION TRAFFIC" SIGN ; SEE DETAIL 1/C-700
14. REMOVE AND SALVAGE TOP OF KIOSK FOR RE-INSTALLATION. REMOVE BRICK BASE AND FOUNDATION
15. PROTECT EXISTING BUILDING AND WALLS DURING ALL STAGES OF CONSTRUCTION
16. PERFORM SEWER TELEVISING ON SEWER AND CONFIRM OUTLET DIRECTIONS AND ELEVATIONS

N

0 20' 40'

SCALE: 1" = 20'

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DEMOLITION PLAN

WSU Keast Commons

City of Detroit
Wayne County
MICHIGAN

Date:	05.07.25
Scale:	1"=20'
Sheet:	C-300
Project:	20572.10D

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EROSION AND SEDIMENT CONTROL PLAN -NOTES

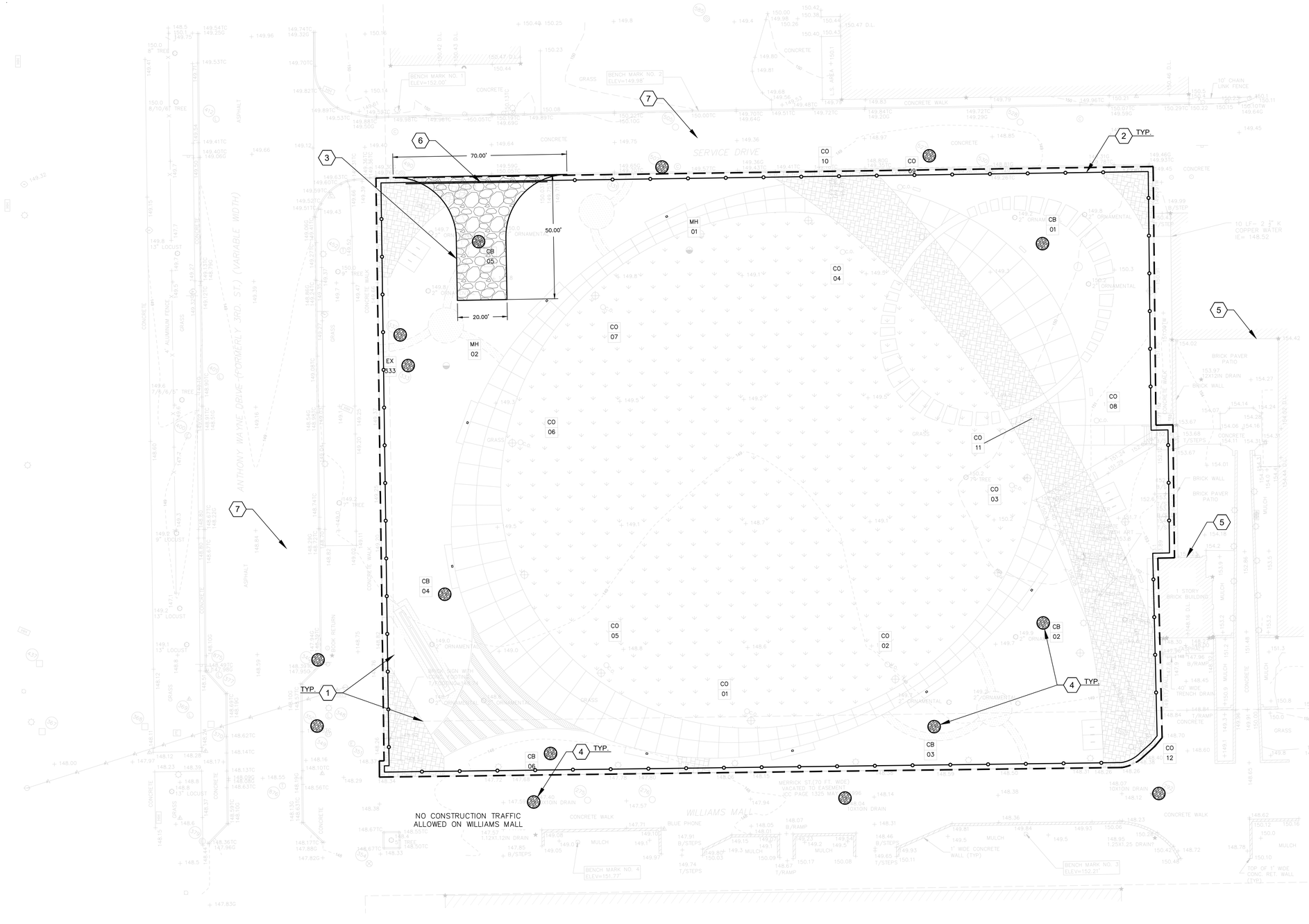
1. SEE SHEET C100 FOR GENERAL LEGEND AND ADDITIONAL NOTES.
2. SEE SHEET C-700 FOR SESC DETAILS..
3. SOIL EROSION CONTROL MEASURES ARE SHOWN FOR THE INITIAL DEMOLITION AND MASS GRADING PHASES OF THE PROJECT. THE CONTRACTOR SHALL MAINTAIN AND ADJUST THESE MEASURES AS OTHER PHASES OF CONSTRUCTION (I.E. BUILDINGS AND PAVEMENTS) ARE UNDERTAKEN TO ENSURE THAT ALL SEDIMENT IS CONTAINED ON-SITE.
4. THE DEVELOPMENT OF THIS SITE SHALL NOT RESULT IN ANY INCREASE IN DUST, ODOR, SMOKE, FUMES, NOISE, LIGHTS, OR OTHER OBJECTIONABLE FEATURES.

SOIL EROSION AND SEDIMENTATION CONTROL SEQUENCE

1. INSTALL MUD MATS, SILT FENCE AND INLET FILTERS AT ALL EXISTING LOCATIONS AS SHOWN AND AS REQUIRED TO ACHIEVE ON-SITE CONTAINMENT.
2. INSTALL STORM SEWER AND ALL ASSOCIATED STORM WATER IMPROVEMENTS AS SHOWN ON PLANS. IMMEDIATELY INSTALL INLET FILTERS AT ALL CATCH BASINS.
3. ROUGH GRADE THE PROJECT "WORK AREA" AS NEEDED.
4. INSTALL OTHER UTILITIES (GAS, ELECTRIC, PHONE, CABLE, ETC.) AND/OR ALL NEEDED CONDUITS AND SLEEVES.
5. INSTALL PAVEMENT BACKFILL AND SEED & MULCH ALL DISTURBED AREAS.
6. CLEAR ALL ACCUMULATED SILT AND REMOVE ALL EROSION AND SEDIMENT CONTROL DEVICES.
7. INSTALL LANDSCAPING MATERIALS AS INDICATED PER PLANS & RE-SEED, FERTILIZE AND MULCH ALL DISTURBED AREAS.

SOIL EROSION QUANTITY TABLE	
DESCRIPTION	QUANTITY
SEDIMENT CONTROL FENCE	1,048 LF
SEDIMENT INLET FILTER	15 EACH
MUD MAT	1 EACH

STREET CLEANING SCHEDULE							
	SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY (IF WORKING)
SCRAPE STREETS		√	√	√	√	√	√
SWEEP STREETS				√			



EROSION AND SEDIMENT CONTROL PLAN - LEGEND

SEDIMENT INLET FILTER

SEDIMENT CONTROL FENCE

MUD MAT ENTRANCE

EROSION AND SEDIMENT CONTROL PLAN - KEY NOTES

1. EXISTING RIGHT-OF-WAY LINE, TYP
2. PROVIDE, INSTALL AND MAINTAIN SEDIMENT CONTROL FENCE DURING CONSTRUCTION. SEE DETAIL 2/C-700
3. PROVIDE, INSTALL, AND MAINTAIN AGGREGATE MUD MAT. SEE DETAIL 3/C-700
4. PROVIDE, INSTALL AND MAINTAIN SEDIMENT INLET FILTER DURING CONSTRUCTION. SEE DETAIL 4/C-700
5. PROTECT BUILDING DURING CONSTRUCTION
6. PROPOSED CONSTRUCTION GATE
7. STREET SWEEPING TO BE PERFORMED. SEE STREET CLEANING SCHEDULE, THIS PAGE

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SOIL EROSION AND SEDIMENT CONTROL PLAN

WSU Keast Commons

City of Detroit
Wayne County
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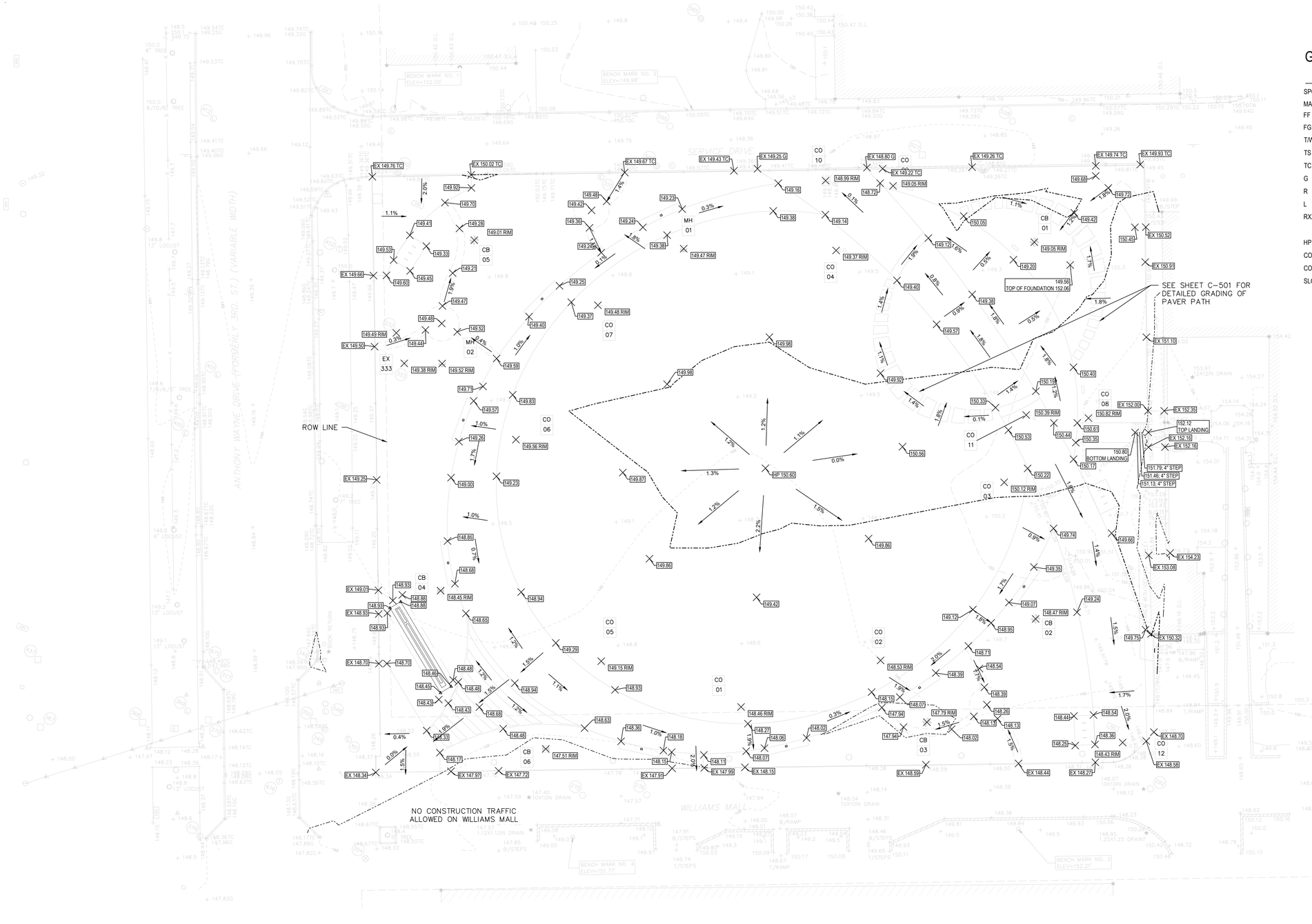
GRADING PLAN - NOTES

1. SEE SHEET C-100 FOR ADDITIONAL PROJECT NOTES AND INFORMATION.
2. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY IF ANY CONFLICT OR DISCREPANCY IS IDENTIFIED WITH NEW FINISHED GRADES.
3. THE CONTRACTOR SHALL VERIFY ALL EXISTING GRADES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY IF ANY CONFLICT OCCURS WHERE NEW FINISHED GRADES MATCH OR TIE-INTO EXISTING GRADES.
4. PAVEMENT SLOPE OF ALL ADA ACCESSIBLE ROUTES SHALL BE IN ACCORDANCE WITH ADA STANDARDS FOR ACCESSIBLE DESIGN.
5. THE CROSS SLOPE OF ALL ADA ACCESSIBLE ROUTES SHALL NOT EXCEED 1 IN 50 (2%) AND THE RUNNING SLOPE OF ALL ADA ACCESSIBLE ROUTES SHALL NOT EXCEED 1 IN 20 (5%).
6. THE CONTRACTOR SHALL PROVIDE A MINIMUM 5' LANDING AT THE TOP AND BOTTOM OF ALL DOORS, STAIRS, ADA RAMPS AND FENCE GATES IN ACCORDANCE WITH ADA STANDARDS FOR ACCESSIBLE DESIGN. THE LANDING SLOPE SHALL NOT EXCEED 1 IN 50 (2%) IN ALL DIRECTIONS.
7. ALL NEW PAVING AND STREET REPAIRS WITHIN THE RIGHT-OF-WAY SHALL COMPLY WITH CITY OF DETROIT STANDARDS.
8. ALL PAVEMENT AND GRASSY AREAS SHALL DIRECT RUNOFF TO CATCH BASIN OR DRAIN INLET STRUCTURES WITHOUT ANY PONDING OR BIRDBATHS. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY IF ANY PONDING OR BIRDBATHS SHALL OCCUR.
9. THE CASTING OF ALL EXISTING STRUCTURES INVOLVED IN THE SCOPE OF CIVIL WORKS SHALL BE FIELD ADJUSTED AND FLUSH WITH THE FINISHED GRADE OF NEW PAVING.
10. THE CONTRACTOR SHALL SUBMIT A JOINTING PLAN DETAILING ALL JOINTS BASED ON ACI GUIDELINES FOR REVIEW AND APPROVAL BY THE ENGINEER PRIOR TO PLACING CONCRETE.



GRADING PLAN - GRADING LEGEND

	EXISTING	PROPOSED
SPOT ELEVATION	× 150.23	× XXX.XX
MATCH EXISTING GRADE		× EX XXX.XX
FF		FINISHED FLOOR
FG		FINISHED GRADE
T/WALL		TOP OF WALL
TS		TOP OF STEP
TC		TOP OF CURB
G		GUTTER
R		ADA RAMP, SLOPE </= 8.33%
L		ADA LANDING, SLOPE </= 2%
RXX.X'		RADIUS OF A CURVE, MEASURED FROM FACE OF CURB
HP		HIGH POINT
CONTOUR MINOR		
CONTOUR MAJOR		
SLOPE, IN PERCENTAGE		0.6%

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GRADING PLAN

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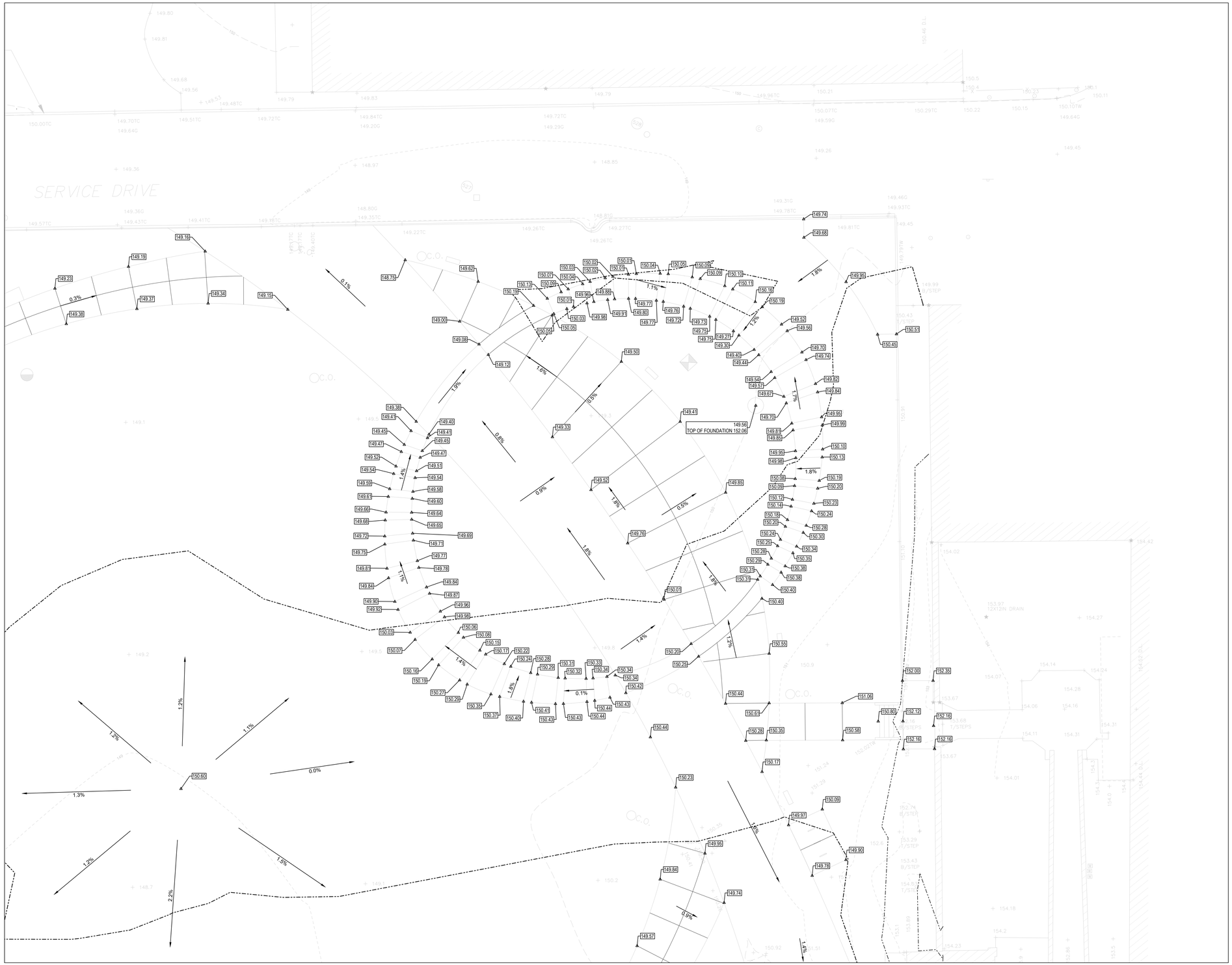
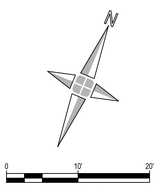


GRADING PLAN - GRADING LEGEND

	EXISTING	PROPOSED
SPOT ELEVATION	× 150.23	× XXX.XX
MATCH EXISTING GRADE		× EX XXX.XX
FF		FINISHED FLOOR
FG		FINISHED GRADE
T/WALL		TOP OF WALL
TS		TOP OF STEP
TC		TOP OF CURB
G		GUTTER
R		ADA RAMP, SLOPE </= 8.33%
L		ADA LANDING, SLOPE </= 2%
RXX.X'		RADIUS OF A CURVE, MEASURED FROM FACE OF CURB
HP		HIGH POINT
CONTOUR MINOR		
CONTOUR MAJOR		
SLOPE, IN PERCENTAGE		0.6%



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PAVER PATH GRADING DETAIL

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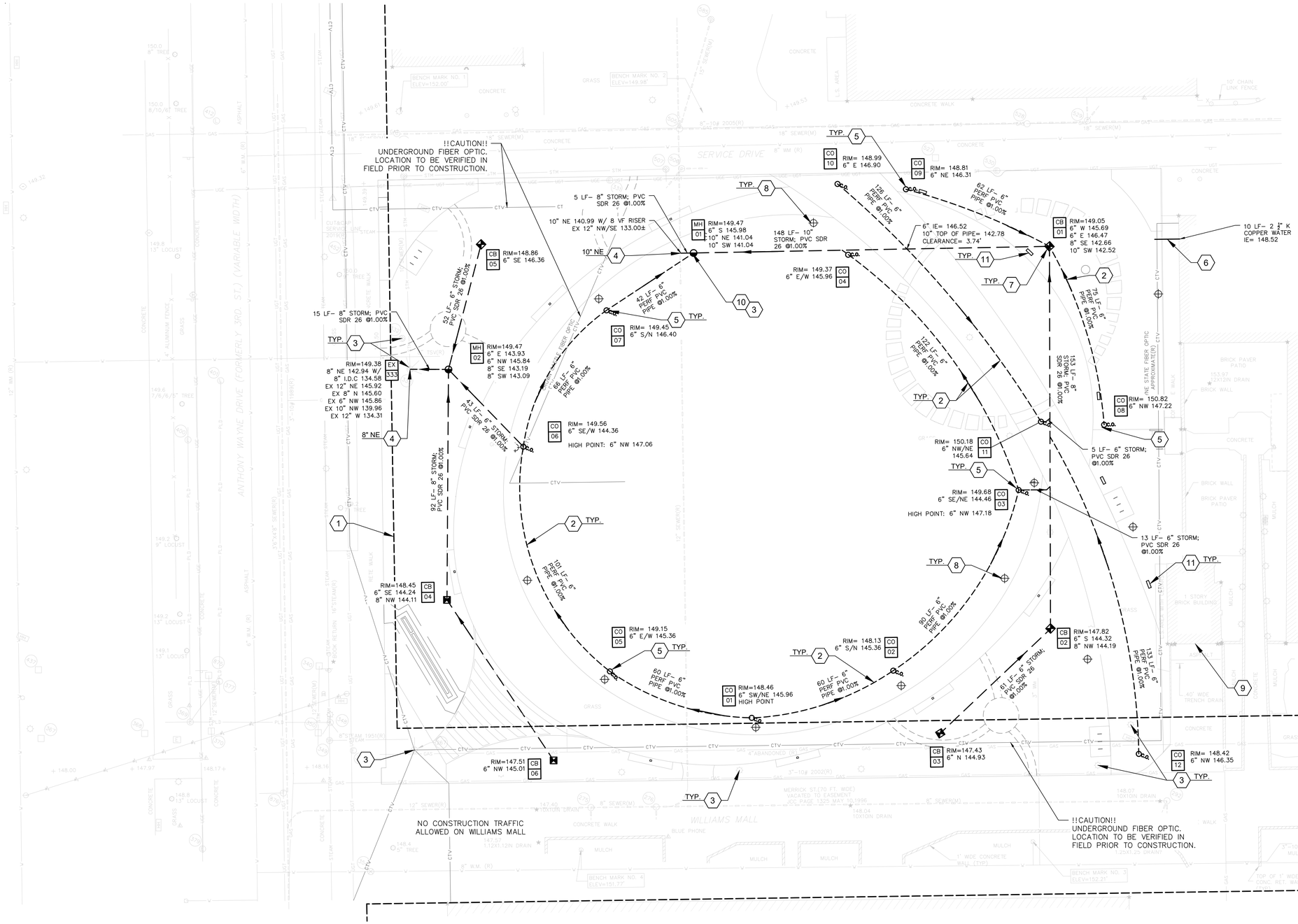
UTILITY PLAN - LEGEND

STORM SEWER
SANITARY SEWER
PERFORATED DRAIN
WATER SERVICE
UNDERGROUND ELECTRIC (UGE)
GAS SERVICE (GAS)
COMMUNICATIONS (CTV)
YARD HYDRANT
STOP BOX AND VALVE
FIRE DEPARTMENT CONNECTION
WATER METER

YARD DRAIN
SANITARY SEWER DRAIN
STORM CLEANOUT
STORM MANHOLE



UTILITY PLAN - KEY NOTES

1. EXISTING RIGHT OF WAY
2. PERFORATED UNDERDRAIN, SIZE INDICATED ON PLANS, SEE DETAIL 5/C-700. COORDINATE UNDERDRAIN WITH PROPOSED ELECTRICAL AND IRRIGATION.
3. PROTECT UTILITY STRUCTURE THROUGHOUT CONSTRUCTION
4. BLIND TAP EXISTING MANHOLE OR SEWER. FIELD VERIFY LOCATION AND CONFIRM ELEVATIONS. SEE DETAILS 6/C-700 & 7/C-700
5. PROVIDE AND INSTALL STORM CLEAN OUT, SEE DETAIL 8/C-700
6. WATER FOR IRRIGATION TO COME FROM INTERNAL PLUMBING; SEE IR-100 FOR IRRIGATION PLAN
7. INSTALL ADS NYLOPLAST 24" DIAMETER DRAIN AND COVER, SEE DETAIL 1/C-701
8. PROPOSED LIGHT POLE, SEE ELECTRICAL PLAN E-004
9. PROTECT EXISTING BUILDING DURING CONSTRUCTION
10. PROPOSED STORM MANHOLE, SEE DETAIL 9/C-700
11. ELECTRICAL PEDESTAL. SEE ELECTRICAL PLAN E-004.

NOTE:
1. SEE ELECTRICAL PLAN FOR ELECTRICAL CONNECTIONS, LIGHTING, AND POWER PEDESTALS

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UTILITY PLAN

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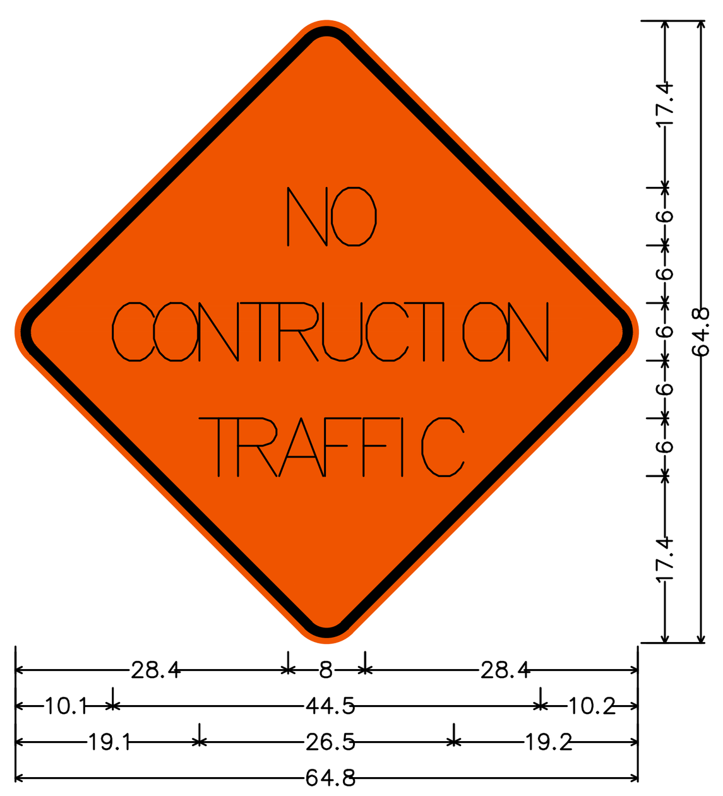


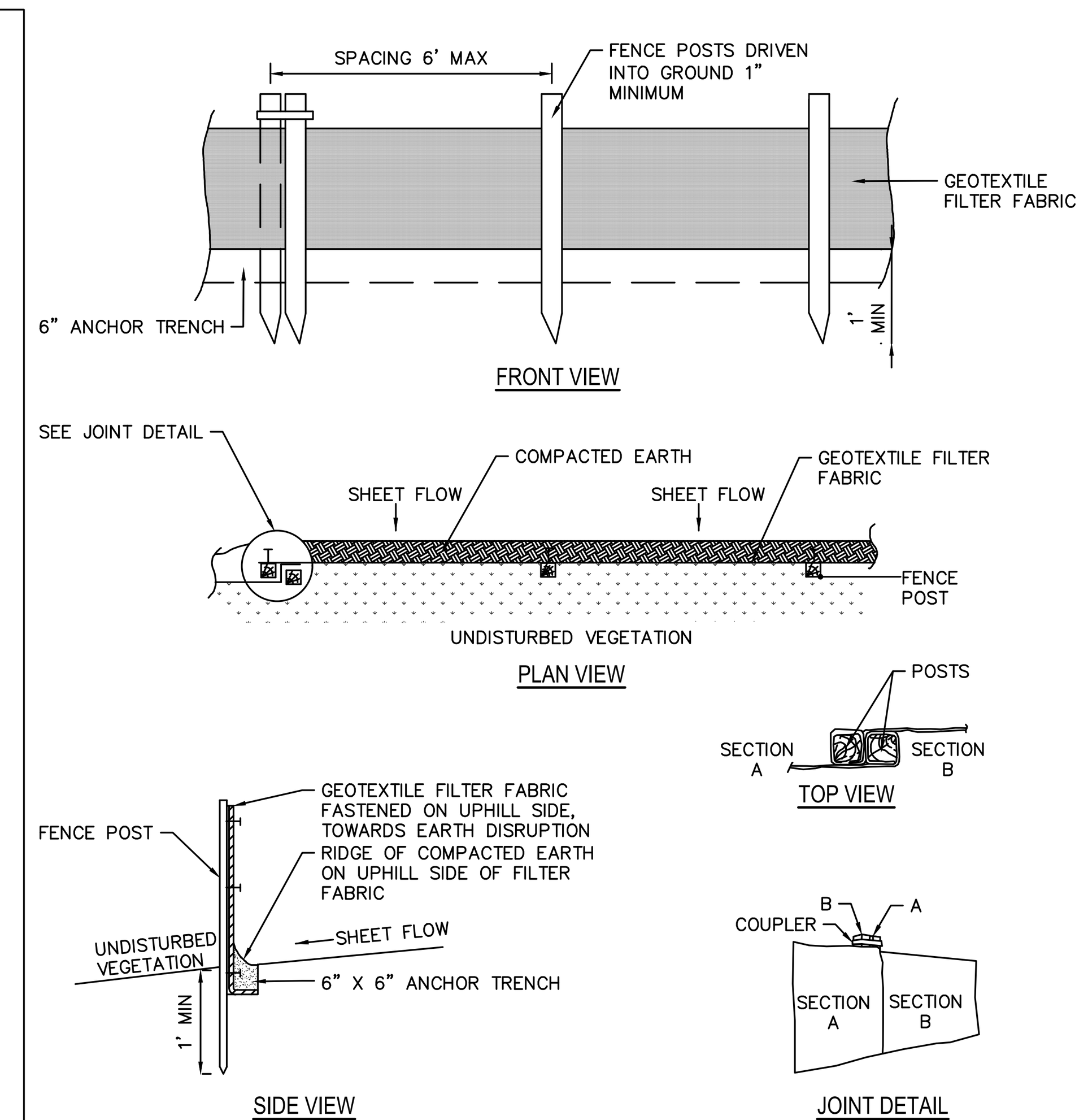
48.0" across sides 3.8" Radius, 0.9" Border, 0.6" Indent, Black on Orange; "NO", C; "CONTRUCTION", C; "TRAFFIC", C;
Table of letter and object lefts

N	O
28.4	32.9

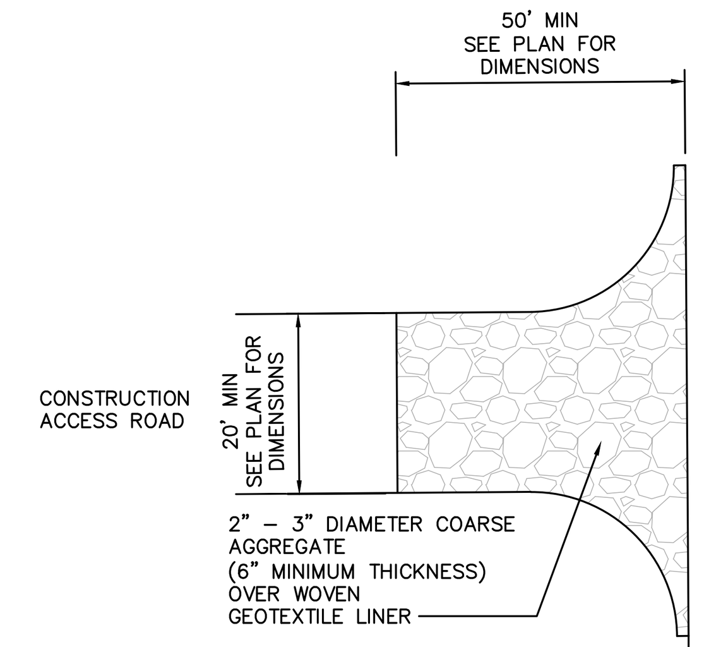
C	O	N	T	R	U	C	T	I	O	N
10.1	14.4	19.2	23.4	27.5	32.0	36.6	40.5	44.5	46.6	51.4

T	R	A	F	F	I	C
19.1	23.2	27.5	32.2	36.2	40.2	42.3

(1) NO CONSTRUCTION TRAFFIC SIGN
NTS



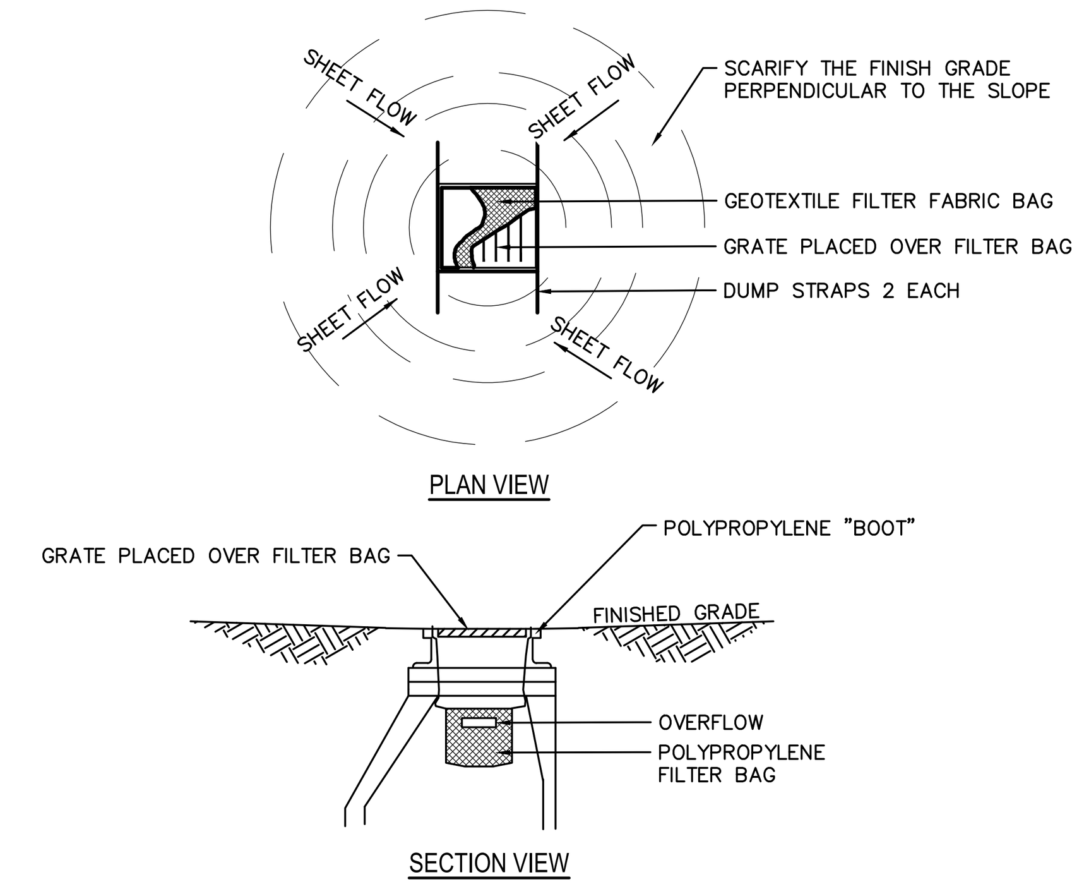
(2) SEDIMENT CONTROL FENCE
NTS



NOTE:

1. ENSURE MUDMAT AND SEDIMENT IS NOT TRANSPORTED ONTO PAVED ROADS. AGGREGATE PAD REQUIRED TO PROVIDE BUFFER AREA FOR VEHICLES TO DROP MUD AND SEDIMENT THEREBY CONTROLLING DUST AND SEDIMENT FROM SURFACE RUNOFF.
2. INSTALL AND MAINTAIN AS SPECIFIED ON SOIL EROSION AND SEDIMENTATION CONTROL PLAN.

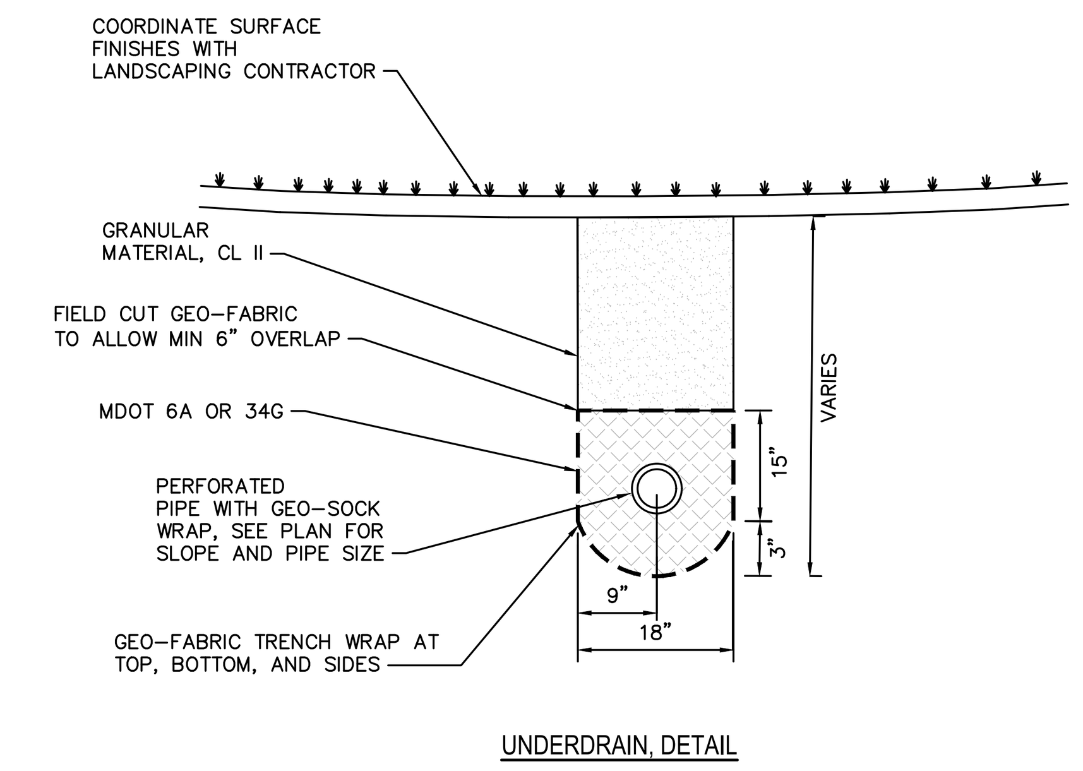
(3) AGGREGATE MUD MAT
NTS



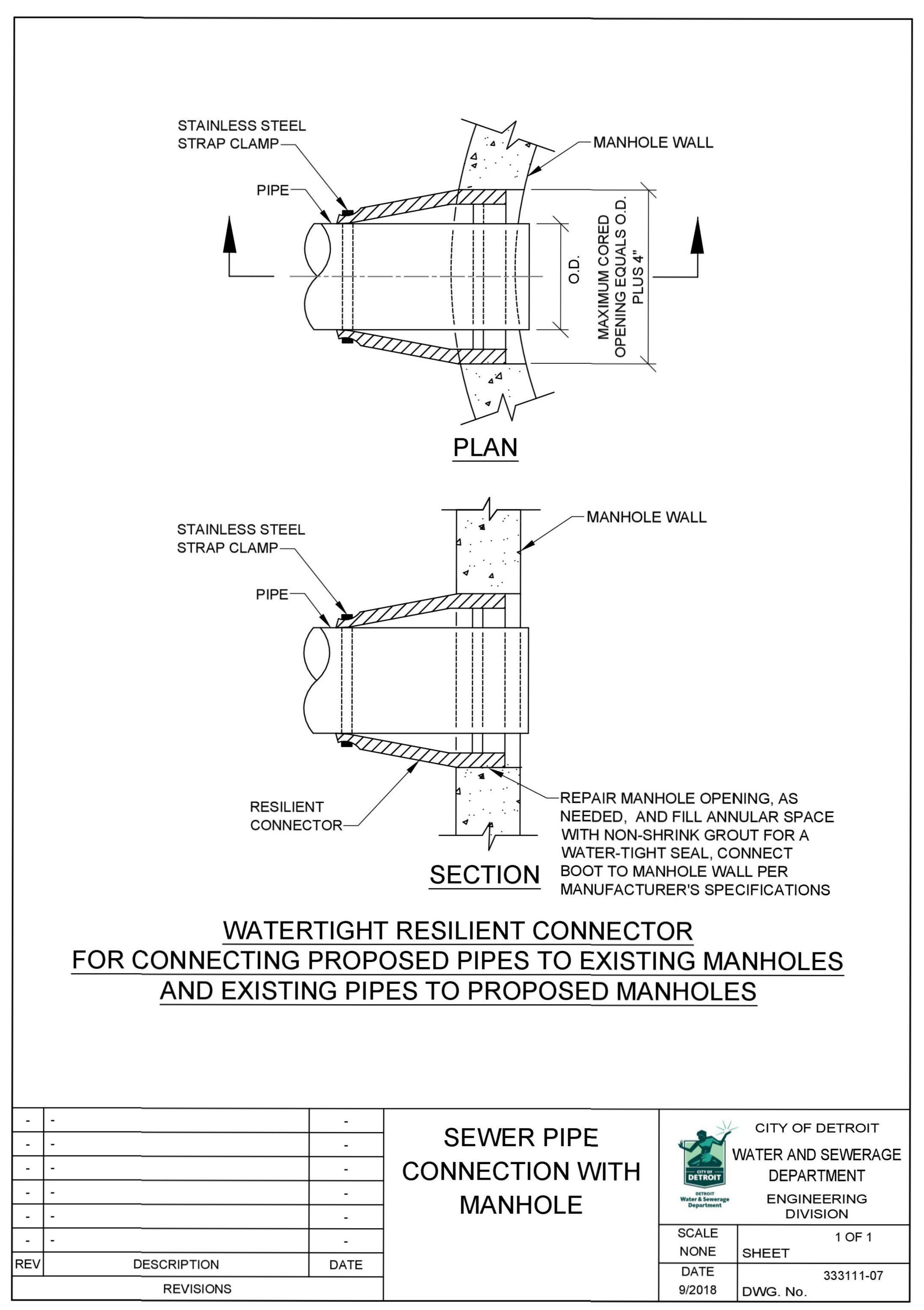
NOTE:

1. TEMPORARY SEDIMENT INLET FILTER TO BE INSTALLED ON ALL PAVED CATCH BASINS OR STORM INLETS, OR AS SPECIFIED ON THE SOIL EROSION CONTROL PLAN.
2. INLET FILTER TO BE SIMILAR TO "STREAMGUARD" AS MANUFACTURED BY STORMWATER SERVICES CORPORATION OR "SILTSACK" AS MANUFACTURED BY ATLANTIC CONSTRUCTION FABRICS, INC..
3. CLEAN FILTER AS NEEDED, OR AS REQUIRED BY THE SOIL EROSION AND SEDIMENT CONTROL PLAN.

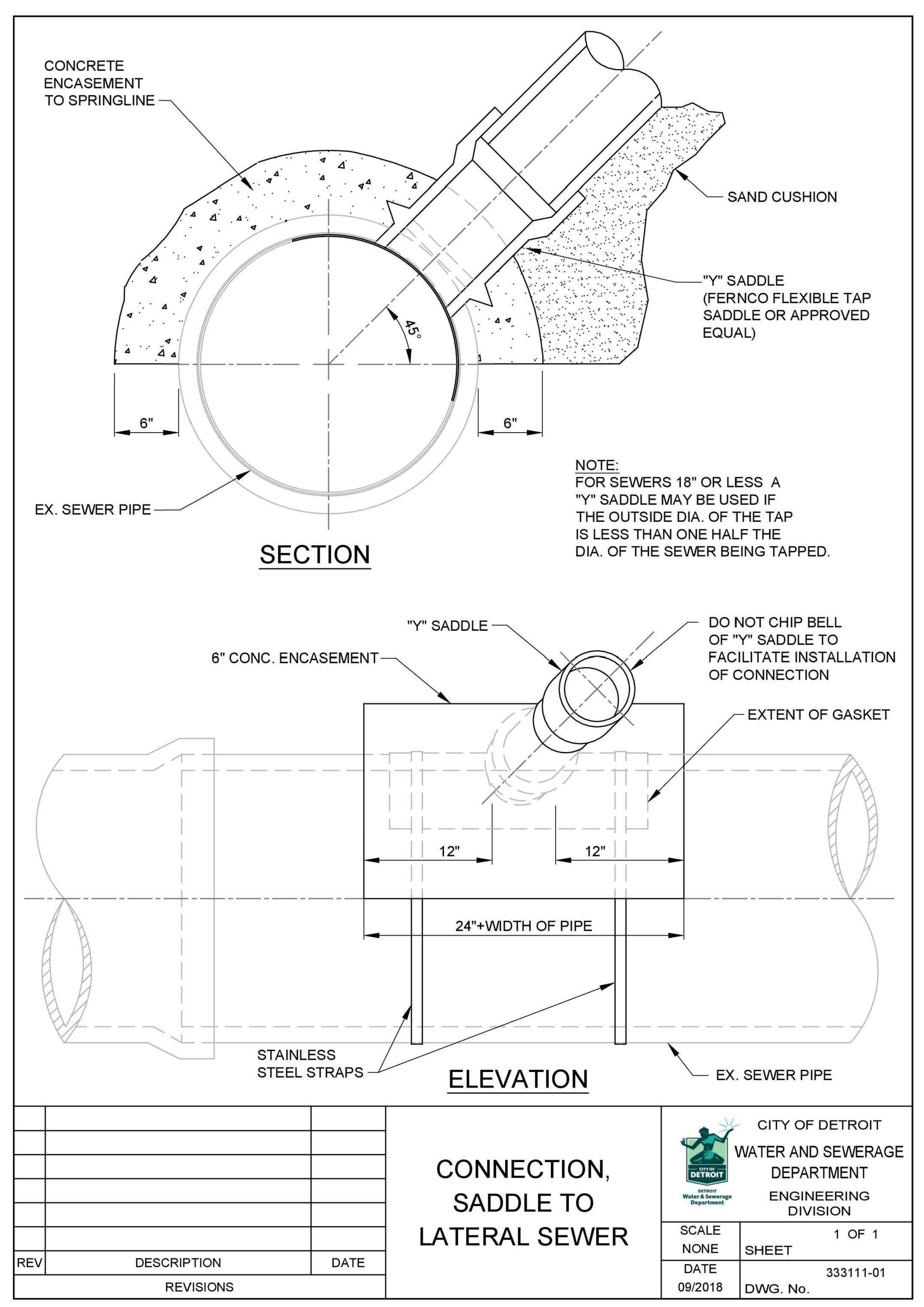
(4) SEDIMENT INLET FILTER
NTS



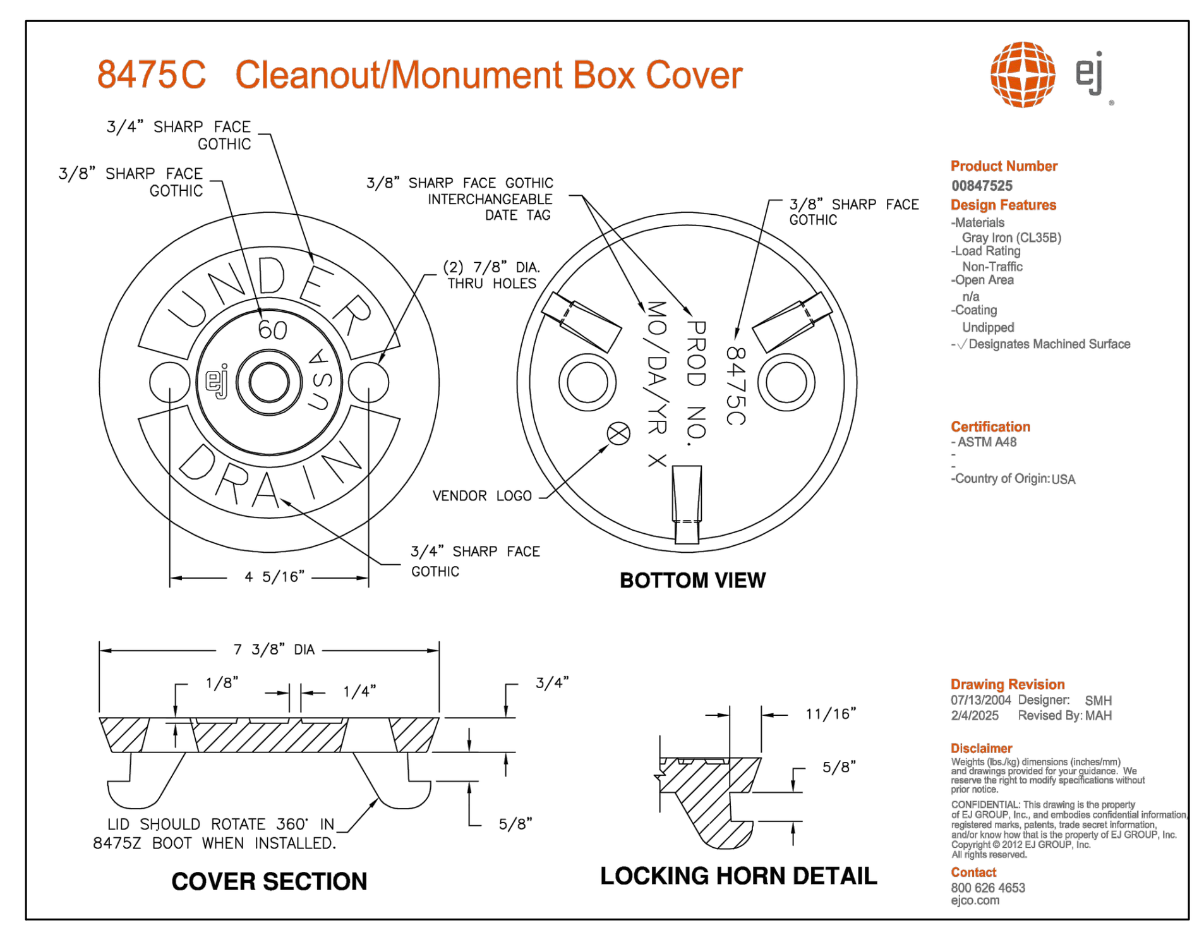
(5) UNDERDRAIN
NTS

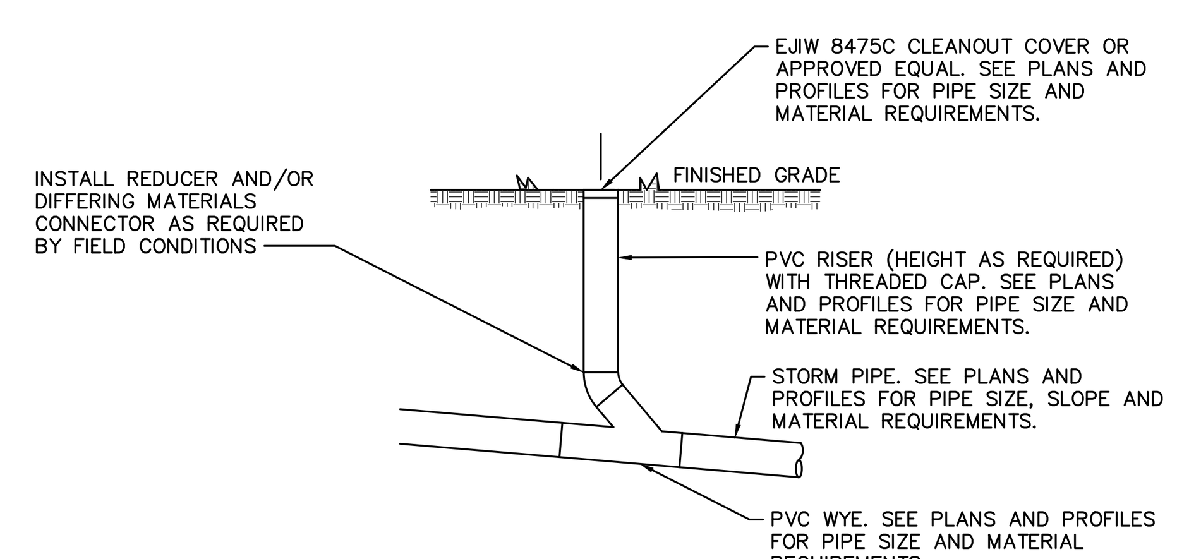


(6) SEWER PIPE CONNECTION WITH MANHOLE
NTS

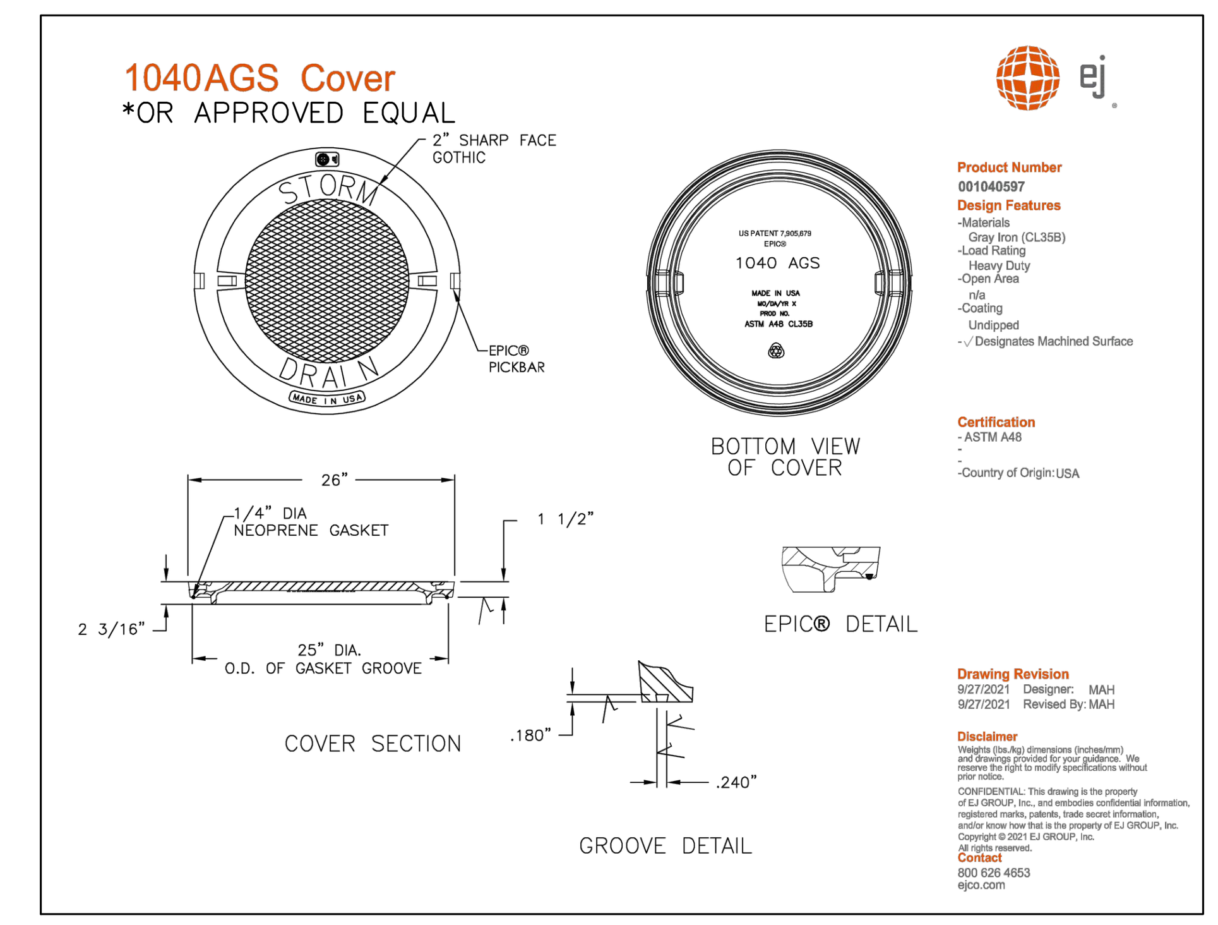


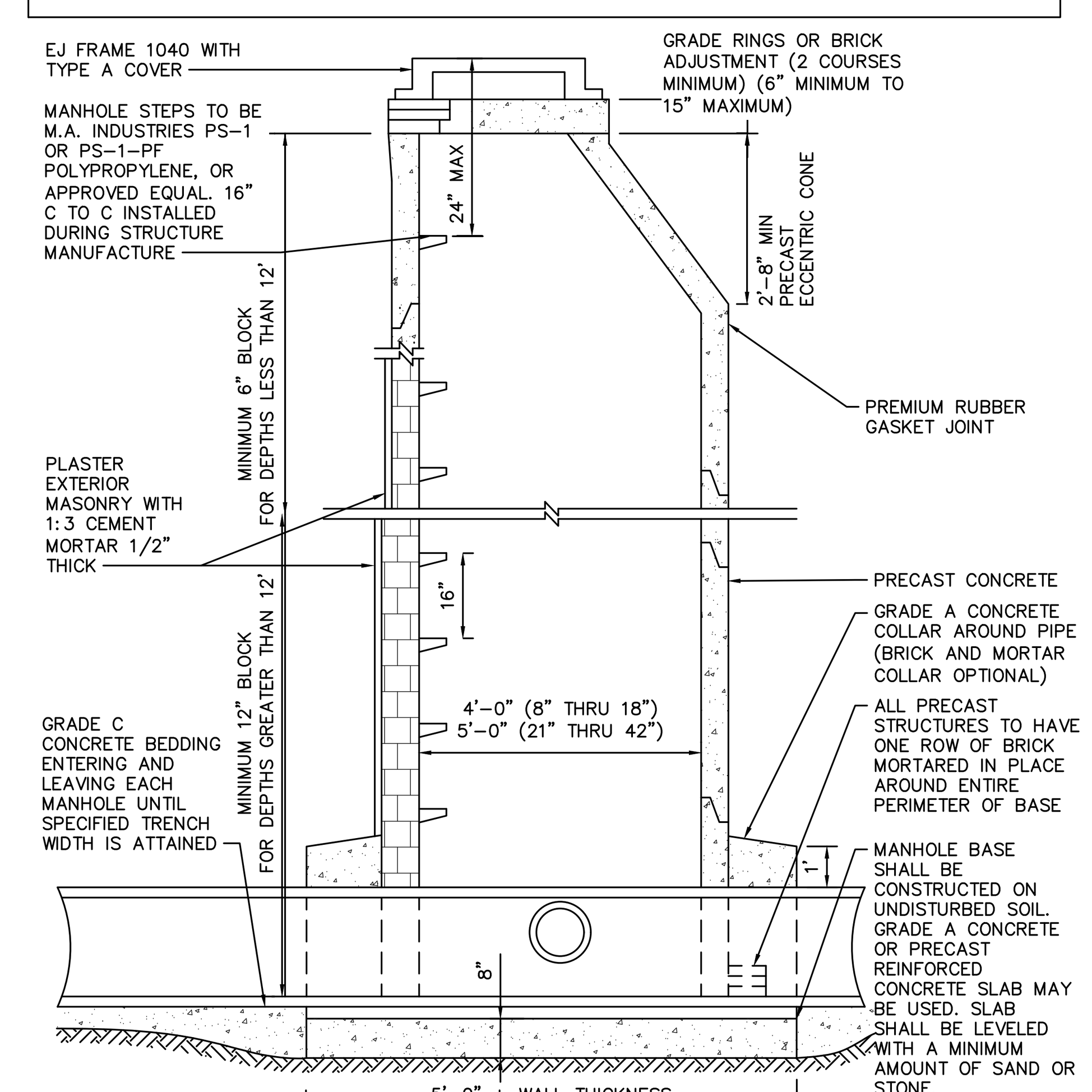
(7) CONNECTION SADDLE TO LATERAL SEWER
NTS





(8) STORM CLEANOUT
NTS





(9) STORM MANHOLE
NTS

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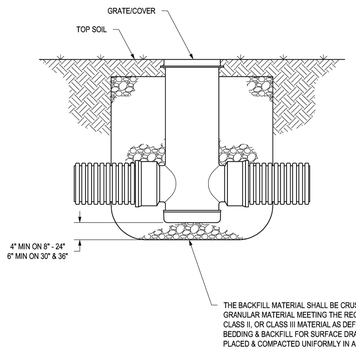
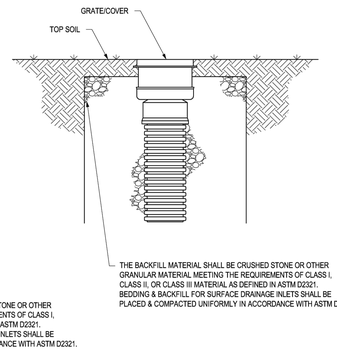
NON TRAFFIC INSTALLATION

DRAIN BASIN



INLINE DRAIN



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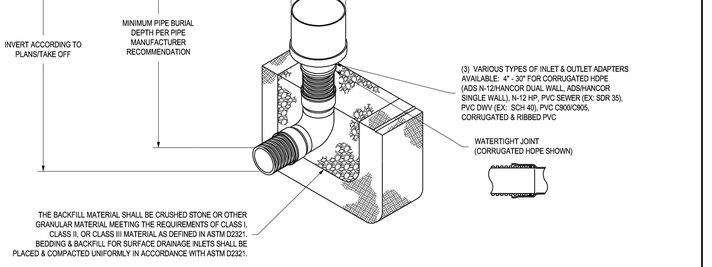
NYLOPLAST INLINE DRAIN WITH DOME GRATE



1 - 8" - 30" DOME GRATES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05.
2 - DRAINAGE CONNECTON STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE (ADS N-12/HANCOR DUAL WALL), N-12 HP, & PVC SEWER (4" - 24").
3 - 8" - 30" DOME GRATES HAVE NO LOAD RATING

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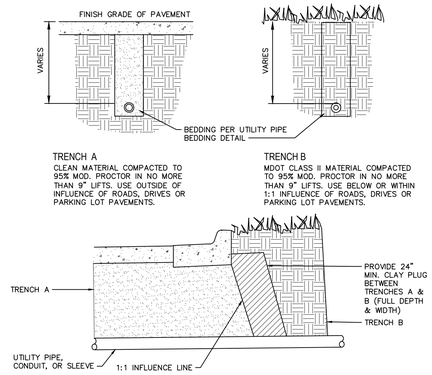
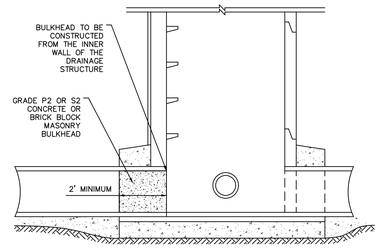
1 INLET DRAIN WITH DOME GRATE
NTS



NOTE:

1. CONDUIT AND SLEEVES SHALL BE PLACED A MINIMUM OF 42 INCHES BELOW FINISH GRADE UNLESS OTHERWISE NOTED.

2 TRENCH BACKFILL
NTS



3 PIPE BULKHEAD
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DETAILS

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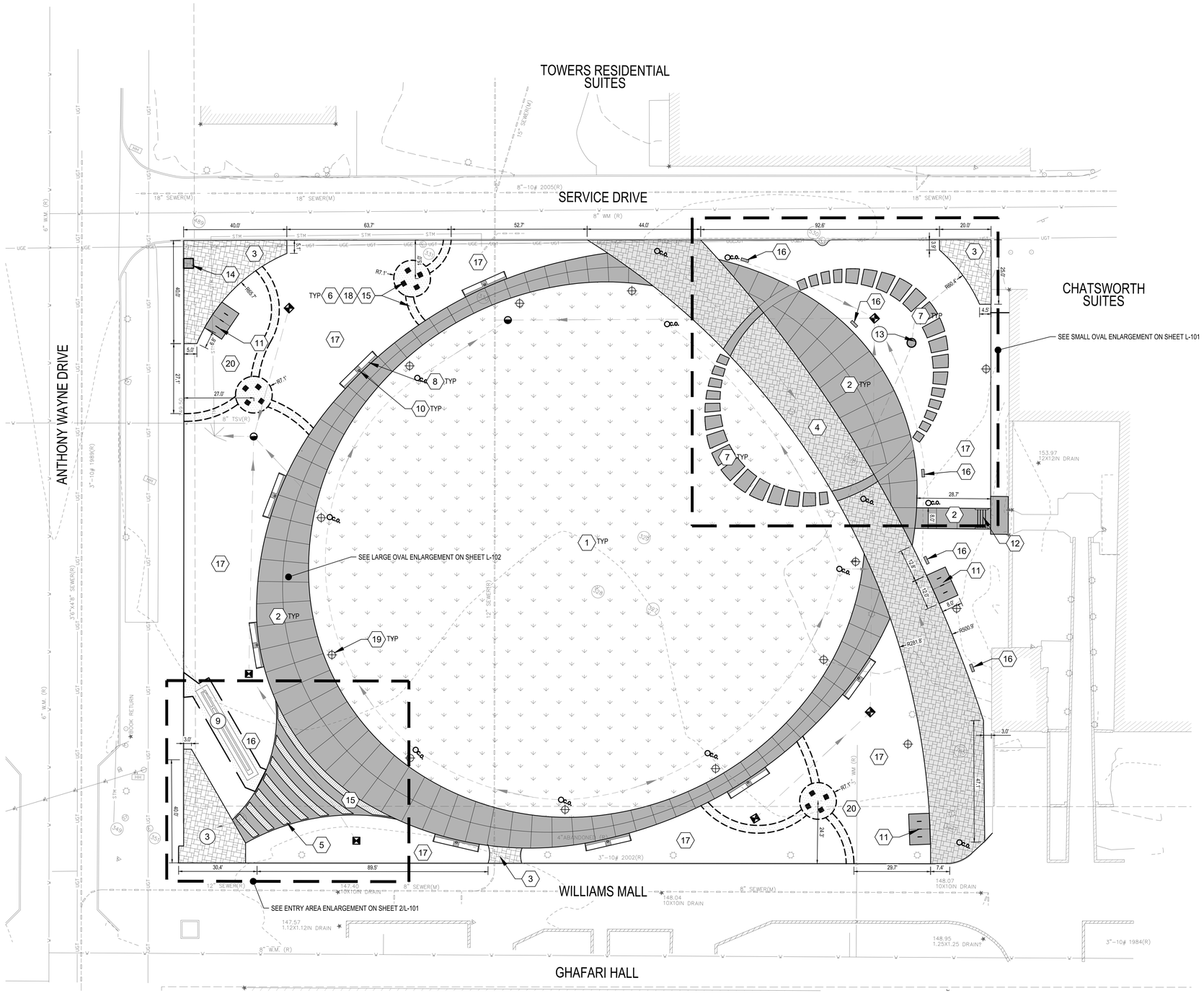

LAYOUT & MATERIALS PLAN - KEY NOTES

1. SOD - SEE DETAIL 6/L-500
2. 8" CONCRETE PAVEMENT - SEE DETAIL 1/L-501
3. UNILOCK PAVER - NON-PERMEABLE - SEE DETAIL 2/L-501
4. UNILOCK PAVER - PERMEABLE - SEE DETAIL 3/L-501
5. UNILOCK PAVER AND CONCRETE BANDING
6. SLAG STONE SURFACE PATH - SEE DETAIL 4/L-501
7. CONCRETE STEPPING STONES
8. CONCRETE BENCH - SEE DETAIL 3/L-503
9. BRANDING SIGNAGE - SEE DETAIL 2/L-502
10. POWER PEDESTAL - SEE ELECTRICAL PLANS
11. BIKE RACK - SEE DETAIL 4/L-503
12. STAIRS WITH HANDRAIL - SEE DETAIL 5&6/L-503
13. RELOCATED SCULPTURE
14. RELOCATED WAYFINDING SIGN - SEE DETAIL 1&3/L-502
15. METAL EDGING, SEE 4/L-500
16. HINGED PEDESTAL - FOOD TRUCK, SEE ELECTRICAL PLANS
17. PLANTING BED MULCH, DBL SHREDDED NATURAL MULCH
18. SEATING AREA
19. LIGHT POLE, SEE ELECTRICAL PLANS
20. POTENTIAL ART LOCATION

NOTES
1. WHERE AND CONCRETE MEET, ALL PAVERS TO BE INSTALLED FLUSH WITH ADJACENT PAVED SURFACES.

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

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LAYOUT & MATERIALS PLAN

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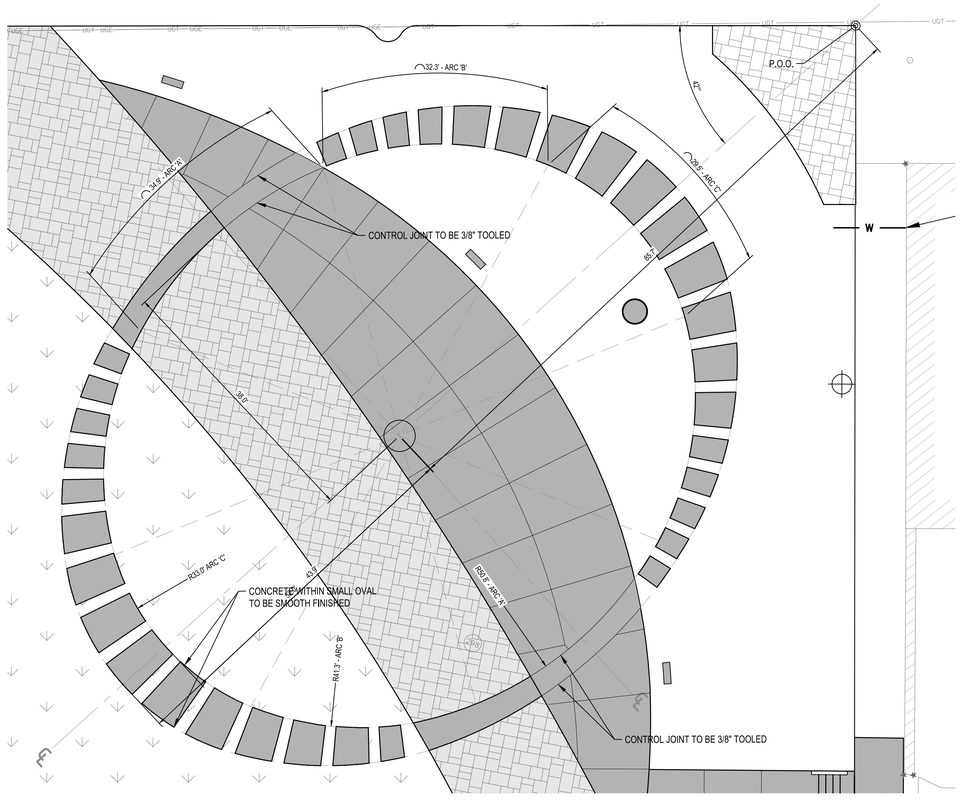
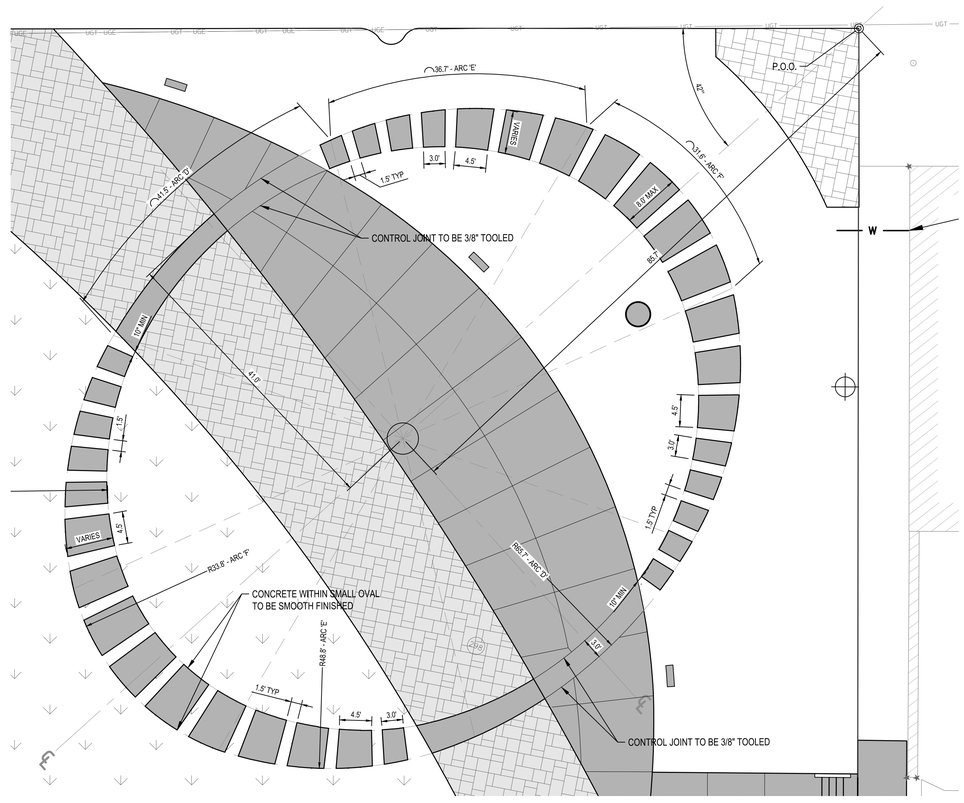


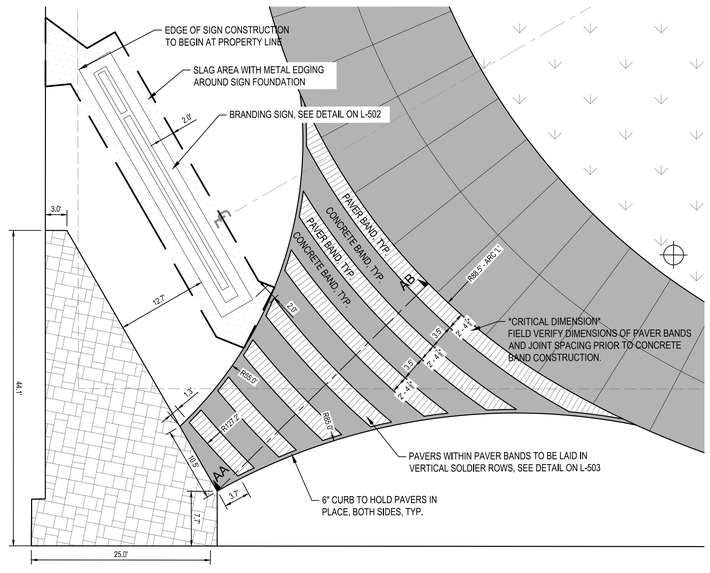
4 SMALL OVAL INNER DIMENSION PLAN

SCALE: 1" = 10'



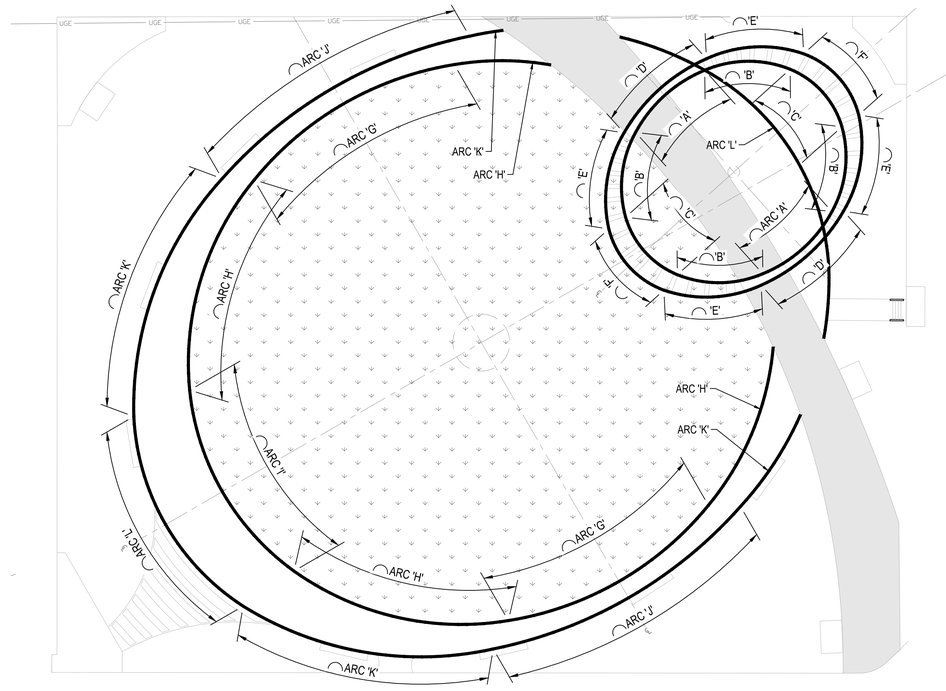
3 SMALL OVAL ENLARGEMENT AND OUTER DIMENSION PLAN

SCALE: 1" = 10'



2 ENTRY AREA ENLARGEMENT

SCALE: 1" = 10'



1 OVAL ARC PLAN

NOT TO SCALE

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LAYOUT ENLARGEMENT

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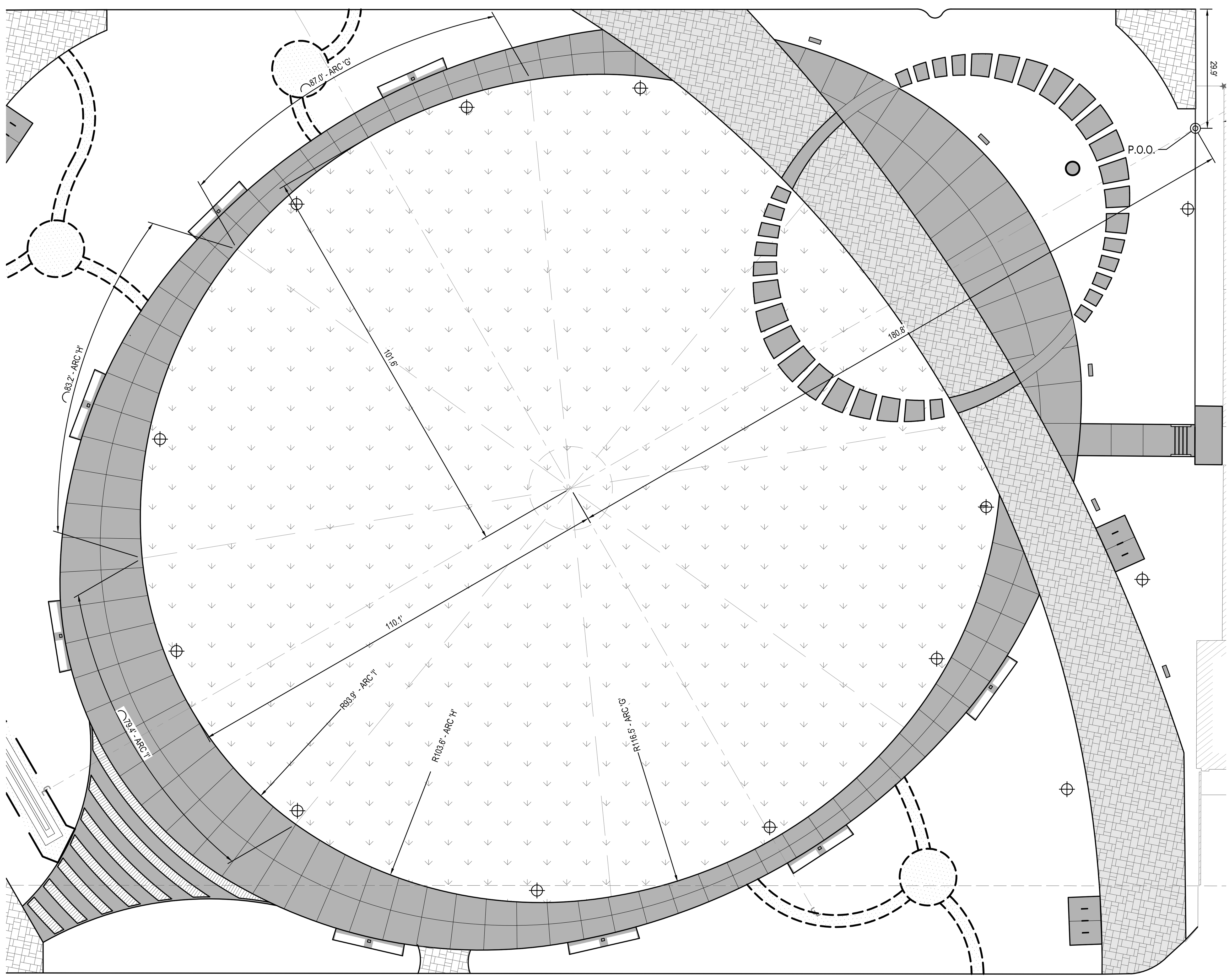
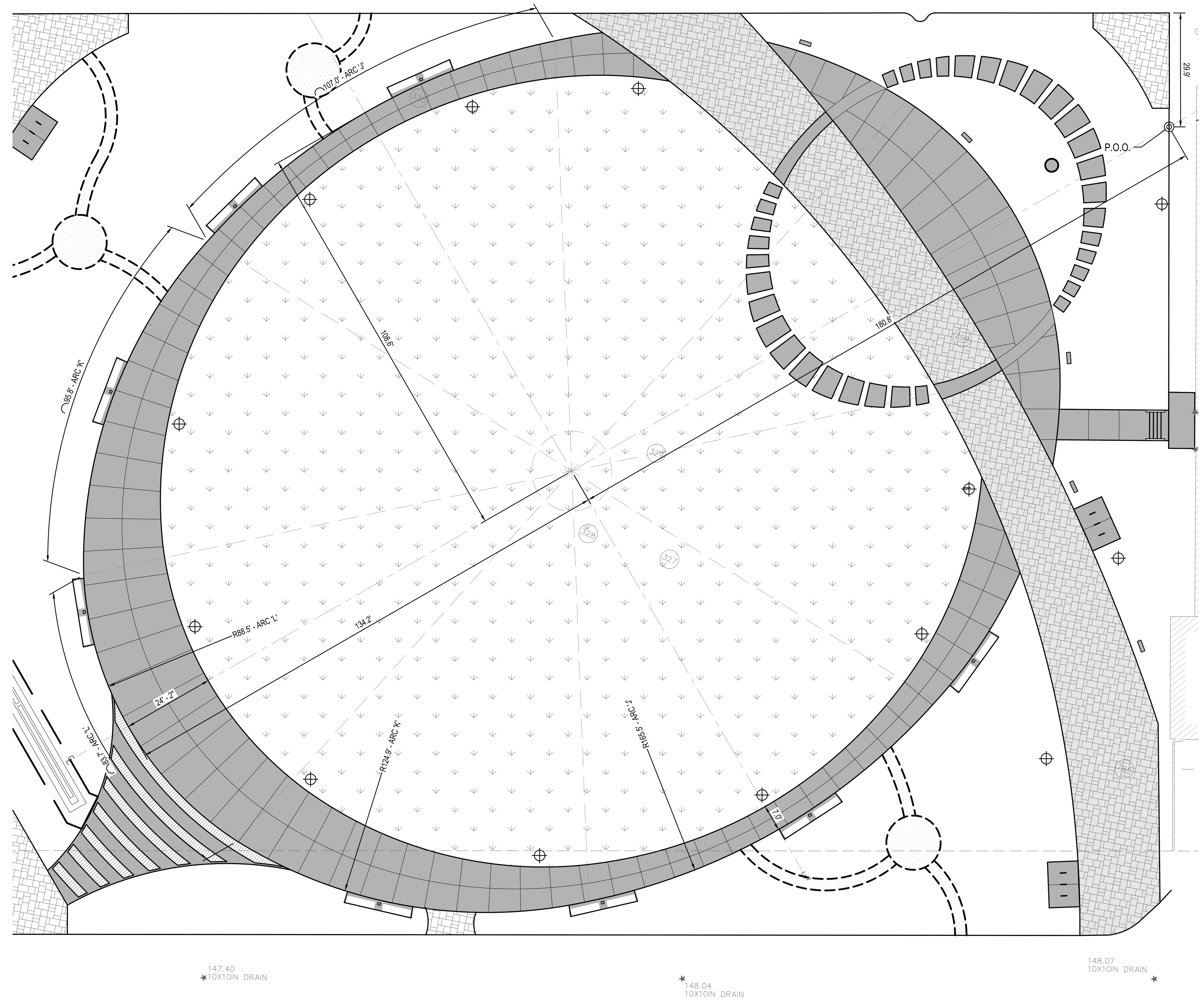


2 LARGE OVAL - INNER DIMENSION PLAN

SCALE: 1" = 20'



1 LARGE OVAL - OUTTER DIMENSION PLAN

SCALE: 1" = 20'

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LAYOUT ENLARGEMENT

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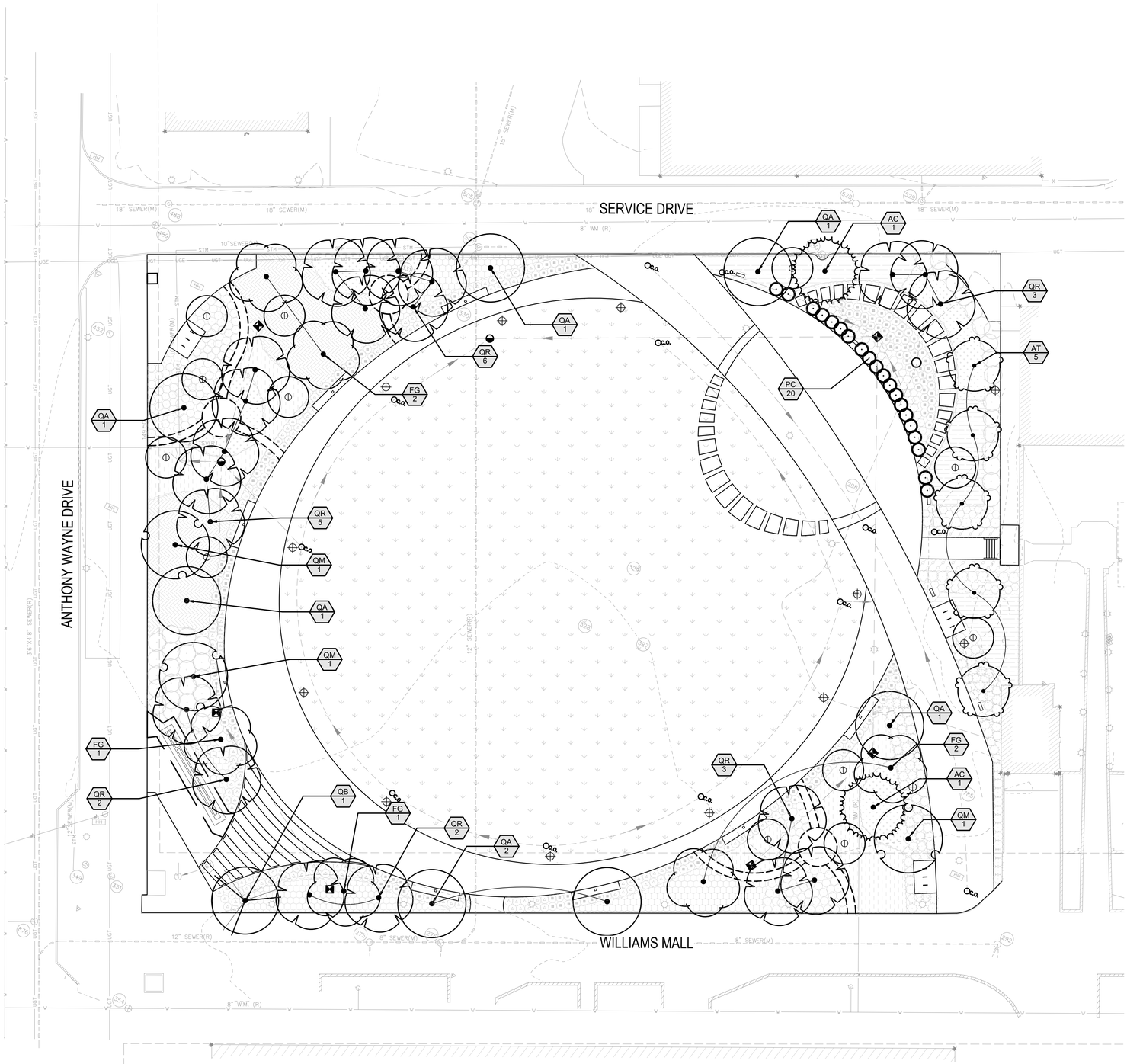
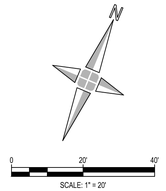


SB	A	'BLACK LACE' / BLACK L
SO		MOSA 'SMNSRD4' / LEMO
SO2		'ANNYS200809' / FLOWEF

SHRUB AREAS

AM		IUM' / MILLENIUM ORNAM
CA		'ARMITPP02' / TINY TORTI
GR		NNE' / HARDY GERANIUM
HJ2		JUNE HOSTA
IC		WARF CRESTED IRIS
PF	A	'FORT HILLS' / FORT HILI

NOTES
1. ADDITIONAL UNDERSTORY TREES COULD BE ADDED TO SITE AS PLANTED TREES MATURE. POTENTIAL UNDERSTORY TREES: REDBUD, AMELANCHIER, DOGWOOD.



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LANDSCAPE PLAN - TREES

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Wayne County
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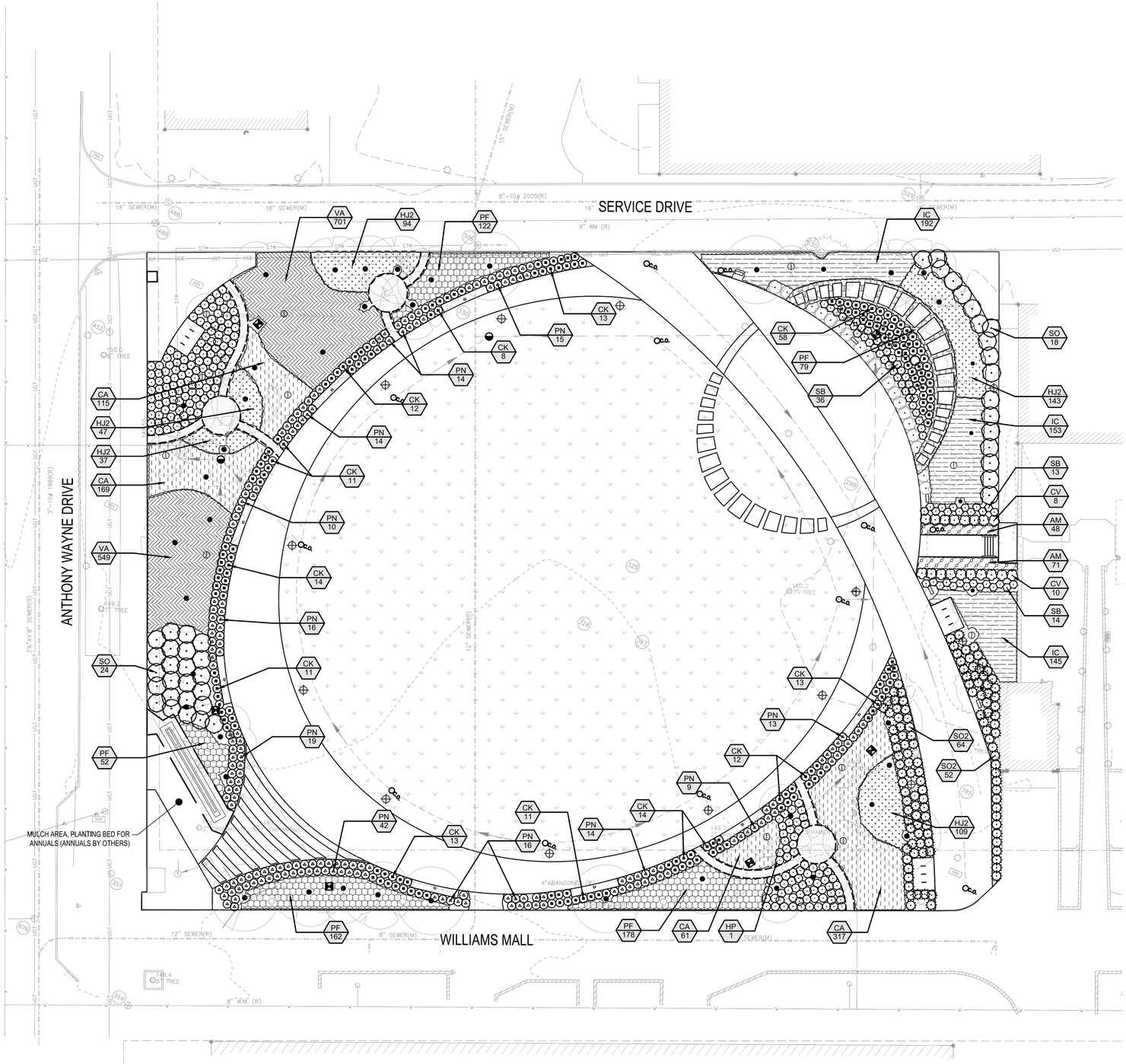

PLANT SCHEDULE

SYMBOL	CODE	BOTANICAL / COMMON NAME	SIZE	CONTAINER	SPACING
SHRUBS					
	CK	CENCHRUS ORIENTALIS 'KARLEY ROSE' / KARLEY ROSE FOUNTAIN GRASS	3 GAL.	POT	36" o.c.
	CV	CHAMAECYPARIS PISIFERA 'VINTAGE GOLD' / VINTAGE GOLD SAWARA CYPRESS	1 GAL.	POT	48" o.c.
	HP	HYDRANGEA PANICULATA 'JANE' / LITTLE LIME® PANICLE HYDRANGEA	3 GAL.	POT	36" o.c.
	PN	PICEA ABIES 'NIDIFORMIS' / BIRD'S NEST NORWAY SPRUCE	3 GAL.	POT	36" o.c.
	SB	SAMBUCUS NIGRA 'BLACK LACE' / BLACK LACE ELDERBERRY	5 GAL.	POT	36" o.c.
	SO	SAMBUCUS RACEMOSA 'SMNSRD4' / LEMONY LACE® ELDERBERRY	5 GAL.	POT	84" o.c.
	SO2	SYRINGA MEYERI 'ANNYS200809' / FLOWERFESTA® PURPLE KOREAN LILAC	1 GAL.	POT	48" o.c.
SHRUB AREAS					
	AM	ALLIUM X 'MILLENIUM' / MILLENIUM ORNAMENTAL ONION	1 GAL.	POT	18" o.c.
	CA	CHELONE LYONII 'ARMITPP02' / TINY TORTUGA PINK TURTLEHEAD	1 GAL.	POT	24" o.c.
	GR	GERANIUM 'ROZANNE' / HARDY GERANIUM ROZANNE	1 GAL.	POT	24" o.c.
	HJ2	HOSTA X 'JUNE' / JUNE HOSTA	1 GAL.	POT	24" o.c.
	IC	IRIS CRISTATA / DWARF CRESTED IRIS	1 GAL.	POT	24" o.c.
	PF	PHLOX SUBULATA 'FORT HILLS' / FORT HILLS CREEPING PHLOX	1 GAL.	POT	24" o.c.

N

0 20' 40'

SCALE: 1" = 20'

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LANDSCAPE PLAN - SHRUBS & PERENNIALS

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Project:	20572.10D

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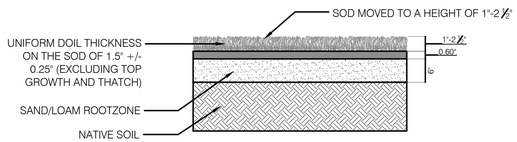
PLANT AND SOIL NOTES:

1. Plant materials shall be sound, heathy vigorous, free from plant diseases and insects or their eggs, and shall have normal, healthy root systems. Caliper measurements shall be taken 6 ft: above the ground level. All other measurements shall be in accordance with the latest edition of "American Standard for Nursery Stock" (ANSI Z-60.1 + A3002004.)
2. All plant material to be northern grown and sourced per Section 917.03 of the MDOT 2020 Standard Specifications for Construction
3. Provide nursery qualifications and source information for all plant material to Landscape Architect prior to plant material purchase.
4. Notify Landscape Architect of sources of plant material seven days in advance of delivery to site.
5. Planting bed soil for annuals shall be screened topsoil. To deter weed growth during the establishment of annual, & perennial bed, apply a pre-emergent ('Preen' or equal) after planting 2-3 times per growing season, at a rate per recommendation of product manufacturer.
6. Planting pockets shall be no deeper than the height of the root ball, saucer shall be made on the edges of the plant pocket.
7. All tree wrap shall be removed upon planting.
8. Mulch shall be shredded hardwood bark, free from deleterious materials and suitable as a top dressing of planting beds and individual tree plantings.
9. Trees shall be mulched with minimum of 3" deep hardwood bark mulch.
10. Grass seed shall be certified turf grass seed complying with A.S.P.A. specifications, and free of weed seeds and undesirable native grasses. Seeded areas shall not be permitted to dry out. All lawn areas shall be fertilized and watered as required during the first growing season to maintain a dense and vigorous growing lawn.
11. Plants shall be guaranteed for two complete growing seasons (24 months). Dead material shall be replaced as needed prior to the expiration of the guarantee period, in accordance with the local ordinance requirements.
12. Contractor shall provide in writing a list of recommended maintenance procedures for the first two (2) growing seasons.
13. Remove top $\frac{1}{3}$ of burlap on root ball or all if wrapped in plastic covering and/or nylon cord.
14. Plant materials shall be used in compliance with the provisions of the local ordinance and shall be nursery grown, free of pests and diseases, hardy in this county, in conformance with the standards of the American Association of Nurserymen, and shall have passed inspections required under state regulations. In addition, plant materials shall conform to the standard of the county cooperative extension service.
15. In lawn areas prepare planting soil as follows:
    - A. Scarify subsoil to depth of 6" min (12" min below finish grade) except within tree root zones.
    - B. Place 6" min. depth topsoil.

13. In planting beds prepare planting soil as follows:
    - A. Scarify subsoil to depth of 18" min (30" min below finish grade) except within tree root zones.
    - B. Place 12" min. depth topsoil (top 3" min. to be imported topsoil).
    - C. Place specified mulch.



SECTION

HGT CHARACTERISTICS AESTHETICS:
- USES: COMMERCIAL, SPORTS.
- COLOR: BRIGHT GREEN
- BLADE WIDTH: 1-2 MM
- FEEL: VERY SOFT
- FALL COLOR RETENTION: GOOD
- SPRING CLEANUP: GOOD

CARE:
- MOWERI STANDARD ROTARY / REEL
- HEIGHT: 1-2 ½

NOTES:
- SNOW FENCE TO BE UTILIZED DURING FIRST WINTER FOR SOD ESTABLISHMENT

HGT CHARACTERISTICS AESTHETICS:
- USES: COMMERCIAL, SPORTS.
- COLOR: BRIGHT GREEN
- BLADE WIDTH: 1-2 MM
- FEEL: VERY SOFT
- FALL COLOR RETENTION: GOOD
- SPRING CLEANUP: GOOD

CLIMATE:
- HEAT: EXCELLENT
- SHADE: FAIR
- DROUGHT: GOOD
- SALT: GOOD

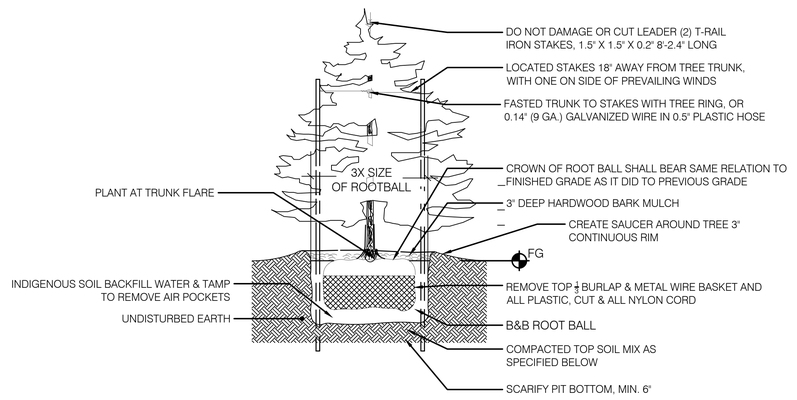
6 SOD DETAIL
NTS

GENERAL NOTES:

1. All Construction shall conform to the current standards and specifications of local ordinances.
2. All areas not built, landscaped, or paved upon shall be seeded or sodded. Terra seed system or approved equal is encouraged.
3. Contractor to provide tree gaters, one per tree as shown on plan, to convey water for the first two years.
4. Two (2) year guarantee period begins at Final Inspection of landscape material by the owner's representative, a landscape architect or nurseryman, and prior to the authorization of the occupancy permit. This is the first of two (1 of 2) required City inspections of the Landscape Plan installation.
5. Building Department will not release construction bonds until City approved landscape architect or nurseryman has inspected the site and approved the installation of landscape plans. Final bond will not be released until the two (2) year guarantee expires and final inspection is made.
6. Owner is then responsible for care and maintenance of all plants upon return of bonds. All plant material is to be maintained for the natural life of the plant. No removal of any plants material is permitted without replacement.

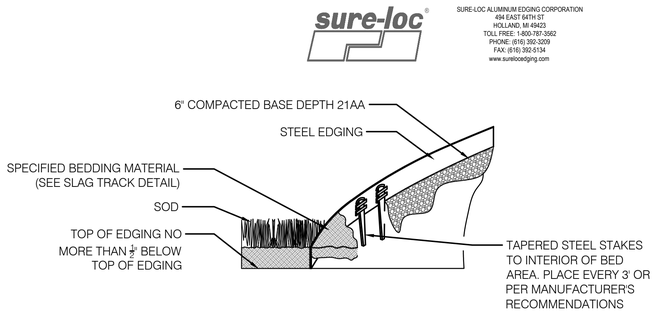
LANDSCAPE CONTRACTOR'S "TWO-YEAR MAINTENANCE REQUIREMENT PERIOD"

1. It shall be the responsibility of the landscape contractor to program and periodically adjust the irrigation system (provided by others) as required to ensure delivery of proper and adequate water supply to all plant material, and seeded lawn areas serviced by the same irrigation system, to ensure the establishment of healthy plant material and lawn for their first year of growth. Following the landscape contractor's two-year irrigation requirement period, the contractor shall provide the owner with suggested irrigation maintenance schedule for their use.
2. Maintain plant material in accordance with Section 815 of the MDOT 2020 Standard Specifications for Construction



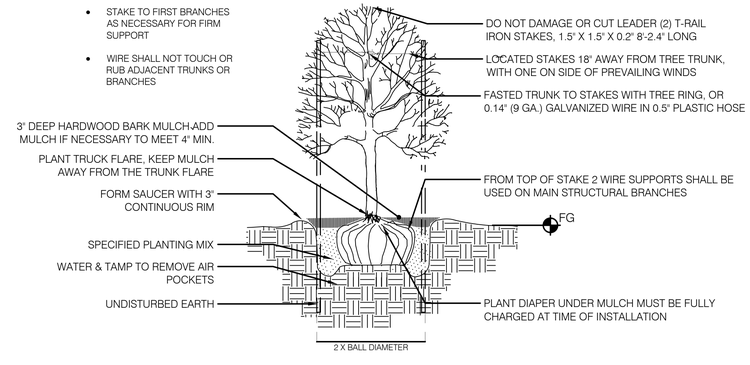
NOTES:
1. DO NOT DAMAGE MAIN ROOTS OR DESTROY ROOT BALL WHEN INSTALLING TREE STAKE.
2. WATER THOROUGHLY AFTER INSTALLATION
3. REMOVE TREE RINGS AND STAKES TWO YEARS AFTER INSTALLATIONS.
4. PROVIDE DRAINAGE FOR PLANTING PIT IN IMPERMEABLE SOIL.

5 EVERGREEN TREE PLANTING DETAIL
NTS



NOTES:
1. DESIRED SIZE: 3/16" X 4" X 16' (.182-.188" AVERAGE THICKNESS)
2. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
3. BLACK PAINT FINISH

4 EDGING DETAIL
NTS



3 TREE PLANTING DETAIL
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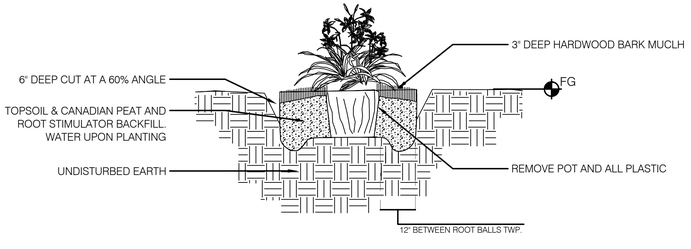
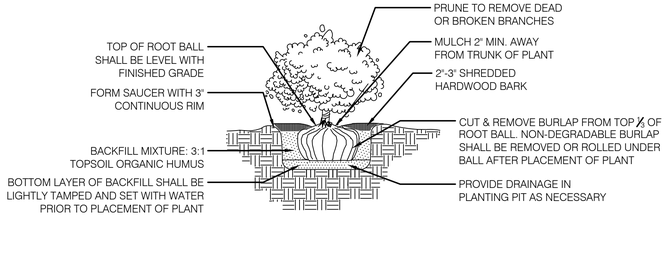


2 PERENNIAL PLANTING DETAIL
NTS



1 SHRUB PLANTING DETAIL
NTS

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Quality Control:	FS
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LANDSCAPE DETAILS

WSU Keast Commons

City of Detroit
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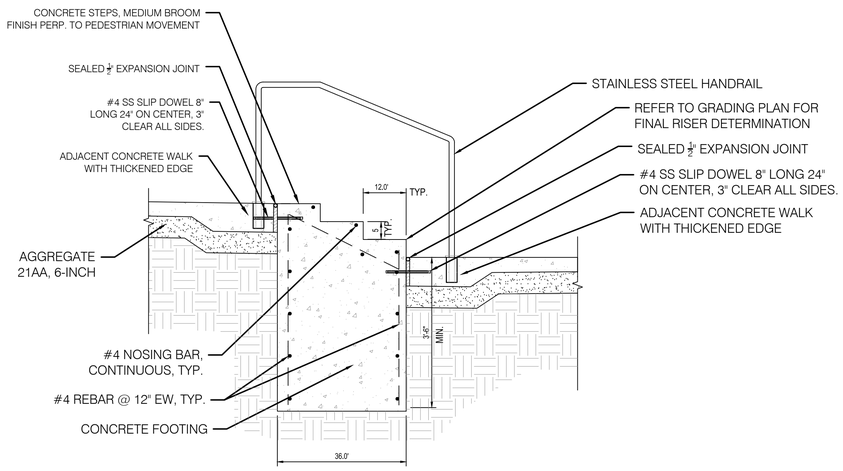
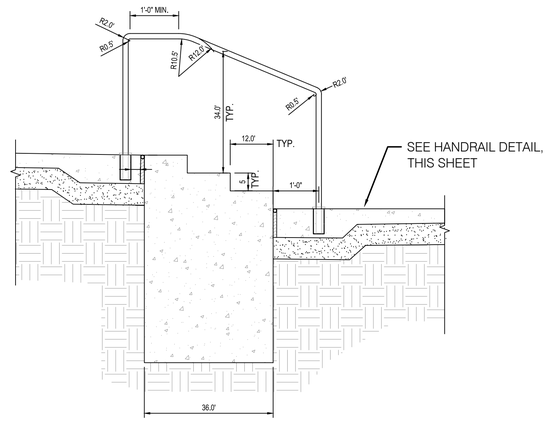
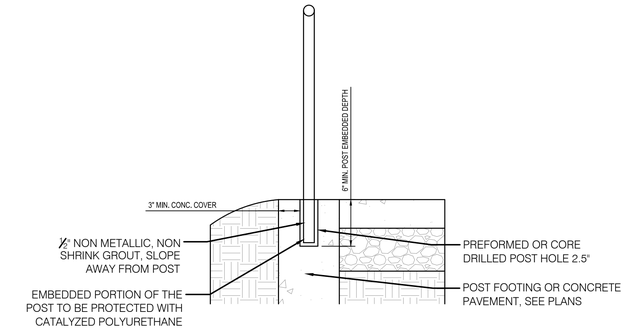


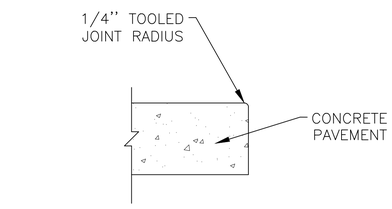
6 CONCRETE STAIRS WITH HANDRAIL (3-STEP)
NTS



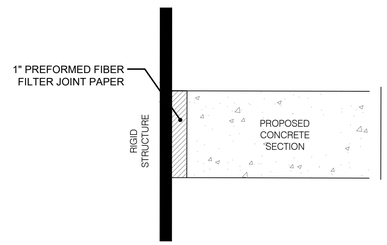


5 HANDRAIL
1"=10'

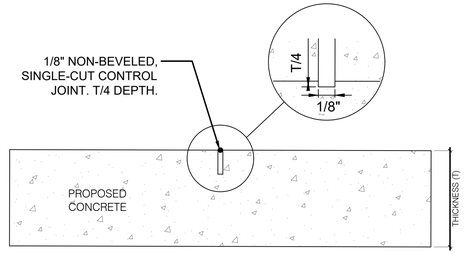
NOTES:
1. CONTRACTOR SHALL ADAPT EACH RAILING TYPE'S DESIGN FOR APPLICATION AS NECESSARY WHERE SHOWN ON PLANS, INCLUDING HANDRAIL PER CODE. FIELD VERIFY ALL EXISTING RAILING DIMENSIONS PRIOR TO FABRICATION AND INSTALLATION.
2. FIELD VERIFY ALL DIMENSIONS OF RAMPS AND PAVING SURFACES PRIOR TO FABRICATION AND INSTALLATION.
3. ALL HANDRAIL MATERIAL TO BE FURNISHED FROM ALUMINUM. HANDRAIL HARDWARE TO BE OF ALUMINUM.
4. CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT INSTALLED HANDRAILS ARE COMPLIANT WITH THE CURRENT BUILDING CODE AND CURRENT ADA REQUIREMENTS IN PROJECT JURISDICTION.
5. ALL METAL JOINTS AT POSTS, RAILS, BARS AND SIMILAR ARE TO BE CONTINUOUS WELDS AND GRINDED SMOOTH.
6. ALL STEEL SURFACES AND WELDS, BOTH SHOP AND FIELD, SHALL BE CLEANED TO SSPC-SP3 AND/OR PER PAINT MANUFACTURERS RECOMMENDATIONS PRIOR TO INSTALLATION.
7. ALL VERTICAL MEMBERS ARE TO BE SET PLUMB UNLESS OTHERWISE NOTED.



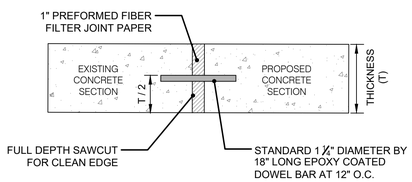
10 TOOLED CONCRETE EDGE
NTS



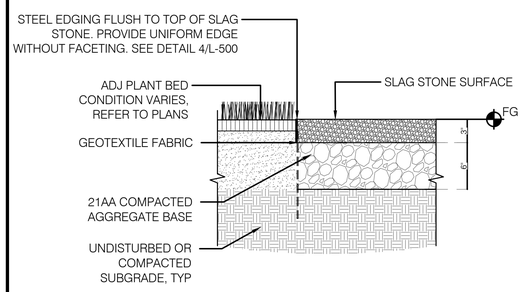
9 ISOLATION JOINT STRUCTURES
NTS



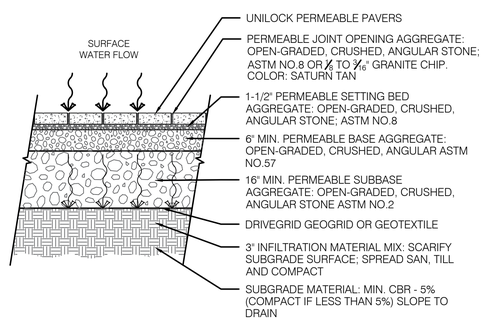
8 SAWCUT JOINT
NTS



7 EXPANSION JOINT
NTS

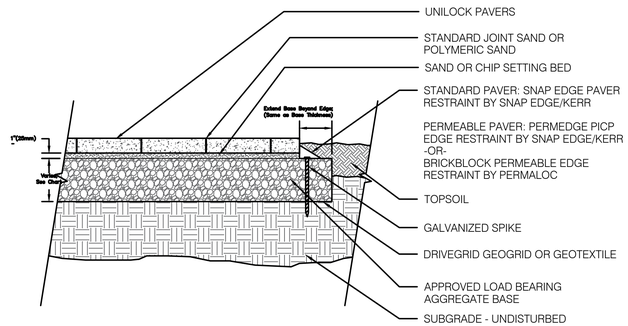


4 SLAG STONE SURFACE
NTS



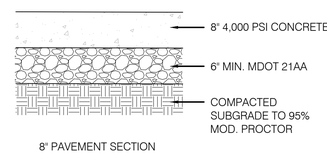
NOTES:
1. SEE 5/L-503 DETAIL FOR ADDITIONAL PAVER INFORMATION.
2. ALL PAVERS TO BE INSTALLED FLUSH WITH ADJACENT PAVERS AND PAVED SURFACES AND SURFACE IS TO BE ADA COMPLIANT.

3 PERMEABLE PAVERS - UNILOCK
NTS



NOTES:
1. SEE 5/L-503 DETAIL FOR ADDITIONAL PAVER INFORMATION.
2. ALL PAVERS TO BE INSTALLED FLUSH WITH ADJACENT PAVERS AND PAVED SURFACES AND SURFACE IS TO BE ADA COMPLIANT.

2 TYPICAL NON-PERMEABLE PAVERS - UNILOCK
NTS



8" PAVEMENT SECTION

NOTES:
1. ALL CONCRETE TO BE MEDIUM BROOM FINISH EXCEPT WHERE NOTED ON PLANS
2. IF NOT INDICATED ON THE PLANS THE CONTRACTOR SHALL SUBMIT A JOINTING PLAN PRIOR TO PLACEMENT OF CONCRETE PAVEMENT
2. INTEGRAL COLOR: "WHEAT LIGHT" BY SYNERGY.
2.1. CONTACT INFO: 1251Arundel Street, St. Paul, MN 55117 (651) 488-6091. www.prism-corporation.com
2.2. SEE CONCRETE AND PRECAST SPEC 03300.

1 CONCRETE PAVEMENT
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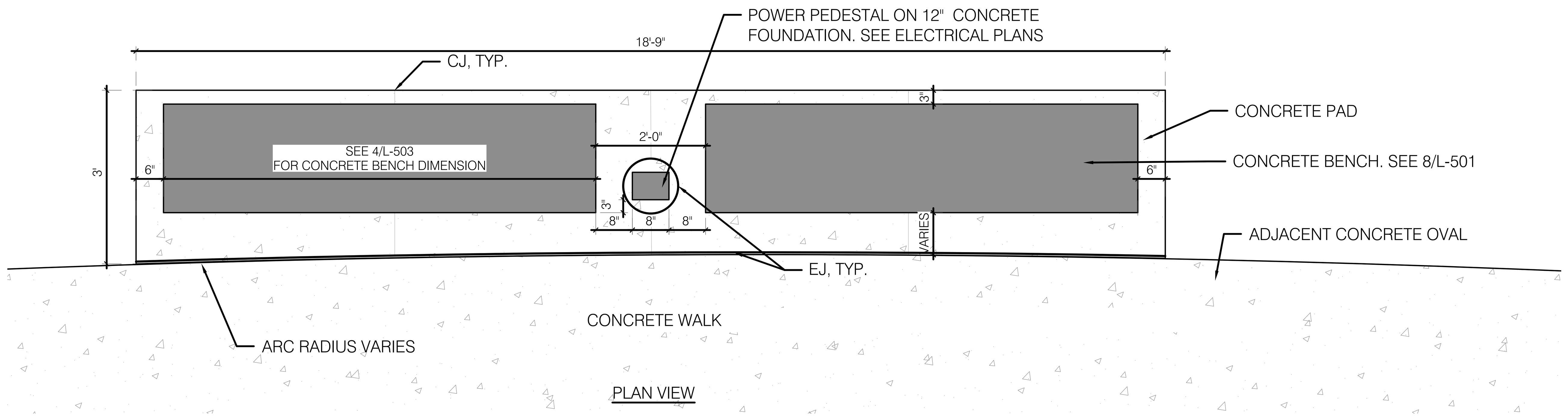
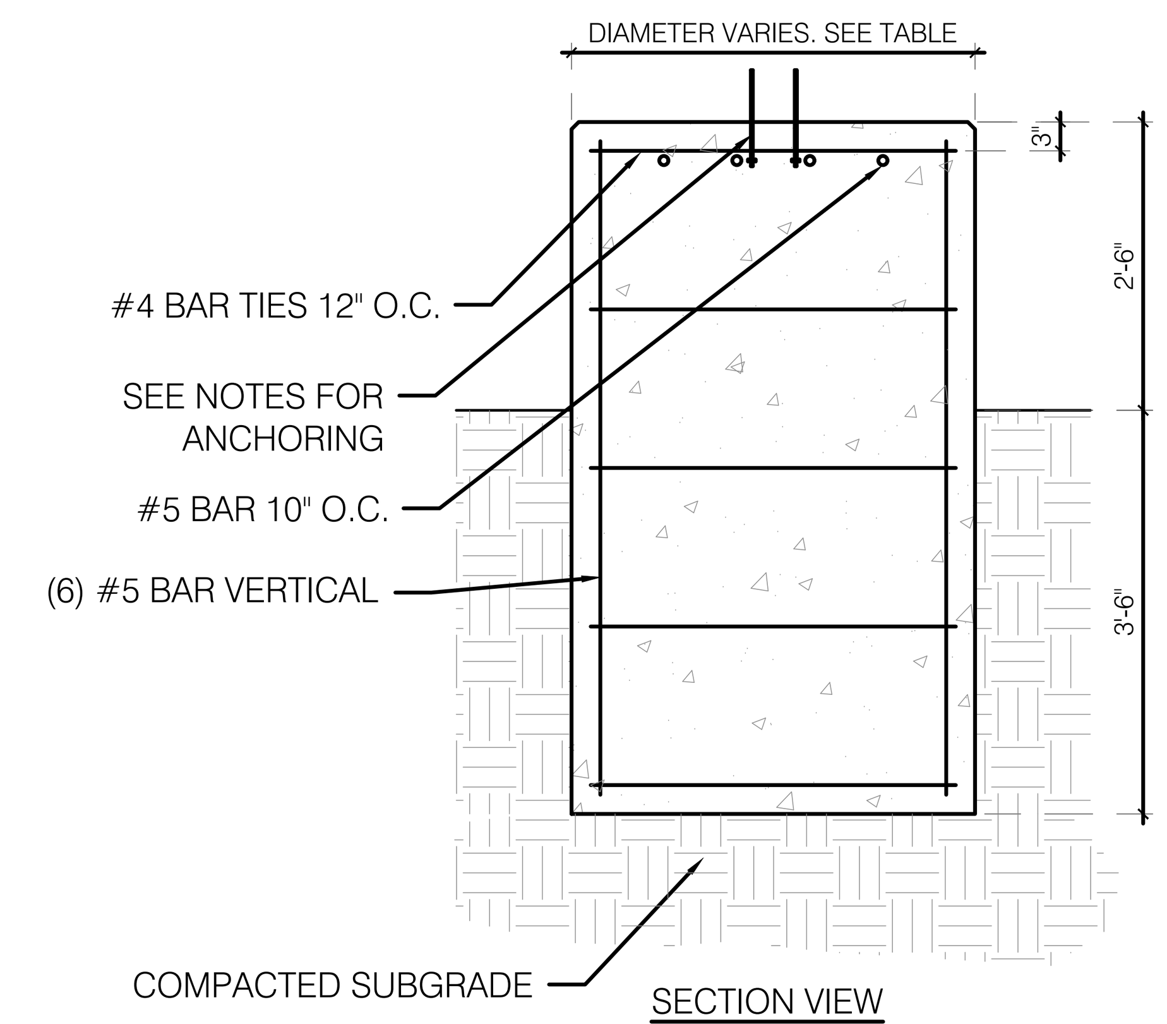
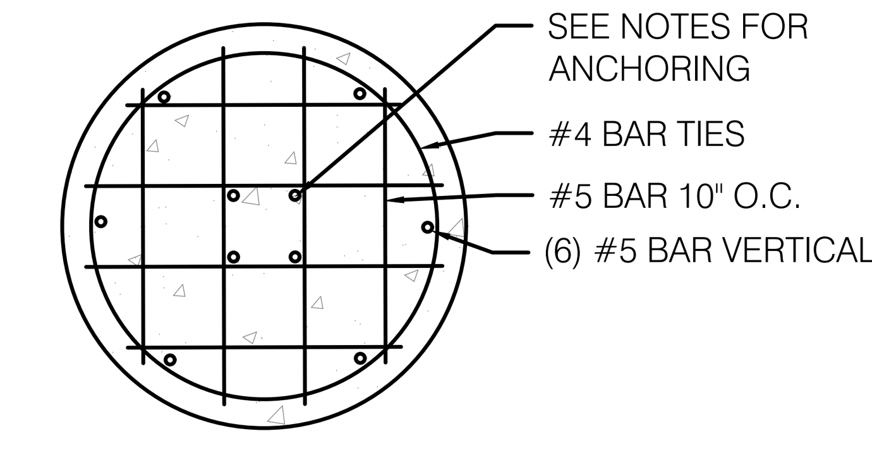


4 CONCRETE PAD WITH BENCHES AND POWER PEDESTAL

1"=20'



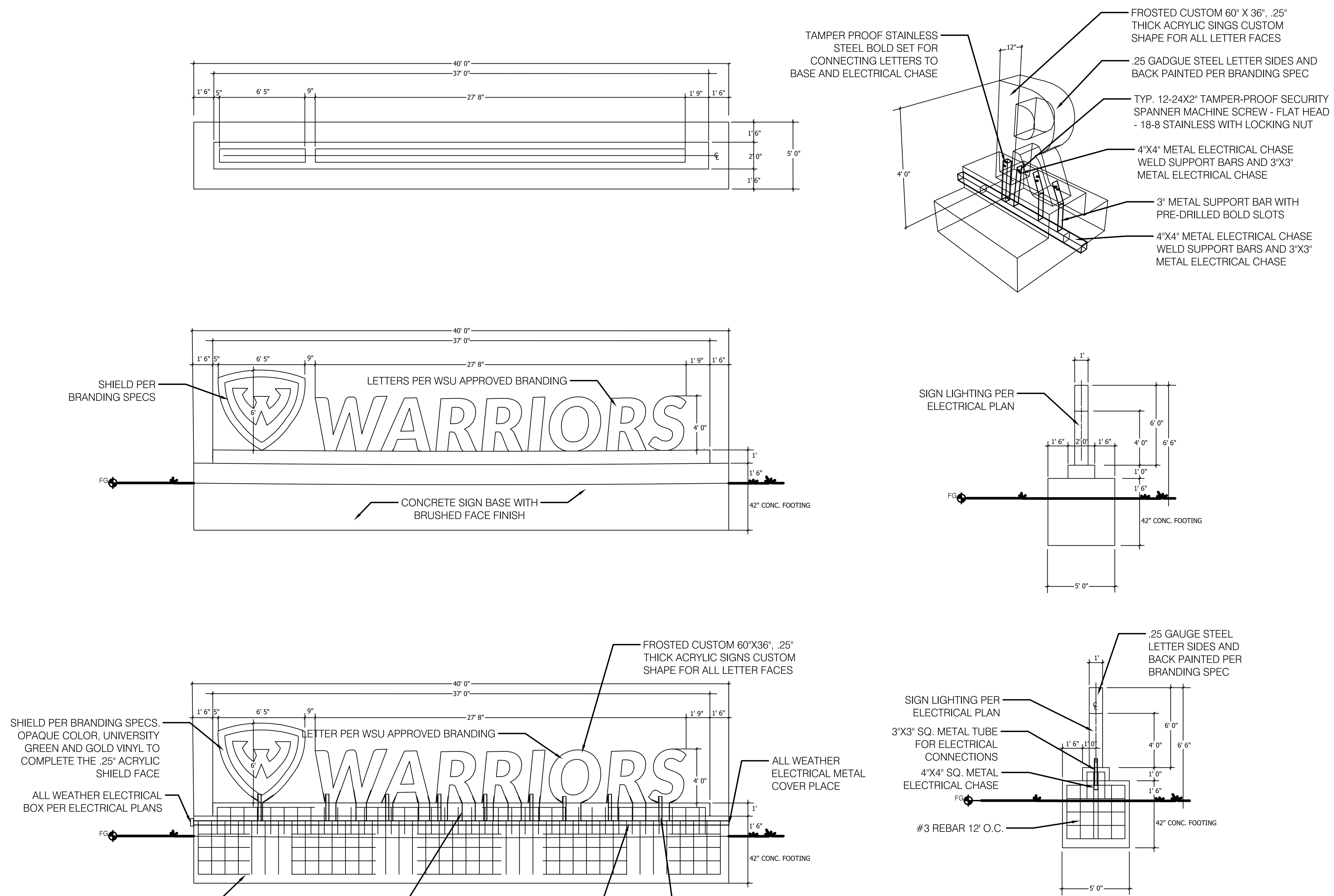


SCULPTURE #	DIAMETER	HEIGHT ABOVE GRADE	FOUNDATION DEPTH
#1, "IKTOMI" **	42"	30"	42"
#2, "SIGNAL"	42"	6"	42"
#3, T.B.D.	36"	12"	42"

NOTES:
1. ALL SCULPTURE ANCHORING TO BE CONFIRMED BY ARTIST PRIOR TO CONSTRUCTION.
2. CONCRETE FOUNDATION TO BE STANDARD CONCRETE. CONCRETE FINISH TO BE STRIPPED, RUBBED AND FILLED IN TO MAKE A UNIFORM CLEAN SURFACE.
3. SCULPTURE ATTACHMENT METHOD TO FOUNDATION TO BE SPECIFIED BY ARTIST.
4. ALL HARDWARE TO BE STAINLESS STEEL.
** ICTOMI SCULPTURE EXISTING ON SITE TO BE RELOCATED WITH SCULPTURE SIGN

3 TYPICAL ART SCULPTURE FOUNDATION

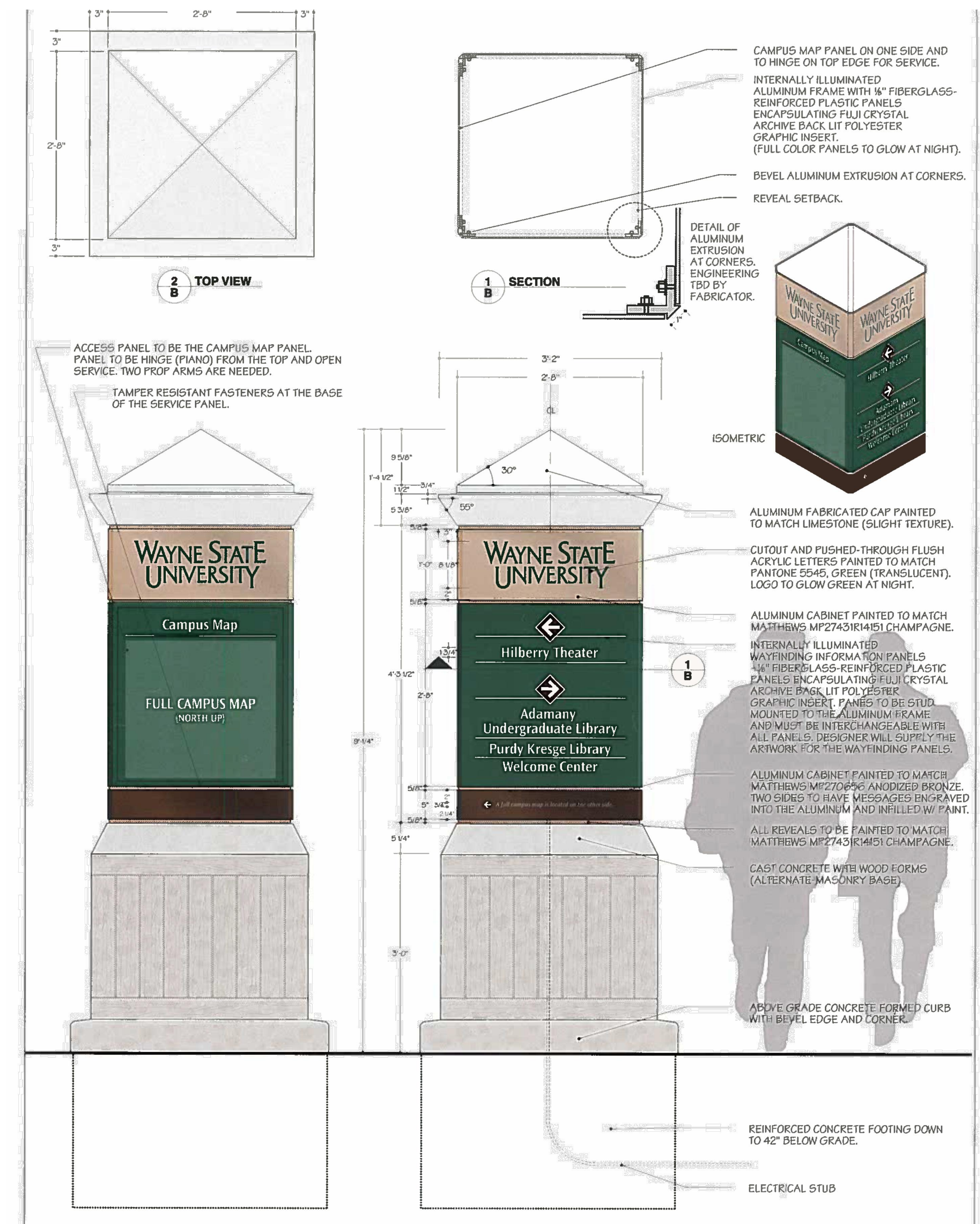
N.T.S.



NOTES:
1. THIS IS A A DIAGRAMMATIC SKETCH OF THE BRANDING SIGN. SHOP DRAWINGS ARE TO BE SUBMITTED AND APPROVED PRIOR TO FINAL FABRICATION.
2. SIGN COMPANY IS RESPONSIBLE FOR SHOP DRAWING SUBMITTALS FOR LETTERS, LIGHTING AND ATTACHMENT TO FOUNDATION.
3. FRONT FACE OF SIGN ONLY TO BE INTERNALLY LIT.
4. CONCRETE FOUNDATION TO BE STANDARD CONCRETE CONCRETE. CONCRETE FINISH TO BE STRIPPED, RUBBED AND FILLED IN TO MAKE A UNIFORM CLEAN SURFACE.

2 BRANDING SIGN DETAILS

NTS



Fonts	General Notes	Illumination	Colors	
WSU Logo Signature Ocean Sans MM (Family)	Four-sided, internally-illuminated painted aluminum fabrication with fiberglass panels for wayfinding information sections. Sign to be mounted a top a concrete base.	Metal halide illumination 4000° k color, multi-tap HID ballast, UL approved. Fabricator to determine number of light fixtures as required to provide even light source. Access through the cap with disconnect switch to be located inside the cabinet just under cap (exact location tbd).	Paint Matches: Matthews MP27431R14151 Champagne; Matthews MP270656 Anodized Bronze; Matthews MP00786 Green	Vinyl Matches

Corbin Design	Release	Date	Notes	Master Signage Program	Signtype
Corbin Design 109 East Front 304 Traverse City, MI 49684 231 947.1236	2.0	3.7.00	Refinements	Wayfinding Program Wayne State University Columnar Design Concept	B Boundary Marker Drawing Scale: 3/4" = 1'-0" (if spec sheet is 11x17)
	3.0	3.15.00	Presented to Committee		
	4.0	4.25.00	Final Review		
	5.0	7.27.00	Pre Bid Document		
	6.0	8.10.00	FINAL REVIEW		
	7.0	11.10.00	FOR BID		
	9.0	3.30.01	FOR RE-BID		

NOTES:
1. UTILIZE SALVAGED BOUNDARY MARKER SIGN MATERIALS WHERE FEASIBLE

1 WAYFINDING BOUNDARY MARKER

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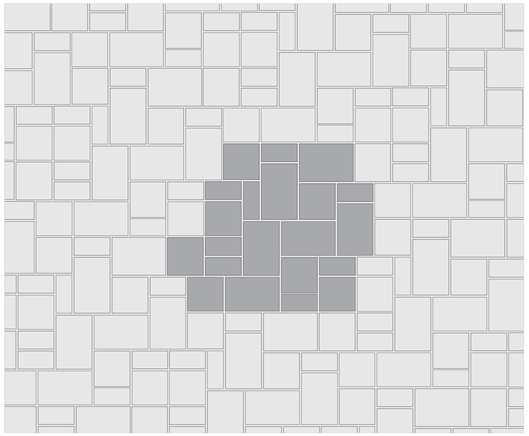
TREO® SMOOTH PERMEABLE

PATTERN R

Random



Shaded area represents repeatable pattern.

NOTE: Some patterns may not necessarily reflect the percentages of stone sizes within a particular bundle configuration. In some cases you may have extras in one or more of the sizes. This must be accounted for in your planning and design.

UNILOCK
PAVERS & WALLS

UNILOCK.COM | 1-800-UNILOCK

PAVERS - STANDARD PATTERN

SMALL RECTANGLE

8 3/4" x 4 1/4" (0.739' x 0.375')
HEIGHT: 2 3/8"

SQUARE

8 7/8" X 8 7/8" (0.739 x 0.739)
HEIGHT: 2 3/8"

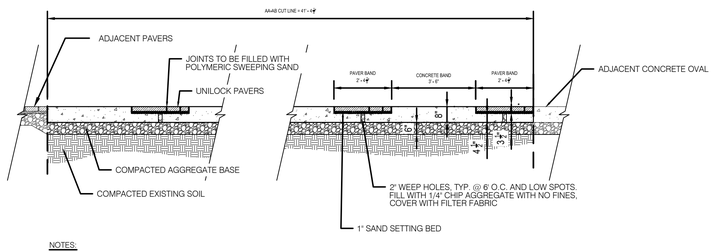
LARGE RECTANGLE

8 3/4" X 13 3/8" (0.739 x 1.114)
HEIGHT: 2 3/8"

NOTES:
1. UNILOCK CONTACT INFORMATION: Shaun Breuer
   Shaun.Breuer@unilock.com
   12591 Emerson Dr.
   Brighton, MI 48116
2. TREO PAVER BY UNILOCK (PERMEABLE AND NON-PERMEABLE, SEE PLANS)
3. COLOR: SUMMER WHEAT
4. FINISH: UMBRIANO
5. INSTALL PER MANUFACTURERS RECOMMENDATIONS

5 PAVERS - UNILOCK

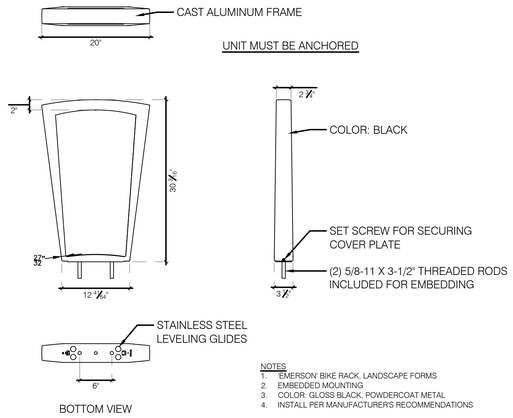
N.T.S.



NOTES:
1. ALL PAVERS TO BE INSTALLED FLUSH WITH ADJACENT PAVERS AND PAVED SURFACES AND SURFACE IS TO BE ADA COMPLIANT.

2 PAVER AND CONCRETE BAND SECTION

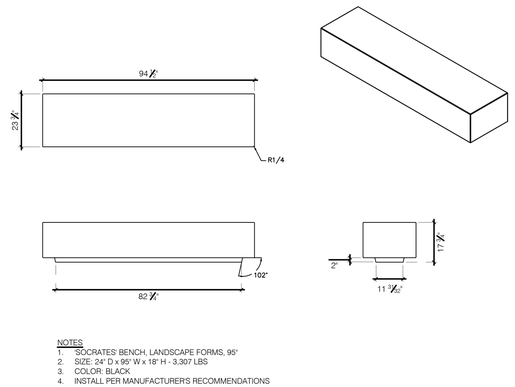
N.T.S.



NOTES:
1. EMERSON' BIKE RACK, LANDSCAPE FORMS
2. EMBEDDED MOUNTING
3. COLOR: GLOSS BLACK, POWDERCOAT METAL
4. INSTALL PER MANUFACTURER'S RECOMMENDATIONS

4 BIKE RACK

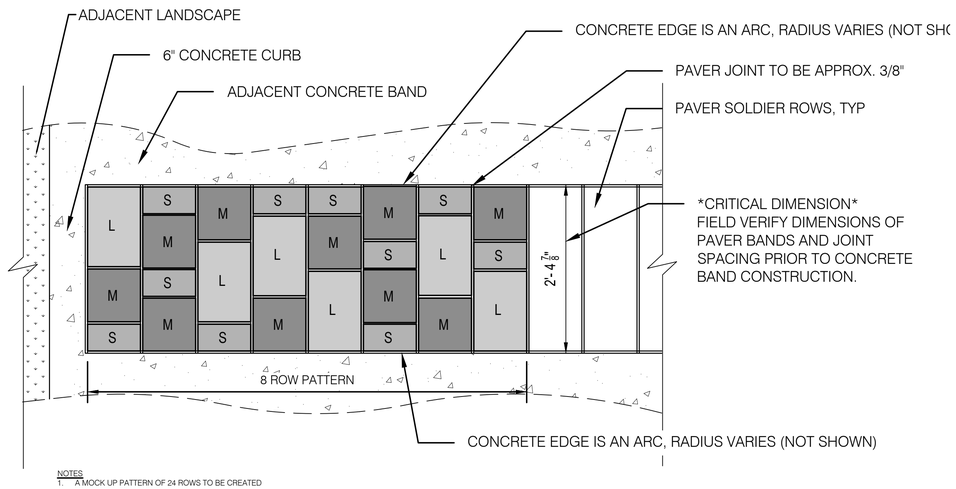
NTS



NOTES:
1. SOCRATES' BENCH, LANDSCAPE FORMS, 95°
2. SIZE: 24" D x 95" W x 18" H - 3,307 LBS
3. COLOR: BLACK
4. INSTALL PER MANUFACTURER'S RECOMMENDATIONS

3 CONCRETE BENCH

NTS



NOTES:
1. A MOCK UP PATTERN OF 24 ROWS TO BE CREATED PRIOR TO INSTALLATION
2. MAXIMUM PAVER GAP TO BE 1/2" WIDE

1 PAVER BAND - SOLDIER ROWS

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ELECTRICAL SYMBOL LIST

(NOTE: SOME SYMBOLS AND ABBREVIATIONS SHOWN MAY NOT APPLY TO THIS PROJECT)

SYMBOL	DESCRIPTION
X (NL)	X DENOTES FIXTURE TYPE (NL INDICATES NIGHT LIGHT)
	FILL DENOTES EMERGENCY FIXTURE
	TROFFER LIGHT
	STRIP LIGHT
	LINEAR LIGHT
	MULTIHEAD ADJUSTABLE LIGHT
	DOWN LIGHT
	DIRECTIONAL DOWN LIGHT
	DECORATIVE LIGHT
	DECORATIVE LIGHT
	WALL MOUNTED LIGHT
	WALL SCONCE
	ARM MOUNTED LIGHT
	LIGHTING TRACK
	TRACK LIGHT
	ADJUSTABLE FLOOD LIGHT
	STEP LIGHT
---	LED TAPE
	REMOTE DRIVER
	HIGH BAY LIGHT
	POLE MOUNTED LIGHT
	POST TOP LIGHT
	BOLLARD LIGHT
	IN GROUND LIGHT
	EMERGENCY LIGHT
	EXIT LIGHT WITH DIRECTIONAL ARROWS (FILLED AREA INDICATES FACE)
	EXIT LIGHT WITH DIRECTIONAL ARROWS (FILLED AREA INDICATES FACE)
	EXIT LIGHT – WALL MOUNTED (FILLED AREA INDICATES FACE)
	EXIT/EMERGENCY LIGHT COMBO – WALL MOUNTED (FILLED AREA INDICATES FACE)
BCELTS	BRANCH CIRCUIT EMERGENCY LIGHTING TRANSFER SWITCH
ALCR	AUTOMATIC LOAD CONTROL RELAY
LC	LIGHTING CONTROL DEVICE – REFER TO LIGHTING CONTROL SCHEDULE
XX	ROOM CONTROL DESIGNATION – REFER TO LIGHTING CONTROL SCHEDULE
S	SINGLE POLE TOGGLE SWITCH
S2	TWO POLE TOGGLE SWITCH
S3	3 WAY TOGGLE SWITCH
S4	4 WAY TOGGLE SWITCH
K	KEY OPERATED SWITCH
K3	3 WAY KEY OPERATED SWITCH
K4	4 WAY KEY OPERATED SWITCH
D	DIMMER SWITCH
D3	3 WAY DIMMER SWITCH
DO	DIMMER OCCUPANCY SENSOR SWITCH
DL	LOW VOLTAGE DIMMER SWITCH
SP	PILOT SWITCH

SYMBOL	DESCRIPTION
	TWO-WAY COMMUNICATION SYSTEM CALL STATION
TWCD	TWO-WAY COMMUNICATION SYSTEM AUTO DIALER
TWCA	TWO-WAY COMMUNICATION SYSTEM ANNUNCIATOR & COMMUNICATION PANEL
TWCP	TWO-WAY COMMUNICATION SYSTEM POWER SUPPLY WITH BATTERY BACK-UP
TWCDP	TWO-WAY COMMUNICATION SYSTEM AUTO DIALER POWER SUPPLY WITH BATTERY BACK-UP
RGP	REMOTE GENERATOR ANNUCIATOR PANEL
ATS	AUTOMATIC TRANSFER SWITCH
UPS	UNINTERRUPTIBLE POWER SUPPLY
CSX	LOW VOLTAGE CONTROL STATION "X" INDICATES TYPE
"X"	SINGLE/DUPLEX RECEPTACLE OUTLET "X" INDICATES TYPE
"X"	SINGLE/DUPLEX RECEPTACLE OUTLET CONTROLLED BY AUTOMATIC CONTROL DEVICE/SYSTEM (SIMILAR FOR TAMPER RESISTANT, GFCI, USB)
HH	DUPLEX / TAMPER RESISTANT RECEPTACLE OUTLET HALF CONTROLLED BY AUTOMATIC CONTROL DEVICE/SYSTEM
	QUAD RECEPTACLE OUTLET
	ABOVE COUNTER DUPLEX RECEPTACLE OUTLET (SIMILAR FOR TAMPER RESISTANT, CONTROLLED, QUADS, EMERGENCY, UPS, USB, AND GFCI RECEPTACLE OUTLETS)
	DUPLEX GROUND FAULT CIRCUIT INTERRUPTER RECEPTACLE OUTLET
	DEAD FRONT GROUND FAULT CIRCUIT INTERRUPTER
	DUPLEX EMERGENCY RECEPTACLE OUTLET
	DUPLEX TAMPER RESISTANT RECEPTACLE OUTLET
	QUAD TAMPER RESISTANT RECEPTACLE OUTLET
	DUPLEX UPS RECEPTACLE OUTLET
	DUPLEX RECEPTACLE OUTLET WITH 2 USB PORTS
	4 PORT USB CHARGING STATION
	CEILING MOUNTED DUPLEX/QUAD RECEPTACLE OUTLET
	POWER POLE
	WALL/CEILING MOUNTED SPECIAL RECEPTACLE OUTLET – REFER TO ELECTRICAL STANDARD SCHEDULES
	MULTI-OUTLET SURFACE RACEWAY
"X"	MULTI-SERVICE DROP SEE ELECTRICAL DETAILS AND DIAGRAMS SHEET "X" INDICATES TYPE
PTX	POKE-THROUGH ASSEMBLY "X" INDICATES TYPE
FBX	FLOOR SERVICE FITTING "X" INDICATES TYPE
AFX	ACCESS FLOOR SERVICE FITTING "X" INDICATES TYPE
RX	CORD REEL "X" INDICATES TYPE
S S	DUAL SWITCHING FOR INNER/OUTER LAMPS OF FLUORESCENT LIGHT FIXTURES
S3 S3	3-WAY DUAL SWITCHING FOR INNER/OUTER LAMPS OF FLUORESCENT LIGHT FIXTURES
S4 S4	4-WAY DUAL SWITCHING FOR INNER/OUTER LAMPS OF FLUORESCENT LIGHT FIXTURES
ST	DIGITAL TIME SWITCH
SI	ILLUMINATED TOGGLE SWITCH FOR CONTROL OF LIGHTING ON CRITICAL POWER-ILLUMINATED WHEN SWITCH IS IN "OFF" POSITION
SL	LOW VOLTAGE SWITCH
SO	OCCUPANCY SENSOR
SO2	OCCUPANCY SENSOR
OS X	OCCUPANCY SENSOR "X" INDICATES TYPE

REFER TO ELECTRICAL STANDARD SCHEDULES

SYMBOL	DESCRIPTION
CP	CONTROL PANEL
	MOTOR
VFC	VARIABLE FREQUENCY CONTROLLER.
	MANUAL CONTROLLER
	MAGNETIC CONTROLLER
	COMBINATION MAGNETIC CONTROLLER
	NON-FUSIBLE DISCONNECT SWITCH
	FUSIBLE DISCONNECT SWITCH
CB	ENCLOSED CIRCUIT BREAKER
	PUSH BUTTON STATION
J	JUNCTION BOX
	HARD WIRE POWER CONNECTION
	GROUND ROD
	GROUND CONNECTION
HH	HANDHOLE
ACCP	ACCESS CONTROL CONTROL PANEL
ACPS	ACCESS CONTROL POWER SUPPLY
X	CONDUIT SLEEVE WITH BUSHINGS LENGTH AS REQUIRED "X" INDICATES CONDUIT SIZE
	CONDUIT UP
	CONDUIT DOWN
	EMPTY BOX FOR FUTURE TELECOMMUNICATION OUTLET
	ABOVE COUNTER EMPTY BOX FOR FUTURE TELECOMMUNICATION OUTLET
	EMPTY BOX FOR FUTURE CEILING MOUNTED TELECOMMUNICATION OUTLET
X	TELECOMMUNICATION OUTLET "X" INDICATES TYPE
X	ABOVE COUNTER TELECOMMUNICATION OUTLET "X" INDICATES TYPE
X	TELECOMMUNICATION CEILING MOUNTED OUTLET "X" INDICATES TYPE
	TELECOMMUNICATION BACKBOARD
TGB	TELECOMMUNICATION GROUNDING BUS BAR
TMGB	TELECOMMUNICATION MAIN GROUNDING BUS BAR
IC	INTERCOM OUTLET
S	SPEAKER
S	SPEAKER – WALL MOUNTED
MIC	MICROPHONE
VC	VOLUME CONTROL/STATION SELECTOR
B	SIGNALING BELL
	SINGLE FACE CLOCK – CEILING MOUNTED
	SINGLE FACE CLOCK – WALL MOUNTED
	DOUBLE FACE CLOCK – CEILING MOUNTED
S	DOUBLE FACE COMBINATION CLOCK/SPEAKER CEILING MOUNTED
	DOUBLE FACE CLOCK – WALL MOUNTED
S	DOUBLE FACE COMBINATION CLOCK/SPEAKER WALL MOUNTED
T/C	TIME CLOCK
C	CONTACTOR
P	PHOTOCELL
TT	TWIST TIMER

SYMBOL	DESCRIPTION
	JUNCTION BOX
MD	MOTION DETECTOR
K	SECURITY KEY SWITCH
DC	DOOR CONTACT
KP	KEY PAD
CR	CARD READER
DB	DURESS PUSH BUTTON STATION
DE	DELAYED EGRESS
REX	REQUEST TO EXIT STATION
PP	AUTOMATIC DOOR PUSH PAD OPERATOR
DO	DOOR OPERATOR
DA	DOOR ACTUATOR
AC	ACCESS CONTROL STATION
	CIRCUIT BREAKER
	DRAWOUT CIRCUIT BREAKER MANUALLY/ OPERATED
	DRAWOUT CIRCUIT BREAKER ELECTRICALLY/ OPERATED
	SWITCH
	AUTOMATIC OR MANUAL TRANSFER SWITCH
	FUSE
	TRANSFORMER
	CURRENT TRANSFORMER
	POTENTIAL TRANSFORMER
	LIGHTNING ARRESTOR
X	PANELBOARD "X" INDICATES PANELBOARD NAME
FS	GROUND
DR	STRESS CONE TERMINATION
K	SECURITY KEY INTERLOCK
G	ENGINE GENERATOR
M	UTILITY METER
EMU	ELECTRONIC METERING UNIT
A	AMMETER
V	VOLTMETER
AS	AMMETER SWITCH
VS	VOLTMETER SWITCH
SPD	SURGE PROTECTIVE DEVICE
CR	CONTROL RELAY
TDR	TIME DELAY RELAY
PRM	PHASE ROTATION MONITOR
	CAMLOK – MALE
	CAMLOK – FEMALE
EVSE	ELECTRICAL VEHICLE SUPPLY EQUIPMENT
DCFC	DC FAST CHARGER – STANDALONE
DCPM	DC FAST CHARGER – POWER MODULE
DCDP	DC FAST CHARGER – DISPENSER

SYMBOL	DESCRIPTION
	SECURITY CAMERA
F	MANUAL FIRE ALARM BOX
SD	SMOKE DETECTOR
DD	DUCT SMOKE DETECTOR
CO	CARBON MONOXIDE DETECTOR
RT	REMOTE TEST STATION (FOR DUCT DETECTOR)
HD	HEAT DETECTOR
BD	PROJECTED BEAM DETECTOR
F	FIRE ALARM BELL
F	FIRE ALARM AUDIBLE NOTIFICATION APPLIANCE
XX	FIRE ALARM VISUAL NOTIFICATION APPLIANCE "XX" INDICATES CANDELA RATING IF NO RATING SHOWN, APPLIANCE IS 15cd
XX	FIRE ALARM COMBINATION VISUAL/ AUDIBLE "XX" INDICATES CANDELA RATING IF NO RATING SHOWN, APPLIANCE IS 15cd
F XX	FIRE ALARM COMBINATION VISUAL/ AUDIBLE NOTIFICATION APPLIANCE– CEILING MOUNTED "XX" INDICATES CANDELA RATING IF NO RATING SHOWN, APPLIANCE IS 15cd
XX	FIRE ALARM VISUAL NOTIFICATION APPLIANCE CEILING MOUNTED "XX" INDICATES CANDELA RATING IF NO RATING SHOWN, APPLIANCE IS 15cd
F	FIRE ALARM AUDIBLE NOTIFICATION APPLIANCE – CEILING MOUNTED
F	FIREFIGHTERS PHONE JACK
FACP	FIRE ALARM CONTROL PANEL
FAA	FIRE ALARM ANNUNCIATOR PANEL
NAC	NOTIFICATION APPLIANCE CIRCUIT EXTENDER PANEL
MM	ADDRESSABLE MONITORING MODULE
CM	ADDRESSABLE CONTROL MODULE
TS	ADDRESSABLE MONITORING MODULE FOR TAMPER SWITCH
FS	ADDRESSABLE MONITORING MODULE FOR FLOW SWITCH
DR	MAGNETIC DOOR RELEASE
	THERMAL OVERLOAD RELAY
	NORMALLY OPEN CONTACTS
	NORMALLY CLOSED CONTACTS
	N.O. PUSH BUTTON SINGLE CIRCUIT
	N.C. PUSH BUTTON SINGLE CIRCUIT
X–X	CABLE VAULT "X–X" INDICATES TYPE
	BRANCH CIRCUIT PANELBOARD
	LOAD CENTER
	MOTOR CONTROL CENTER
T	TRANSFORMER
	DISTRIBUTION EQUIPMENT
GB	ELECTRICAL GROUNDING BUS BAR
PB	PLUG IN BUSWAY
FB	FEEDER BUSWAY
12x4	CABLE TRAY – ALL SIZES IN INCHES

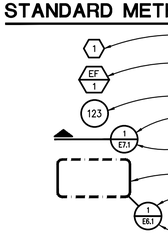
ELECTRICAL DRAWING INDEX

ELECTRICAL ABBREVIATION LIST

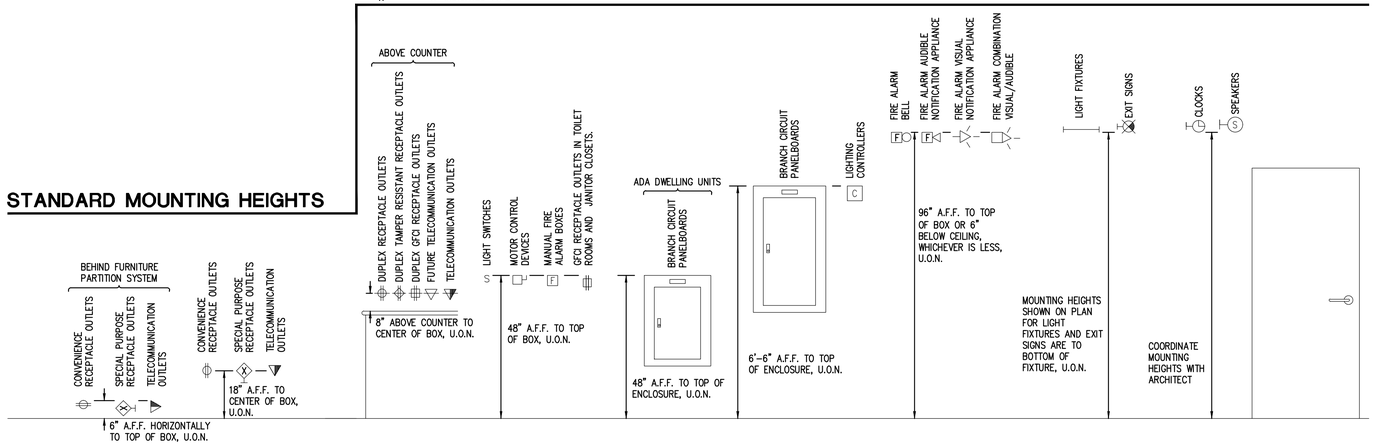
ABBREVIATION	DESCRIPTION
A	AMPERES
AER	ARC ENERGY REDUCTION
AF	AMPERES FRAME (BREAKER RATING)
AFCI	ARC FAULT CIRCUIT INTERRUPTER
A.F.F.	ABOVE FINISH FLOOR
AIC	AMPS INTERRUPTING CAPACITY
AL	AUDIENCE LEFT
ALCR	AUTOMATIC LOAD CONTROL RELAY
AR	AUDIENCE RIGHT
AT	AMPERES TRIP (BREAKER SETTING)
ATS	AUTOMATIC TRANSFER SWITCH
AUX	AUXILIARY
BCELTS	BRANCH CIRCUIT EMERGENCY LIGHTING TRANSFER SWITCH
BKR	BREAKER
BPS	BOLTED PRESSURE SWITCH
C	CONDUIT
CB	CIRCUIT BREAKER
CFCI	CONTRACTOR FURNISHED, CONTRACTOR INSTALLED
CKT	CIRCUIT
CT	CURRENT TRANSFORMER
DEMO	DEMOLITION
DIM	DIMENSION
DISC	DISCONNECT
DP	DISTRIBUTION PANEL
DS	DOWNSTAGE
DWG	DRAWING
EBU	EMERGENCY BATTERY UNIT
EC	ELECTRICAL CONTRACTOR
ECM	ELECTRONICALLY COMMUTATED MOTOR
ELEC	ELECTRICAL
EM/ EMERG	EMERGENCY
EMT	ELECTRICAL METALLIC TUBING
EO	ELECTRICALLY OPERATED
EPO	EMERGENCY POWER OFF
EWC	ELECTRIC WATER COOLER
EXIST	EXISTING
FA	FIRE ALARM
FLA	FULL LOAD AMPS
FLR	FLOOR
FOH	FRONT OF HOUSE
FSEC	FOOD SERVICE EQUIPMENT CONTRACTOR
FU	FUSE
G/GRD/EG	GROUND
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GFP	GROUND FAULT PROTECTION
HOA	HAND-OFF-AUTO
HP	HORSEPOWER
HV	HIGH VOLTAGE
HZ	HERTZ
IG	ISOLATED GROUND

ABBREVIATION	DESCRIPTION
JB	JUNCTION BOX
KA	THOUSAND AMP
KV	KILOVOLT
KVA	KILOVOLT – AMPERES
KW	KILOWATT
KWH	KILOWATT – HOURS
LA	LIGHTNING ARRESTOR
LP	LIGHTING PANEL
LDP	LIGHTING DISTRIBUTION PANEL
MAX	MAXIMUM
MCA	MINIMUM CIRCUIT AMPACITY
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MDP	MAIN DISTRIBUTION PANEL
MECH	MECHANICAL
MIN	MINIMUM
MISC.	MISCELLANEOUS
MLO	MAIN LUGS ONLY
MOP	MAXIMUM OVERCURRENT PROTECTION
MTD	MOUNTED
MTG	MOUNTING
MTR	MOTOR
N	NEUTRAL
NC	NORMALLY CLOSED
NEC	NATIONAL ELECTRICAL CODE
NF	NON-FUSIBLE
NIC	NOT IN CONTRACT
NL	NIGHT LIGHT
NO	NORMALLY OPEN
NTS	NOT TO SCALE
OC	ON CENTER
OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED
OFOI	OWNER FURNISHED, OWNER INSTALLED
P	POLE
PB	PUSHBUTTON STATION
PH	PHASE
PT	POTENTIAL TRANSFORMER
PDP	POWER DISTRIBUTION PANEL
RECEPT.	RECEPTACLE
RDP	RECEPTACLE DISTRIBUTION PANEL
RP	RECEPTACLE PANEL
RSC	RIGID STEEL CONDUIT
SCCR	SHORT CIRCUIT CURRENT RATING
SCHED	SCHEDULE
SPD	SURGE PROTECTION DEVICE
ST	SHUNT TRIP
SW	SWITCH
SWBD	SWITCHBOARD
SWGR	SWITCHGEAR
TB	TERMINAL BOX
TELECOM	TELECOMMUNICATIONS
TR	TAMPER RESISTANT
TTB	TELEPHONE TERMINAL BACKBOARD
TYP	TYPICAL
U.O.N.	UNLESS OTHERWISE NOTED
US	UPSTAGE
V	VOLTS
W	WIRE OR WATTS
WAP	WIRELESS ACCESS POINT
WG	WIRE GUARD
WP	WEATHERPROOF
WR	WEATHER RESISTANT
XFMR	TRANSFORMER
XP	EXPLOSION PROOF
(E)	EXISTING
(R)	RELOCATED

STANDARD METHODS OF NOTATION



STANDARD MOUNTING HEIGHTS



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ELECTRICAL STANDARDS AND DRAWING INDEX

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BRANCH CIRCUIT VOLTAGE DROP WIRING SCHEDULE FOR SINGLE PHASE CIRCUITS

BRANCH CKT RATING (A)	WIRE SIZE (AWG)	MAXIMUM BRANCH CIRCUIT LENGTH (IN FEET)				
		120V	208V	240V	277V	480V
20A	12	83	143	165	191	331
	10	128	222	256	295	511
	8	201	348	402	464	804
	6	313	542	625	721	1250
30A	10	85	148	170	197	341
	8	134	232	268	309	536
	6	208	361	417	481	833
	4	313	542	625	721	1250

GENERAL NOTES:
1. THE ABOVE TABLE VALUES ARE BASED ON COPPER CONDUCTORS, IN STEEL CONDUIT, WITH A LOAD POWER FACTOR OF 0.85 PER NEC CHAPTER 9, TABLE 9.
2. PROVIDE BRANCH CIRCUIT CONDUCTORS AS INDICATED IN THE TABLE ABOVE FOR ALL LIGHTING AND RECEPTACLE BRANCH CIRCUITS. WHERE BRANCH CIRCUITS SERVE DEDICATED EQUIPMENT, THE CONTRACTOR MAY PERFORM VOLTAGE DROP CALCULATIONS BASED ON ACTUAL EQUIPMENT CONNECTED LOAD AND PROVIDE CONDUCTORS APPROPRIATELY SIZED TO LIMIT VOLTAGE DROP TO A MAXIMUM OF 3%.
3. CONDUCTOR SIZES ARE BASED ON MAXIMUM OF 9 CURRENT CARRYING CONDUCTORS IN A SINGLE CONDUIT.
4. LIMITS FOR CONDUCTOR LENGTHS SHOWN ARE BASED ON A MAXIMUM BRANCH CIRCUIT LOADING OF 64% OF THE BRANCH BREAKER RATING AND A MAXIMUM OF 3 PERCENT VOLTAGE DROP TO COMPLY WITH ASHRAE 90.1 AND THE NEC. FOR CIRCUITS LOADED GREATER THAN 64% OF BRANCH BREAKER RATING, THE CONTRACTOR SHALL PROVIDE CONDUCTORS APPROPRIATELY SIZED TO LIMIT VOLTAGE DROP TO 3%.

SPECIAL RECEPTACLES

TAG	DESCRIPTION
1	250V, 20A, SINGLE PHASE, LOCKING RECEPTACLE, 2 POLE, 3 WIRE (NEMA L6-20R)
2	250V, 30A, SINGLE PHASE, LOCKING RECEPTACLE, 2 POLE, 3 WIRE (NEMA L6-30R)
3	250V, 30A, SINGLE PHASE, LOCKING RECEPTACLE, 2 POLE, 3 WIRE (NEMA L6-50R)
4	250V, 20A, THREE PHASE, LOCKING RECEPTACLE, 3 POLE, 4 WIRE (NEMA L15-20R)
5	250V, 30A, THREE PHASE, LOCKING RECEPTACLE, 3 POLE, 4 WIRE (NEMA L15-30R)
6	250V, 50A, THREE PHASE, LOCKING RECEPTACLE, 3 POLE, 4 WIRE (NEMA L15-50R)

FEEDER AND BRANCH CIRCUIT SIZING SCHEDULE - GENERAL PURPOSE

OVERCURRENT DEVICE RATING (AMPERES)	COPPER CONDUCTORS						KEYED NOTES
	WIRE SIZE (AWG OR KCMIL)		CONDUIT SIZE				
	PHASE & NEUTRAL	GROUND	SINGLE PHASE 2 WIRE+G (1PH, 1N, 1G, 2PH, 1G)	SINGLE PHASE 3 WIRE+G (2PH, 1N, 1G)	THREE PHASE 3 WIRE+G (3PH, 1G)	THREE PHASE & NEUTRAL 4 WIRE+G (3PH, 1N, 1G)	
15–20	12	12	3/4"	3/4"	3/4"	3/4"	
25–30	10	10	3/4"	3/4"	3/4"	3/4"	
35–40	8	10	3/4"	3/4"	3/4"	3/4"	
45–50	8 (6)	10	3/4"	3/4"	3/4"	3/4"	1
60	6 (4)	10	3/4" (1")	3/4" (1")	3/4" (1")	1" (1 1/4")	1
70	4	8	1"	1 1/4"	1 1/4"	1 1/4"	
80	4 (3)	8	1"	1 1/4"	1 1/4"	1 1/4"	1
90–100	3 (2)	8	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1
110	2 (1)	6	–	1 1/4"	1 1/4"	1 1/4" (1 1/2")	1
125	1 (1/0)	6	–	1 1/4" (1 1/2")	1 1/4" (1 1/2")	1 1/2"	1
150	1/0	6	–	1 1/2"	1 1/2"	1 1/2"	
175	2/0	6	–	2"	2"	2"	
200	3/0	6	–	2"	2"	2 1/2"	
225	4/0	4	–	2"	2"	2 1/2"	
250	250	4	–	2 1/2"	2 1/2"	2 1/2"	
300	350	4	–	2 1/2"	2 1/2"	3"	
350	500	3	–	3"	3"	3"	
400	500	3	–	3"	3"	3"	
450	2-4/0	2-2	–	2-2"	2-2"	2-2 1/2"	
500	2-250	2-2	–	2-2 1/2"	2-2 1/2"	2-2 1/2"	
600	2-350	2-1	–	2-2 1/2"	2-2 1/2"	2-3"	
700	2-500	2-1/0	–	2-3"	2-3"	2-3 1/2"	
800	2-500	2-1/0	–	2-3"	2-3"	2-3 1/2"	
1000	3-400	3-2/0	–	3-3"	3-3"	3-3"	
1200	3-600	3-3/0	–	3-3 1/2"	3-3 1/2"	3-3 1/2"	
1600	4-600	4-4/0	–	4-3 1/2"	4-3 1/2"	4-3 1/2"	
2000	5-600	5-250	–	5-3 1/2"	5-3 1/2"	5-3 1/2"	

GENERAL NOTES:
1. CONTRACTOR TO SIZE FEEDERS AND BRANCH CIRCUITS BASED ON THIS SCHEDULE AND OVER CURRENT DEVICE SIZE, UNLESS NOTED OTHERWISE.
2. CONTRACTOR MAY COMBINE 20A CIRCUITS AS NOTED IN SPECIFICATION.
3. CONDUCTORS ARE BASED ON THHN/THWN-2 UP TO AND INCLUDING #4/0. LARGER THAN #4/0 ARE BASED ON TYPE XHHW.
4. CONDUIT SIZES ARE VALID FOR EMT OR RSC. CONDUIT SIZES SHALL BE ADJUSTED AS REQUIRED FOR OTHER TYPES OF CONDUIT.
5. SIZE OF DISCONNECT SWITCH LOCATED AT EQUIPMENT SHALL BE SIZED BASED UPON OVERCURRENT PROTECTION OF THAT DEVICE.
6. OBTAIN APPROVAL FROM ENGINEER PRIOR TO INSTALLING DIFFERENT SIZE/QUANTITY OF CONDUCTORS TO OBTAIN AN EQUIVALENT AMPACITY.

KEYED NOTES:
1. CONDUCTORS ARE BASED ON 90°C, 600V INSULATED WIRE APPLIED AT 75°C FOR TERMINATION RATED 60/75°C OR 75°C. FOR TERMINATION RATED AT 60°C, USE CONDUCTORS AND CONDUIT SIZES INDICATED IN PARENTHESES.

RACEWAY / CONDUCTOR / CABLE APPLICATION SCHEDULE

	WIRE	RACEWAY				
	COPPER, TYPE THHN/THWN-2	COPPER, TYPE XHHW-2	ELECTRICAL METALLIC TUBING (EMT)	RIGID STEEL CONDUIT (RSC)	RIGID NON-METALLIC CONDUIT (RNC) TYPE EPC-40	LIQUID TIGHT FLEXIBLE METAL CONDUIT (LFMC)
FEEDERS - EXTERIOR						
EXPOSED, WITH FREESTANDING SUPPORT		X		X		
CONCEALED IN RETAINING WALL OR SIMILAR ELEMENT		X		X	X	
BELOW GREEN SPACE		X			X	
WITHIN 5' OF FOUNDATION WALL		X		X		
FEEDERS - INTERIOR						
EXPOSED, BELOW 10' AFF AND SUBJECT TO DAMAGE	X			X		
EXPOSED, BELOW 10' AFF AND NOT SUBJECT TO DAMAGE	X		X			
BRANCH CIRCUITS - EXTERIOR						
EXPOSED, WITH FREESTANDING SUPPORT		X		X		
BELOW GREEN SPACE		X			X	
WITHIN 5' OF FOUNDATION WALL		X		X		
BRANCH CIRCUITS - INTERIOR						
EXPOSED, BELOW 10' AFF AND SUBJECT TO DAMAGE	X			X		
EXPOSED, BELOW 10' AFF AND NOT SUBJECT TO DAMAGE	X		X			
SPECIAL APPLICATIONS						
CONNECTIONS TO TRANSFORMERS, MOTORS AND VIBRATING EQUIPMENT		X				X

GENERAL NOTES:
1. TRANSITION FROM PVC AND PROVIDE RIGID STEEL SWEEPS WHERE CONDUITS PENETRATE WALLS, CONCRETE SLABS, CONCRETE BASES, AND ASPHALT.
2. EMT SHALL NOT BE USED ON THE EXTERIOR OF A BUILDING OR IN AREAS SUBJECT TO DAMAGE BELOW 10' AFF.

LUMINAIRE SCHEDULE

TYPE	DESCRIPTION	MANUFACTURER(S)	WATTAGE	VOLTAGE	LIGHT CHARACTERISTICS	CONTROLS	REMARKS
OL1	LED POST TOP	LITHONIA RADPT LED	86	MVOLT	10,000 LUMENS, 4000K, TYPE V DISTRIBUTION, BLACK	ON/OFF, CONTACTOR PANEL	N/A
OL2	LED ARM MOUNT	LITHONIA RAD1 LED	86	MVOLT	11,000 LUMENS, 4000K TYPE V DISTRIBUTION, BLACK	ON/OFF, CONTACTOR PANEL	N/A
OL3	LED YOKE MOUNT FLOOD	LUMENPULSE LBM	28	277	2,490 LUMEN, 4000K, MEDIUM OPTIC, BLACK, UNIVERSAL YOKE ATTACHMENT	ON/OFF, CONTACTOR PANEL	N/A
16'-4" POLE	4" DIA. STRAIGHT ALUMINUM ROUND POLE	LITHONIA RSA	–	–	BLACK	–	N/A
28' POLE	6" DIA. STRAIGHT ALUMINUM SLOTTED ROUND POLE	LUMENPULSE PL-T	–	–	BLACK, BANNER ARMS, UNIVERSAL YOKE	–	N/A

GENERAL NOTES:
1. REFER TO SPECIFICATIONS FOR DETAILED LIGHT FIXTURE CUT SHEETS.
2. WATTAGE LISTED IS FROM THE BASIS OF DESIGN MANUFACTURER.
3. FINISH TO BE APPROVED BY LANDSCAPE DESIGNER, ARCHITECT OR CLIENT.
4. ALL LUMINAIRES TO BE AS SPECIFIED OR EQUAL APPROVED BY PBA AND/OR ILLUMINART.

DRY TYPE DISTRIBUTION TRANSFORMER CIRCUIT SIZING SCHEDULE

XFMR KVA	PRIMARY (480V)	SECONDARY (208Y/120 VOLT)					KEYED NOTES
	OVERCURRENT PROTECTION	OVERCURRENT PROTECTION	CONDUCTOR SIZE (AWG OR KCMIL)			GROUNDING ELECTRODE CONDUCTOR	
			PHASE & NEUTRAL	SUPPLY SIDE BONDING JUMPER	CONDUIT (4W + SSBJ)		
9	20A	30A	10	8	3/4"	8	
15	25A	60A	6	8	1"	8	1
30	45A	100A	3	8	1 1/4"	8	1
45	70A	175A	2/0	4	2"	4	
75	125A	300A/225A	350 / 4/0	2	3"	2	2
112 1/2	175A	400A	600	1/0	3 1/2"	1/0	
150	225A	600A	2-350	2-2	2-3"	2/0	
225	350A	800A	2-600	2-1/0	2-3 1/2"	3/0	
300	500A	1200A	3-600	3-1/0	3-3 1/2"	3/0	
500	800A	1600A	4-600	4-1/0	4-3 1/2"	3/0	

GENERAL NOTES:
1. TRANSFORMERS AND FEEDERS ARE BASED ON 480 VOLT, 3 PHASE, 3 WIRE PRIMARY AND 208Y/120 VOLT, 3 PHASE, 4 WIRE, SECONDARY.
2. PRIMARY OVERCURRENT PROTECTION IS SIZED AT 125% OF TRANSFORMER FULL LOAD CURRENT. PROVIDE PRIMARY OVERCURRENT DEVICE SELECTION TO ALLOW TRANSFORMER IN-RUSH CURRENT AND PROTECT BASED ON THE ANSI DAMAGE CURVE. IF MANUFACTURER REQUIRES PRIMARY OVERCURRENT GREATER THAN 125% (NOT TO EXCEED 250%) THEN PRIMARY FEEDER SHALL BE INCREASED ACCORDINGLY.
3. SECONDARY CONDUCTOR BASED ON TEN FOOT MAXIMUM LENGTH (NEC 240.21(C)(2)). IF CONDUCTORS ARE LONGER THAN TEN FOOT, REQUIREMENTS IN NEC 240.21(C)(6) MUST BE MET. IN NO CASE SHALL CONDUCTORS BE LONGER THAN TWENTY-FIVE FEET.

KEYED NOTES:
1. CONDUCTORS ARE BASED ON 90°C, 600V. INSULATED WIRE APPLIED AT 75°C FOR TERMINATION RATED 60/75°C OR 75°C.
2. THE SMALLER SIZE IS TO BE USED TO FEED 225A PANELBOARDS.

NOTE: SOME SYMBOLS AND ABBREVIATIONS SHOWN MAY NOT APPLY TO THIS PROJECT.

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ELECTRICAL STANDARD SCHEDULES

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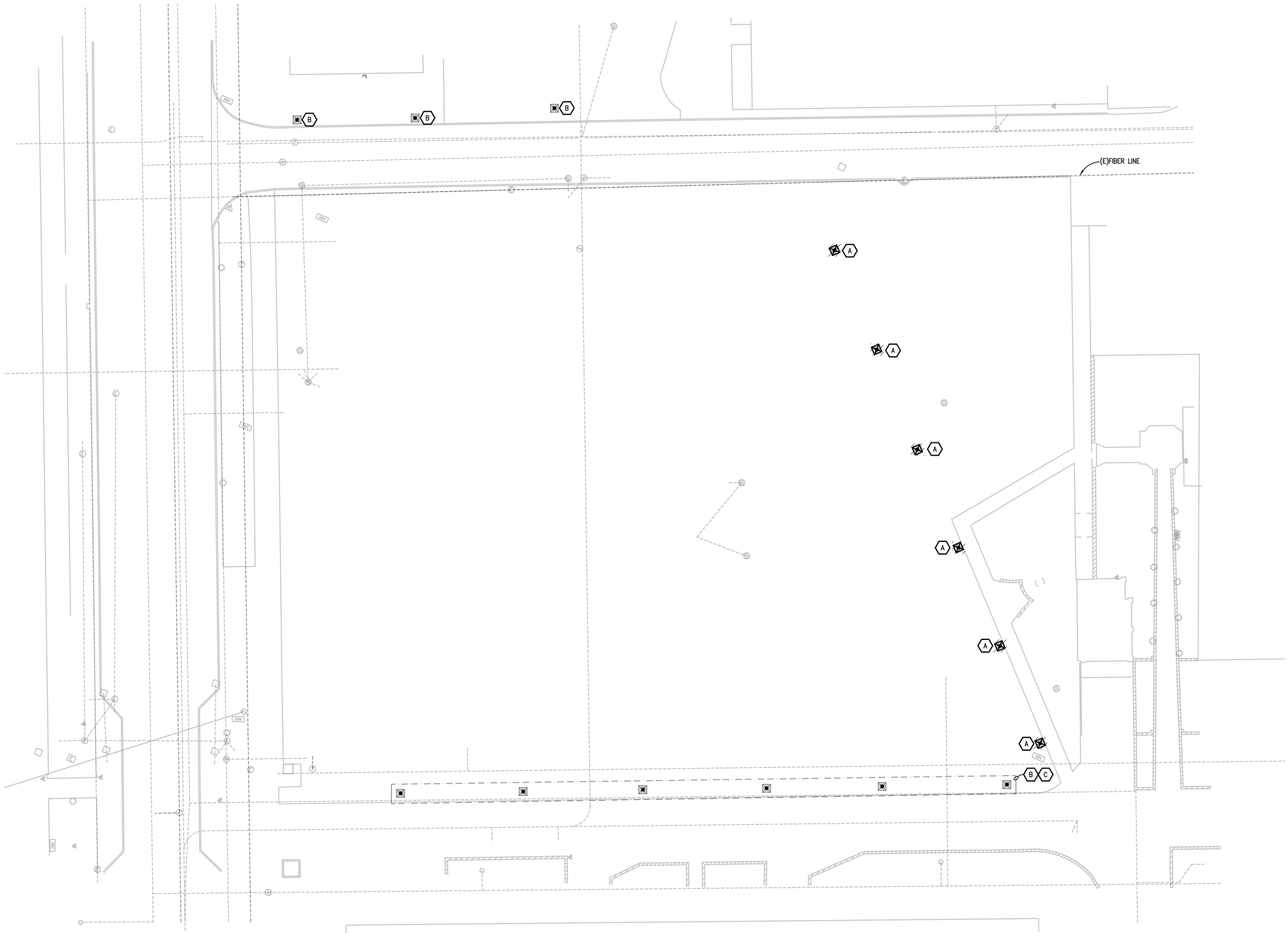

SITE PLAN GENERAL NOTES:

1. THESE NOTES ARE GENERIC GUIDELINES ONLY. ELECTRICAL CONTRACTOR'S PERSONNEL ON SITE SHALL BE THOROUGHLY FAMILIAR WITH THE PUBLISHED SPECIFICATIONS FOR EXACT DESCRIPTIONS OF SCOPE, METHODS, AND MATERIAL.
2. THESE DRAWINGS REPRESENT THE GENERAL EXTENT AND ARRANGEMENT OF SYSTEMS. COORDINATE EXACT EQUIPMENT LOCATIONS, ELEVATIONS, AND FINAL CONNECTION REQUIREMENTS. PROVIDE EACH SYSTEM COMPLETE, INCLUDING ALL NECESSARY COMPONENTS, FITTINGS AND OFFSETS.
3. INSTALL SYSTEMS IN COMPLIANCE WITH WAYNE STATE UNIVERSITY STANDARDS FOR TELECOMMUNICATIONS INFRASTRUCTURE (https://tech.wayne.edu/docs/infrastructure-construction-comm-standards.pdf).
4. CONDUCT A SURVEY TO IDENTIFY ALL UNDERGROUND UTILITIES. CALL 811 PRIOR TO EXCAVATION.
5. UTILITIES SHOWN ON THESE DRAWINGS ARE FOR REFERENCE ONLY. COORDINATE EXACT LOCATION OF ALL EXISTING UTILITIES, AND ROUTING OF ALL NEW UNDERGROUND UTILITIES PRIOR TO EXCAVATION.
6. DEWATER TRENCHES PRIOR TO INSTALLATION OF CONDUITS. PROVIDE WATER TIGHT FITTINGS ON ALL UNDERGROUND CONDUITS.
7. COORDINATE DEMOLITION WORK, AND ELECTRICAL AND TELEPHONE SERVICES TO THE SITE, WITH THE RESPECTIVE LOCAL UTILITY COMPANY REPRESENTATIVES PRIOR TO COMMENCEMENT OF WORK. INCLUDE ALL ASSOCIATED COST/FEES BY THE UTILITY COMPANIES IN THE BID PRICE.
8. INSTALL UNDERGROUND CONDUITS 42" BELOW FINISHED GRADE, MINIMUM, UNLESS NOTED OTHERWISE.
9. COORDINATE SERVICE SHUT-DOWNS WITH ALL TRADES INVOLVED ON SITE AND OBTAIN WRITTEN AUTHORIZATION FROM OWNER 72 HOURS PRIOR TO ANY ELECTRICAL AND/OR TELEPHONE SHUT-DOWN.
10. REMOVE ALL DE-ENERGIZED CONDUCTORS FROM SITE AT COMPLETION OF THE PROJECT.
11. OUTDOOR LIGHTING BRANCH CIRCUIT WIRING SHALL BE MINIMUM #8 AWG CONDUCTORS (XHHW-2), IN MINIMUM 1" DIA. CONDUIT, UNLESS NOTED OTHERWISE.
12. OUTDOOR POWER BRANCH CIRCUIT WIRING SHALL BE MINIMUM #10 AWG CONDUCTORS (XHHW-2), IN MINIMUM 1" DIA. CONDUIT, UNLESS NOTED OTHERWISE.
13. OUTDOOR COMMUNICATION CONDUIT SHALL BE IN MINIMUM 1-1/4" DIA., UNLESS NOTED OTHERWISE.
14. SPARE CONDUITS SHALL INCLUDE PULL STRING AND SHALL BE TERMINATED WITH A CAP.
15. EXCAVATE THE ENTIRE LENGTH OF TRENCH TO PROPERLY SET DUCT ELEVATIONS.

(#) DEMOLITION KEY NOTES:

A. REMOVE FIXTURE, POLE AND POLE BASE. OWNER HAS FIRST RIGHT OF REFUSAL FOR LIGHT FIXTURE AND POLE. REMOVE BRANCH CIRCUIT.

B. EXISTING LIGHTING TO BE KEPT OPERATIONAL AFTER DEMOLITION OF OTHER LIGHTING IN THE AREA. EXTEND EXISTING BRANCH CIRCUIT SHOULD THE LIGHT BECOME ORPHANED.

C. ALTERNATE #1: REMOVE FIXTURE, POLE AND POLE BASE. OWNER HAS FIRST RIGHT OF REFUSAL FOR LIGHT FIXTURE AND POLE. REMOVE BRANCH CIRCUIT.

ELECTRICAL SITE PLAN DEMOLITION
SCALE: 1" = 20'

THE FOLLOWING DIMENSION EQUALS ONE INCH WHEN PRINTED TO SCALE. 1"

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Section:	X

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2025-05-07	Design Development
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Developed For:
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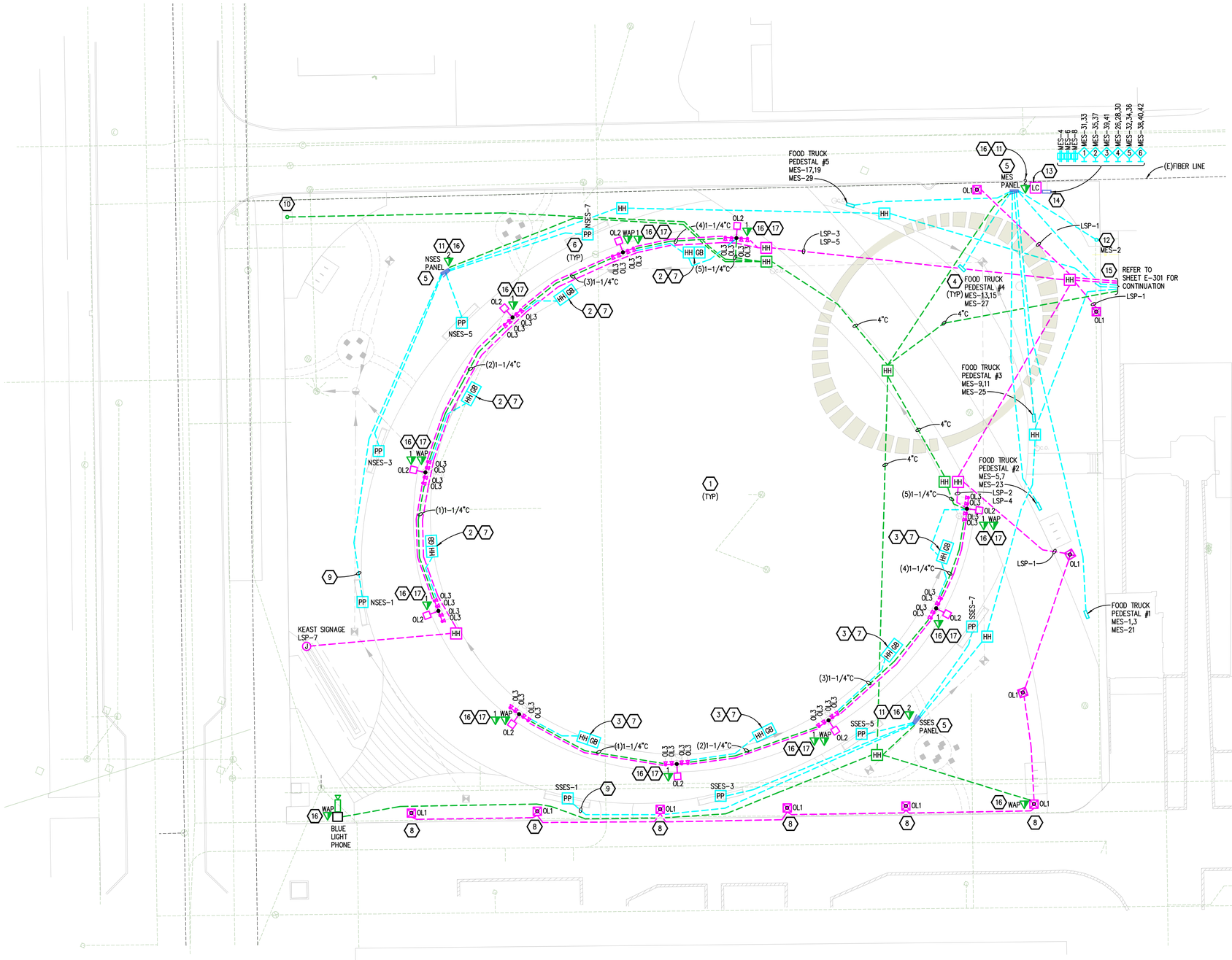
Detroit MI 48202

ELECTRICAL SITE PLAN DEMOLITION

WSU Keast Commons

Detroit
Wayne
MICHIGAN

Date:	06.27.2025
Scale:	1/8"=1'-0"
Sheet:	E-003
Project:	20572.10D



ELECTRICAL SITE PLAN NEW WORK

SCALE: 1" = 20'

THE FOLLOWING DIMENSION EQUALS ONE INCH WHEN PRINTED TO SCALE. 1"

LEGEND:

- LIGHTING
- POWER
- LOW VOLTAGE

SITE PLAN GENERAL NOTES:

1. THESE NOTES ARE GENERIC GUIDELINES ONLY. ELECTRICAL CONTRACTOR'S PERSONNEL ON SITE SHALL BE THOROUGHLY FAMILIAR WITH THE PUBLISHED SPECIFICATIONS FOR EXACT DESCRIPTIONS OF SCOPE, METHODS, AND MATERIAL.
2. THESE DRAWINGS REPRESENT THE GENERAL EXTENT AND ARRANGEMENT OF SYSTEMS. COORDINATE EXACT EQUIPMENT LOCATIONS, ELEVATIONS, AND FINAL CONNECTION REQUIREMENTS. PROVIDE EACH SYSTEM COMPLETE, INCLUDING ALL NECESSARY COMPONENTS, FITTINGS AND OFFSETS.
3. INSTALL SYSTEMS IN COMPLIANCE WITH WAYNE STATE UNIVERSITY STANDARDS FOR TELECOMMUNICATIONS INFRASTRUCTURE (https://tech.wayne.edu/docs/infrastructure-construction-comm-standards.pdf).
4. CONDUCT A SURVEY TO IDENTIFY ALL UNDERGROUND UTILITIES. CALL 811 PRIOR TO EXCAVATION.
5. UTILITIES SHOWN ON THESE DRAWINGS ARE FOR REFERENCE ONLY. COORDINATE EXACT LOCATION OF ALL EXISTING UTILITIES, AND ROUTING OF ALL NEW UNDERGROUND UTILITIES PRIOR TO EXCAVATION.
6. DEWATER TRENCHES PRIOR TO INSTALLATION OF CONDUITS. PROVIDE WATER TIGHT FITTINGS ON ALL UNDERGROUND CONDUITS.
7. COORDINATE DEMOLITION WORK, AND ELECTRICAL AND TELEPHONE SERVICES TO THE SITE, WITH THE RESPECTIVE LOCAL UTILITY COMPANY REPRESENTATIVES PRIOR TO COMMENCEMENT OF WORK. INCLUDE ALL ASSOCIATED COST/FEES BY THE UTILITY COMPANIES IN THE BID PRICE.
8. INSTALL UNDERGROUND CONDUITS 42" BELOW FINISHED GRADE, MINIMUM, UNLESS NOTED OTHERWISE.
9. COORDINATE SERVICE SHUT-DOWNS WITH ALL TRADES INVOLVED ON SITE AND OBTAIN WRITTEN AUTHORIZATION FROM OWNER 72 HOURS PRIOR TO ANY ELECTRICAL AND/OR TELEPHONE SHUT-DOWN.
10. REMOVE ALL DE-ENERGIZED CONDUCTORS FROM SITE AT COMPLETION OF THE PROJECT.
11. OUTDOOR LIGHTING BRANCH CIRCUIT WIRING SHALL BE MINIMUM #8 AWG CONDUCTORS (XHHW-2), IN MINIMUM 1" DIA. CONDUIT, UNLESS NOTED OTHERWISE.
12. OUTDOOR POWER BRANCH CIRCUIT WIRING SHALL BE MINIMUM #10 AWG CONDUCTORS (XHHW-2), IN MINIMUM 1" DIA. CONDUIT, UNLESS NOTED OTHERWISE.
13. OUTDOOR COMMUNICATION CONDUIT SHALL BE IN MINIMUM 1-1/4" DIA., UNLESS NOTED OTHERWISE.
14. SPARE CONDUITS SHALL INCLUDE PULL STRING AND SHALL BE TERMINATED WITH A CAP.
15. EXCAVATE THE ENTIRE LENGTH OF TRENCH TO PROPERLY SET DUCT ELEVATIONS.

CONSTRUCTION KEY NOTES:

1. THE INTERIOR/GRASS AREA OF KEAST COMMONS WILL BE USED AS AN EVENT AREA WITH POSSIBLE LARGE TENTS WITH STACKS. ELECTRICAL WORK IS TO BE LOCATED AROUND THE PERIMETER NEAR THE WALK TO KEEP THE INTERIOR/GRASS AREA CLEAR.
2. PROVIDE 2" CONDUIT FOR FUTURE USE FROM HANDHOLE IN INTERIOR/GRASS AREA TO NSES PANEL. PROVIDE PULL STRING.
3. PROVIDE 2" CONDUIT FOR FUTURE USE FROM HANDHOLE IN INTERIOR/GRASS AREA TO SSES PANEL. PROVIDE PULL STRING.
4. 16" HIGH PEDESTAL WITH (1) GFCI WEATHERPROOF NEMA 5-20R AND (1)NEMA L14-30R. PEDESTAL SHALL BE LEGRAND OUTDOOR POWER PEDESTAL (XPP2G16C-BK). PROVIDE CONCRETE BASE. REFER TO OUTDOOR HINGED PEDESTAL DETAIL [FOOD TRUCK].
5. PROVIDE SUPPORT SYSTEM AND CONCRETE BASES FOR EXTERIOR PANELBOARD.
6. PROVIDE POWER PEDSTAL AND CONCRETE BASE. REFER TO OUTDOOR POWER PEDESTAL DETAIL [PP].
7. OUTDOOR GROUND BOX WITH GFCI WEATHERPROOF NEMA 5-20R RECEPTACLE. BOX SHALL BE LEGRAND OUTDOOR GROUND BOX XB814. INSTALL PER MANUFACTURERS INSTRUCTIONS.
8. ALTERNATE #1: PROVIDE NEW POLE BASES, POLES AND FIXTURES. EXTEND EXTERIOR LIGHTING BRANCH CIRCUIT.
9. 2 #8 & 1 #10(G) - 3/4"C.
10. STUB UP 1-1/4" LOW VOLTAGE CONDUIT TO NEW SIGN LOCATION. COORDINATE FINAL STUB UP HEIGHT AND LOCATION WITH SIGN INSTALLER.
11. PROVIDE WHILE IN USE COVER AND WEATHER TIGHT BOX FOR TELECOMMUNICATION OUTLET. MOUNT TO SUPPORT STRUCTURE OF PANELBOARD.
12. STUB UP CONDUIT FROM MES PANEL TO IRRIGATION CONTROLLER. COORDINATE FINAL STUB UP HEIGHT AND LOCATION WITH IRRIGATION CONTROLLER INSTALLER.
13. PROVIDE WHILE IN USE COVER AND WEATHER TIGHT BOX FOR LOW VOLTAGE LIGHT SWITCH. MOUNT TO SUPPORT STRUCTURE OF PANELBOARD.
14. PROVIDE EXTERIOR RATED WEATHER TIGHT BOX WITH LOCKABLE PANEL COVER FOR RECEPTACLES AT MES PANEL. MOUNT TO SUPPORT STRUCTURE OF PANELBOARD.
15. REMOVE AND REPLACE SIDEWALK FOR ELECTRICAL WORK AS REQUIRED.
16. DATA DROP CABLE LENGTH IS OVER 295'-0" FROM THE MDF (APPROXIMATE MEASUREMENT) AND WILL REQUIRE A SPECIAL INSTALLATION METHOD EITHER BY POE ETHERNET EXTENDERS OR UTILIZING LONG RANGE CATEGORY CABLING. FINAL METHOD IS TO BE APPROVED BY WSU C&IT DURING SUBMITTAL PROCESS.
17. PROVIDE A NON-TERMINATED DATA CABLE FROM THE MDF ROOM IN CHATSWORTH TO THE POLE FOR FUTURE USE. PROVIDE 20' OF EXTRA COILED CABLING AT BOTH THE MDF AND POLE ENDS.

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Section:	X

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2025-06-27	Issue for Bid

Developed For:

Wayne State University

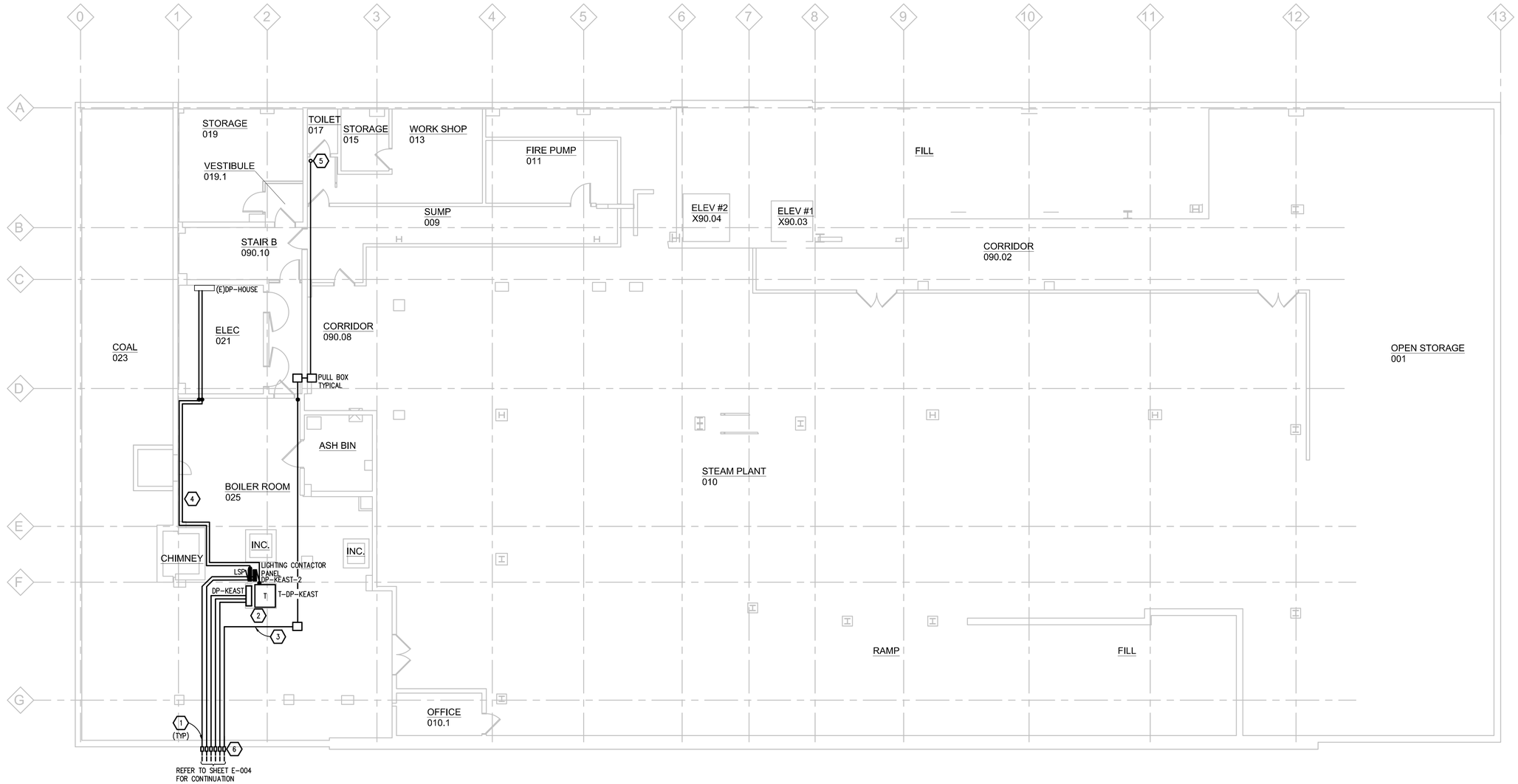
630 Merrick St
Detroit MI 48202

ELECTRICAL SITE PLAN NEW WORK

WSU Keast Commons

Detroit
Wayne
MICHIGAN

Date:	06.27.2025
Scale:	1"=20'
Sheet:	E-004
Project:	20572.10D



CHATSWORTH LOWER BASEMENT ELECTRICAL PLAN

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

ELECTRICAL GENERAL NOTES:

1. THESE DRAWINGS REPRESENT THE GENERAL EXTENT AND ARRANGEMENT OF SYSTEMS. COORDINATE EXACT EQUIPMENT LOCATIONS, ELEVATIONS, AND FINAL CONNECTION REQUIREMENTS. PROVIDE EACH SYSTEM COMPLETE, INCLUDING ALL NECESSARY COMPONENTS, FITTINGS AND OFFSETS.
2. INSTALL SYSTEMS SUCH THAT REQUIRED CLEARANCE AND SERVICE ACCESS SPACE IS PROVIDED AROUND ALL MECHANICAL AND ELECTRICAL EQUIPMENT, AND AROUND ANY COMPONENTS WHICH REQUIRE SERVICE ACCESS.
3. INSTALL SYSTEMS IN COMPLIANCE WITH WAYNE STATE UNIVERSITY STANDARDS FOR TELECOMMUNICATIONS INFRASTRUCTURE (https://tech.wayne.edu/docs/infrastructure-construction-comm-standards.pdf).
4. PROVIDE SUPPLEMENTARY STEEL AS REQUIRED FOR THE PROPER SUPPORT OF ALL SYSTEMS.
5. TRANSFORMER SECONDARY CONDUCTORS SHALL BE SIZED IN ACCORDANCE WITH TRANSFORMER CIRCUIT SIZING SCHEDULE SHOWN ON "ELECTRICAL STANDARD SCHEDULES DRAWING" UNLESS OTHERWISE NOTED.
6. COORDINATE THE MOUNTING HEIGHTS OF DEVICES WITH ARCHITECTURAL ELEVATIONS AND THE TRADES INSTALLING THE WORK.
7. REFER TO MECHANICAL SCHEDULE SHEETS FOR ELECTRICAL REQUIREMENTS FOR MECHANICAL EQUIPMENT. PROVIDE ALL CONNECTIONS, STARTERS, DISCONNECTS, ETC. AS REQUIRED BY SCHEDULES AND WHERE NOTED ELSEWHERE. VERIFY REQUIREMENTS OF ALL MECHANICAL EQUIPMENT WITH SHOP DRAWINGS SUBMITTALS. NOTIFY ENGINEER OF ANY CONFLICTS BETWEEN EQUIPMENT SUBMITTALS AND ELECTRICAL DRAWINGS. WHERE CIRCUIT SIZES ARE SHOWN ON THE ELECTRICAL DRAWINGS THAT DIFFER FROM WHAT IS INDICATED ON THE MECHANICAL SCHEDULES, PROVIDE THE CIRCUIT OF HIGHER AMPACITY.

(#) CONSTRUCTION KEY NOTES:

1. CORE EXISTING WALL FOR NEW ELECTRICAL FEEDERS, BRANCH CIRCUITS AND TELECOMMUNICATIONS CONDUIT. PROVIDE LINK SEAL AROUND CONDUITS.
2. PROVIDE 4" HOUSE KEEPING PAD FOR ELECTRICAL GEAR. MOUNT NEW ELECTRICAL GEAR TO UNISTRUT SUPPORT SYSTEM ATTACHED TO THE HOUSE KEEPING PAD. BOND ALL CONCRETE REINFORCEMENTS AND ANCHORS TOGETHER SO THAT SYSTEM IS ELECTRICALLY CONTINUOUS.
3. 4" CONDUIT FOR LOW VOLTAGE CABLING. ROUTE TO EXISTING MDF ROOM AND PROVIDE PULL BOXES AS REQUIRED.
4. ROUTE FEEDERS ALONG WALL OF BOILER ROOM THEN DOWN TO NEW DISTRIBUTION. PROVIDE PULL BOXES AS REQUIRED.
5. CORE EXISTING FLOOR FOR CONDUIT UP TO EXISTING MDF ROOM.
6. REFER TO CONDUIT PENETRATION DETAIL ON E-701.
7. STUB 4" CONDUIT FROM LOWER BASEMENT INTO MDF ROOM FOR LOW VOLTAGE CABLING.
8. CONFIRM LOCATIONS OF POWER SUPPLY, UPS, AND OTHER HYBRID BLUE LIGHT PHONE EQUIPMENT IN MDF ROOM WITH OWNER PRIOR TO INSTALLATION. PROVIDE AND INSTALL ALL NECESSARY ELECTRICAL COMPONENTS FOR A COMPLETE AND FUNCTIONAL HYBRID BLUE LIGHT PHONE SYSTEM ACCORDING TO WAYNE STATE UNIVERSITY STANDARDS FOR TELECOMMUNICATIONS INFRASTRUCTURE PAGES 58-61 (https://tech.wayne.edu/docs/infrastructure-construction-comm-standards.pdf).
9. PROVIDE LIGHTING PROTECTION PER DATA LINE IN THE MDF BEFORE LANDING CABLING AT THE EXISTING MDF RACK. REFER TO WSU C&IT STANDARDS FOR DETAILS.

THE FOLLOWING DIMENSION EQUALS ONE INCH WHEN PRINTED TO SCALE. 1"

KEY PLAN
NO SCALE

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Designer:	WGH
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Section:	X

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CHATSWORTH LOWER BASEMENT ELECTRICAL PLAN

WSU Keast Commons

Detroit
Wayne
MICHIGAN

Date:	06.27.2025
Scale:	1/8"=1'-0"
Sheet:	E-301
Project:	20572.10D

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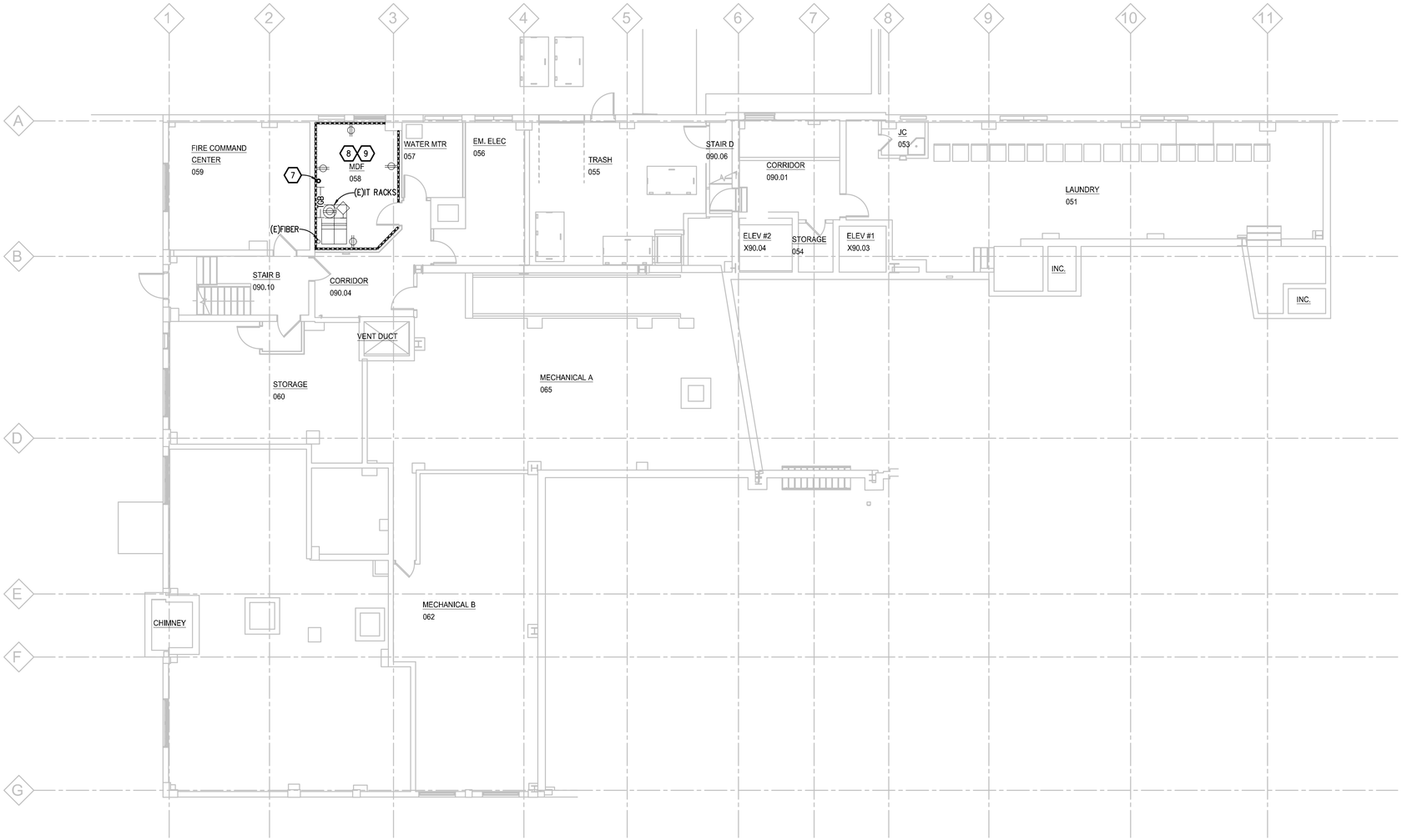


CHATSWORTH UPPER BASEMENT ELECTRICAL PLAN

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

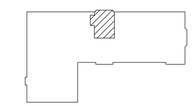
ELECTRICAL GENERAL NOTES:

1. THESE DRAWINGS REPRESENT THE GENERAL EXTENT AND ARRANGEMENT OF SYSTEMS. COORDINATE EXACT EQUIPMENT LOCATIONS, ELEVATIONS, AND FINAL CONNECTION REQUIREMENTS. PROVIDE EACH SYSTEM COMPLETE, INCLUDING ALL NECESSARY COMPONENTS, FITTINGS AND OFFSETS.
2. INSTALL SYSTEMS SUCH THAT REQUIRED CLEARANCE AND SERVICE ACCESS SPACE IS PROVIDED AROUND ALL MECHANICAL AND ELECTRICAL EQUIPMENT, AND AROUND ANY COMPONENTS WHICH REQUIRE SERVICE ACCESS.
3. INSTALL SYSTEMS IN COMPLIANCE WITH WAYNE STATE UNIVERSITY STANDARDS FOR TELECOMMUNICATIONS INFRASTRUCTURE (https://tech.wayne.edu/docs/infrastructure-construction-comm-standards.pdf).
4. PROVIDE SUPPLEMENTARY STEEL AS REQUIRED FOR THE PROPER SUPPORT OF ALL SYSTEMS.
5. TRANSFORMER SECONDARY CONDUCTORS SHALL BE SIZED IN ACCORDANCE WITH TRANSFORMER CIRCUIT SIZING SCHEDULE SHOWN ON "ELECTRICAL STANDARD SCHEDULES DRAWING" UNLESS OTHERWISE NOTED.
6. COORDINATE THE MOUNTING HEIGHTS OF DEVICES WITH ARCHITECTURAL ELEVATIONS AND THE TRADES INSTALLING THE WORK.
7. REFER TO MECHANICAL SCHEDULE SHEETS FOR ELECTRICAL REQUIREMENTS FOR MECHANICAL EQUIPMENT. PROVIDE ALL CONNECTIONS, STARTERS, DISCONNECTS, ETC. AS REQUIRED BY SCHEDULES AND WHERE NOTED ELSEWHERE. VERIFY REQUIREMENTS OF ALL MECHANICAL EQUIPMENT WITH SHOP DRAWINGS SUBMITTALS. NOTIFY ENGINEER OF ANY CONFLICTS BETWEEN EQUIPMENT SUBMITTALS AND ELECTRICAL DRAWINGS. WHERE CIRCUIT SIZES ARE SHOWN ON THE ELECTRICAL DRAWINGS THAT DIFFER FROM WHAT IS INDICATED ON THE MECHANICAL SCHEDULES, PROVIDE THE CIRCUIT OF HIGHER AMPACITY.

(#) CONSTRUCTION KEY NOTES:

1. CORE EXISTING WALL FOR NEW ELECTRICAL FEEDERS, BRANCH CIRCUITS AND TELECOMMUNICATIONS CONDUIT. PROVIDE LINK SEAL AROUND CONDUITS.
2. PROVIDE 4" HOUSE KEEPING PAD FOR ELECTRICAL GEAR. MOUNT NEW ELECTRICAL GEAR TO UNISTRUT SUPPORT SYSTEM ATTACHED TO THE HOUSE KEEPING PAD. BOND ALL CONCRETE REINFORCEMENTS AND ANCHORS TOGETHER SO THAT SYSTEM IS ELECTRICALLY CONTINUOUS.
3. 4" CONDUIT FOR LOW VOLTAGE CABLING. ROUTE TO EXISTING MDF ROOM AND PROVIDE PULL BOXES AS REQUIRED.
4. ROUTE FEEDERS ALONG WALL OF BOILER ROOM THEN DOWN TO NEW DISTRIBUTION. PROVIDE PULL BOXES AS REQUIRED.
5. CORE EXISTING FLOOR FOR CONDUIT UP TO EXISTING MDF ROOM.
6. REFER TO CONDUIT PENETRATION DETAIL ON E-701.
7. STUB 4" CONDUIT FROM LOWER BASEMENT INTO MDF ROOM FOR LOW VOLTAGE CABLING.
8. CONFIRM LOCATIONS OF POWER SUPPLY, UPS, AND OTHER HYBRID BLUE LIGHT PHONE EQUIPMENT IN MDF ROOM WITH OWNER PRIOR TO INSTALLATION. PROVIDE AND INSTALL ALL NECESSARY ELECTRICAL COMPONENTS FOR A COMPLETE AND FUNCTIONAL HYBRID BLUE LIGHT PHONE SYSTEM ACCORDING TO WAYNE STATE UNIVERSITY STANDARDS FOR TELECOMMUNICATIONS INFRASTRUCTURE PAGES 58-61 (https://tech.wayne.edu/docs/infrastructure-construction-comm-standards.pdf).
9. PROVIDE LIGHTING PROTECTION PER DATA LINE IN THE MDF BEFORE LANDING CABLING AT THE EXISTING MDF RACK. REFER TO WSU C&IT STANDARDS FOR DETAILS.

THE FOLLOWING DIMENSION EQUALS ONE INCH WHEN PRINTED TO SCALE. 1"



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CHATSWORTH UPPER BASEMENT ELECTRICAL PLAN

WSU Keast Commons

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Date:	06.27.2025
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Sheet:	E-302
Project:	20572.10D

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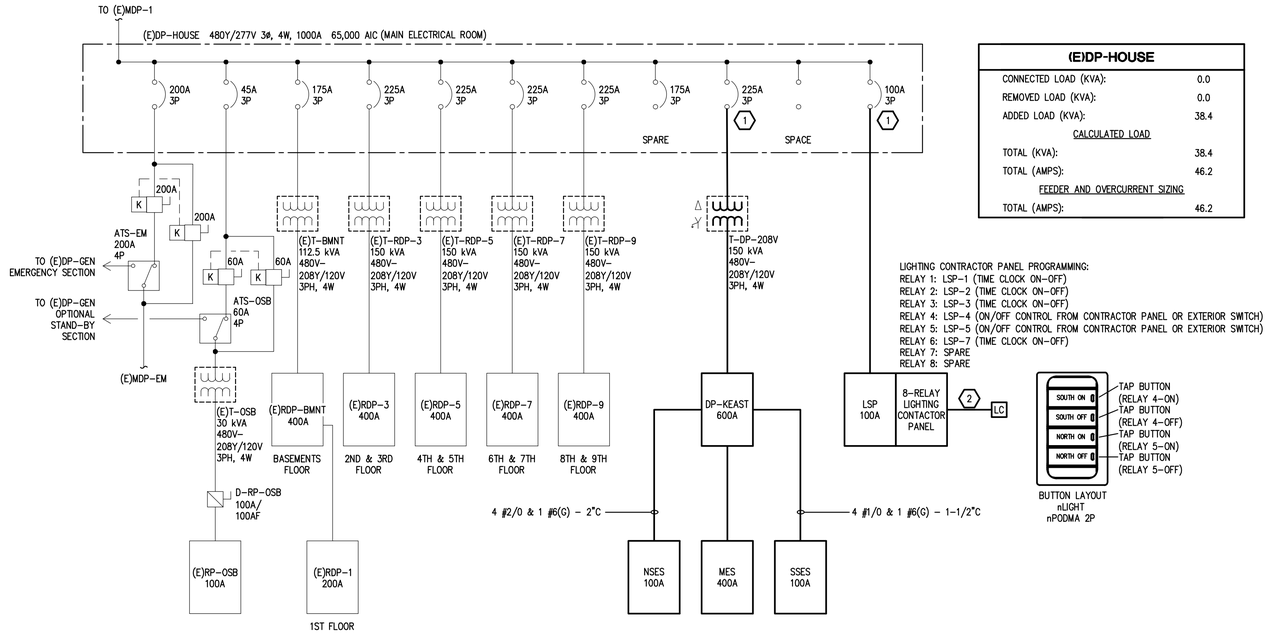

(E)DP-HOUSE	
CONNECTED LOAD (KVA):	0.0
REMOVED LOAD (KVA):	0.0
ADDED LOAD (KVA):	38.4
CALCULATED LOAD	
TOTAL (KVA):	38.4
TOTAL (AMPS):	46.2
FEEDER AND OVERCURRENT SIZING	
TOTAL (AMPS):	46.2

PARTIAL ONE LINE DIAGRAM
NO SCALE

DIAGRAM GENERAL NOTES:

1. THESE DRAWINGS REPRESENT THE GENERAL EXTENT AND ARRANGEMENT OF SYSTEMS. COORDINATE EXACT EQUIPMENT LOCATIONS, ELEVATIONS, AND FINAL CONNECTION REQUIREMENTS. PROVIDE EACH SYSTEM COMPLETE, INCLUDING ALL NECESSARY COMPONENTS, FITTINGS AND OFFSETS.
2. FEEDER AND BRANCH CIRCUIT CONDUCTORS SHALL BE SIZED IN ACCORDANCE WITH THE "FEEDER AND BRANCH CIRCUIT SIZING SCHEDULE-GENERAL PURPOSE" ON THE "ELECTRICAL STANDARD SCHEDULES DRAWING" UNLESS SPECIFICALLY NOTED OTHERWISE.
3. TRANSFORMER SECONDARY CONDUCTORS SHALL BE SIZED IN ACCORDANCE WITH THE "TRANSFORMER CIRCUIT SIZING SCHEDULE-GENERAL PURPOSE" ON THE "ELECTRICAL STANDARD SCHEDULES DRAWING" UNLESS SPECIFICALLY NOTED OTHERWISE.
4. BASIS OF DESIGN IS EATON DISTRIBUTION EQUIPMENT. IF THE CONTRACTOR ELECTS TO PROVIDE EQUIPMENT FROM OTHER APPROVED MANUFACTURERS, THE CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE THE LAYOUT AND CLEARANCE REQUIREMENTS IN ALL SPACES CONTAINING ELECTRICAL EQUIPMENT AND PROVIDE EQUIPMENT MEETING THE SPECIFICATIONS AND ACHIEVING CODE REQUIRED CLEARANCES WITHIN THE SPACE PROVIDED.

(#) CONSTRUCTION KEY NOTES:

1. CONNECT TO EXISTING SPARE BREAKER. EXISTING DISTRIBUTION PANEL IS EATON POW-R-LINE C SERIES. NOTIFY OWNER OF SHUTDOWN TIMELINE.
2. PROVIDE LOW VOLTAGE CABLING IN (1)1"C FROM LIGHTING CONTACTOR PANEL TO EXTERIOR LOW VOLTAGE LIGHTING SWITCH.

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ONE LINE DIAGRAM

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Date:	06.27.2025
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Project:	20572.10D

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PANELBOARD MES

#	LOAD TYPE	DESCRIPTION	CB TYPE	CB	VA	ØA	ØB	ØC	VA	CB	CB TYPE	DESCRIPTION	LOAD TYPE	#
1	NC	FOOD TRUCK PEDESTAL #1		30	2000	3000			1000	20		IRRIGATION CONTROLLER	NC	2
3	NC				2000		2180		180	20		MES POWER/RECEPT PANEL (NEMA 5-20R)	R	4
5	NC	FOOD TRUCK PEDESTAL #2		30	2000			2180	180	20		MES POWER/RECEPT PANEL (NEMA 5-20R)	R	6
7	NC				2000	2180			180	20		MES POWER/RECEPT PANEL (NEMA 5-20R)	R	8
9	NC	FOOD TRUCK PEDESTAL #3		30	2000		2000			20		SPARE		10
11	NC				2000			2000		20		SPARE		12
13	NC	FOOD TRUCK PEDESTAL #4		30	2000	2000				20		SPARE		14
15	NC				2000		2000			20		SPARE		16
17	NC	FOOD TRUCK PEDESTAL #5		30	2000			2000		20		SPARE		18
19	NC				2000	2000				20		SPARE		20
21	NC	FOOD TRUCK PEDESTAL #1		20	1000		1000			20		SPARE		22
23	NC	FOOD TRUCK PEDESTAL #2		20	1000			1000		20		SPARE		24
25	NC	FOOD TRUCK PEDESTAL #3		20	1000	1000								26
27	NC	FOOD TRUCK PEDESTAL #4		20	1000		1000			20		MES POWER/RECEPT PANEL (NEMA L15-20R)		28
29	NC	FOOD TRUCK PEDESTAL #5		20	1000			1000						30
31		MES POWER/RECEPT PANEL (NEMA L6-20R)		20						30		MES POWER/RECEPT PANEL (NEMA L15-30R)		32
33														34
35		MES POWER/RECEPT PANEL (NEMA L6-30R)		30										36
37														38
39		MES POWER/RECEPT PANEL (NEMA L6-50R)		50						50		MES POWER/RECEPT PANEL (NEMA L15-50R)		40
41														42
						10180	8180	8180						
						ØA	ØB	ØC						

PANELBOARD INFORMATION
VOLTAGE: 208Y/120
BUS AMPACITY: 400A
MAIN TYPE: 400A MCB
MINIMUM A.I.C.: 10,000
MOUNTING: SURFACE

☐ FEED-THROUGH LUGS
☐ DOUBLE LUGS
☐ INTEGRAL SPD

PANELBOARD LOCATION
EXTERIOR
MAIN EVENT STAGE AREA

BRANCH CIRCUIT CONNECTED LOAD		DEMAND FACTOR	CALCULATED LOAD	FEEDER AND OCPD SIZING	
CONTINUOUS LOAD (C)		100%		125%	
ELECTRIC HEAT (E)		100%		100%	
NON-CONTINUOUS LOAD (NC)	26000	100%	26000	100%	26000
KITCHEN LOAD (K)		100%		100%	
RECEPTACLE BASE LOAD (R)	540	100%	540	100%	540
RECEPTACLE DEMAND LOAD (R)		50%		100%	
LIGHTING LOAD (L)		100%		125%	
ADDITIONAL TRACK LIGHTING LOAD				100%	
MOTORS, HIGHEST LOAD (MH)		125%		100%	
MOTORS, REMAINING LOAD (M)		100%		100%	
		TOTAL(KVA):	26.54		
NOTE: DEMAND AND SIZING INFORMATION IS CALCULATED FROM CONNECTED LOAD		TOTAL (AMPS):	73.7	TOTAL (AMPS):	73.7

NOTES:
NEMA 3R

DP-KEAST

#	LOAD TYPE	DESCRIPTION	CB TYPE	CB	VA	ØA	ØB	ØC	VA	CB	CB TYPE	DESCRIPTION	LOAD TYPE	#
1	NC				10180	10680			500	20		LIGHTING CONTROL PANEL	C	2
3	NC	MES		400	8180		8180			20		SPARE		4
5	NC				8180			8180		20		SPARE		6
7	NC				2000	2000				20		SPARE		8
9	NC	NSES		100	1000		1000			20		SPARE		10
11	NC				1000			1000		20		SPARE		12
13	NC				2000	2000				20		SPARE		14
15	NC	SSES		100	1000		1000			20		SPARE		16
17	NC				1000			1000		20		SPARE		18
19		SPARE		20						20		SPARE		20
21		SPARE		20						20		SPARE		22
23		SPARE		20						20		SPARE		24
25		SPARE		20						20		SPARE		26
27		SPARE		20						20		SPARE		28
29		SPARE		20						20		SPARE		30
31		SPARE		20						20		SPARE		32
33		SPARE		20						20		SPARE		34
35		SPARE		20						20		SPARE		36
37		SPARE		20						20		SPARE		38
39		SPARE		20						20		SPARE		40
41		SPARE		20						20		SPARE		42
						14680	10180	10180						
						ØA	ØB	ØC						

PANELBOARD INFORMATION
VOLTAGE: 208Y/120
BUS AMPACITY: 600A
MAIN TYPE: 600A MCB
MINIMUM A.I.C.: 10,000
MOUNTING: SURFACE

☐ FEED-THROUGH LUGS
☐ DOUBLE LUGS
☐ INTEGRAL SPD

PANELBOARD LOCATION
CHATSWORTH
BOILER ROOM 025

BRANCH CIRCUIT CONNECTED LOAD		DEMAND FACTOR	CALCULATED LOAD	FEEDER AND OCPD SIZING	
CONTINUOUS LOAD (C)	500	100%	500	125%	625
ELECTRIC HEAT (E)		100%		100%	
NON-CONTINUOUS LOAD (NC)	34540	100%	34540	100%	34540
KITCHEN LOAD (K)		100%		100%	
RECEPTACLE BASE LOAD (R)		100%		100%	
RECEPTACLE DEMAND LOAD (R)		50%		100%	
LIGHTING LOAD (L)		100%		125%	
ADDITIONAL TRACK LIGHTING LOAD				100%	
MOTORS, HIGHEST LOAD (MH)		125%		100%	
MOTORS, REMAINING LOAD (M)		100%		100%	
		TOTAL(KVA):	35.04		
NOTE: DEMAND AND SIZING INFORMATION IS CALCULATED FROM CONNECTED LOAD		TOTAL (AMPS):	97.3	TOTAL (AMPS):	97.6

PANELBOARD NSES

#	LOAD TYPE	DESCRIPTION	CB TYPE	CB	VA	ØA	ØB	ØC	VA	CB	CB TYPE	DESCRIPTION	LOAD TYPE	#
1	NC	NORTH POWER PEDESTAL		20	1000	1000				20		SPARE		2
3	NC	NORTH POWER PEDESTAL		20	1000		1000			20		SPARE		4
5	NC	NORTH POWER PEDESTAL		20	1000			1000		20		SPARE		6
7	NC	NORTH POWER PEDESTAL		20	1000	1000				20		SPARE		8
9		SPARE		20						20		SPARE		10
11		SPARE		20						20		SPARE		12
13		SPARE		20						20		SPARE		14
15		SPARE		20						20		SPARE		16
17		SPARE		20						20		SPARE		18
19		SPARE		20						20		SPARE		20
21		SPARE		20						20		SPARE		22
23		SPARE		20						20		SPARE		24
25		SPARE		20						20		SPARE		26
27		SPARE		20						20		SPARE		28
29		SPARE		20						20		SPARE		30
31		SPARE		20						20		SPARE		32
33		SPARE		20						20		SPARE		34
35		SPARE		20						20		SPARE		36
37		SPARE		20						20		SPARE		38
39		SPARE		20						20		SPARE		40
41		SPARE		20						20		SPARE		42
						2000	1000	1000						
						ØA	ØB	ØC						

PANELBOARD INFORMATION
VOLTAGE: 208Y/120
BUS AMPACITY: 100A
MAIN TYPE: 100A MCB
MINIMUM A.I.C.: 10,000
MOUNTING: SURFACE

☐ FEED-THROUGH LUGS
☐ DOUBLE LUGS
☐ INTEGRAL SPD

PANELBOARD LOCATION
EXTERIOR
NORTH SEC. EVENT STAGE

BRANCH CIRCUIT CONNECTED LOAD		DEMAND FACTOR	CALCULATED LOAD	FEEDER AND OCPD SIZING	
CONTINUOUS LOAD (C)		100%		125%	
ELECTRIC HEAT (E)		100%		100%	
NON-CONTINUOUS LOAD (NC)	4000	100%	4000	100%	4000
KITCHEN LOAD (K)		100%		100%	
RECEPTACLE BASE LOAD (R)		100%		100%	
RECEPTACLE DEMAND LOAD (R)		50%		100%	
LIGHTING LOAD (L)		100%		125%	
ADDITIONAL TRACK LIGHTING LOAD				100%	
MOTORS, HIGHEST LOAD (MH)		125%		100%	
MOTORS, REMAINING LOAD (M)		100%		100%	
		TOTAL(KVA):	4.00		
NOTE: DEMAND AND SIZING INFORMATION IS CALCULATED FROM CONNECTED LOAD		TOTAL (AMPS):	11.1	TOTAL (AMPS):	11.1

NOTES:
NEMA 3R

LSP

#	LOAD TYPE	DESCRIPTION	CB TYPE	CB	VA	ØA	ØB	ØC	VA	CB	CB TYPE	DESCRIPTION	LOAD TYPE	#
1	L	EXTERIOR POST TOP WALK FIXTURES		20	860	1420			560	20		SOUTH KEAST WALK ARM MOUNT FIXTURES	L	2
3	L	NORTH KEAST WALK ARM MOUNT FIXTURES		20	560		990		430	20		SOUTH KEAST UPPER POLE LIGHTING	L	4
5	L	NORTH KEAST UPPER POLE LIGHTING		20	430			430		20		SPARE		6
7	NC	KEAST SIGNAGE		20	500	500				20		SPARE		8
9		SPARE		20						20		SPARE		10
11		SPARE		20						20		SPARE		12
13		SPARE		20						20		SPARE		14
15		SPARE		20						20		SPARE		16
17		SPARE		20						20		SPARE		18
19		SPARE		20						20		SPARE		20
						1920	990	430						
						ØA	ØB	ØC						

PANELBOARD INFORMATION
VOLTAGE: 480Y/277
BUS AMPACITY: 100A
MAIN TYPE: 100A MCB
MINIMUM A.I.C.: 14,000
MOUNTING: SURFACE

☐ FEED-THROUGH LUGS
☐ DOUBLE LUGS
☐ INTEGRAL SPD

PANELBOARD LOCATION
CHATSWORTH
BOILER ROOM 025

BRANCH CIRCUIT CONNECTED LOAD		DEMAND FACTOR	CALCULATED LOAD	FEEDER AND OCPD SIZING	
CONTINUOUS LOAD (C)		100%		125%	
ELECTRIC HEAT (E)		100%		100%	
NON-CONTINUOUS LOAD (NC)	500	100%	500	100%	500
KITCHEN LOAD (K)		100%		100%	
RECEPTACLE BASE LOAD (R)		100%		100%	
RECEPTACLE DEMAND LOAD (R)		50%		100%	
LIGHTING LOAD (L)	2840	100%	2840	125%	3550
ADDITIONAL TRACK LIGHTING LOAD				100%	
MOTORS, HIGHEST LOAD (MH)		125%		100%	
MOTORS, REMAINING LOAD (M)		100%		100%	
		TOTAL(KVA):	3.34		
NOTE: DEMAND AND SIZING INFORMATION IS CALCULATED FROM CONNECTED LOAD		TOTAL (AMPS):	4.0	TOTAL (AMPS):	4.9

PANELBOARD SSES

#	LOAD TYPE	DESCRIPTION	CB TYPE	CB	VA	ØA	ØB	ØC	VA	CB	CB TYPE	DESCRIPTION	LOAD TYPE	#
1	NC	SOUTH POWER PEDESTAL		20	1000	1000				20		SPARE		2
3	NC	SOUTH POWER PEDESTAL		20	1000		1000			20		SPARE		4
5	NC	SOUTH POWER PEDESTAL		20	1000			1000		20		SPARE		6
7	NC	SOUTH POWER PEDESTAL		20	1000	1000				20		SPARE		8
9		SPARE		20						20		SPARE		10
11		SPARE		20						20		SPARE		12
13		SPARE		20						20		SPARE		14
15		SPARE		20						20		SPARE		16
17		SPARE		20						20		SPARE		18
19		SPARE		20						20		SPARE		20
21		SPARE		20						20		SPARE		22
23		SPARE		20						20		SPARE		24
25		SPARE		20						20		SPARE		26
27		SPARE		20						20		SPARE		28
29		SPARE		20						20		SPARE		30
31		SPARE		20						20		SPARE		32
33		SPARE		20						20		SPARE		34
35		SPARE		20						20		SPARE		36
37		SPARE		20						20		SPARE		38
39		SPARE		20						20		SPARE		40
41		SPARE		20						20		SPARE		42
						2000	1000	1000						
						ØA	ØB	ØC						

PANELBOARD INFORMATION
VOLTAGE: 208Y/120
BUS AMPACITY: 100A
MAIN TYPE: 100A MCB
MINIMUM A.I.C.: 10,000
MOUNTING: SURFACE

☐ FEED-THROUGH LUGS
☐ DOUBLE LUGS
☐ INTEGRAL SPD

PANELBOARD LOCATION
EXTERIOR
SOUTH SEC. EVENT STAGE

BRANCH CIRCUIT CONNECTED LOAD		DEMAND FACTOR	CALCULATED LOAD	FEEDER AND OCPD SIZING	
CONTINUOUS LOAD (C)		100%		125%	
ELECTRIC HEAT (E)		100%		100%	
NON-CONTINUOUS LOAD (NC)	4000	100%	4000	100%	4000
KITCHEN LOAD (K)		100%		100%	
RECEPTACLE BASE LOAD (R)		100%		100%	
RECEPTACLE DEMAND LOAD (R)		50%		100%	
LIGHTING LOAD (L)		100%		125%	
ADDITIONAL TRACK LIGHTING LOAD				100%	
MOTORS, HIGHEST LOAD (MH)		125%		100%	
MOTORS, REMAINING LOAD (M)		100%		100%	
		TOTAL(KVA):	4.00		
NOTE: DEMAND AND SIZING INFORMATION IS CALCULATED FROM CONNECTED LOAD		TOTAL (AMPS):	11.1	TOTAL (AMPS):	11.1

NOTES:
NEMA 3R

PANEL SCHEDULE INDEX	
MES	DP-KEAST
NSES	LSP
SSES	

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Designer:	WGH
Quality Control:	X
Section:	X

Professional Seal:

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2025-06-13	Construction Documents
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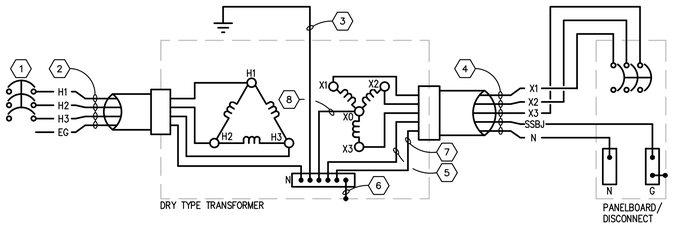
Developed For:
Wayne State University
630 Merrick St
Detroit MI 48202

PANEL SCHEDULES

WSU Keast Commons

Detroit
Wayne
MICHIGAN

Date:	06.27.2025
Scale:	NTS
Sheet:	E-502
Project:	20572.10D

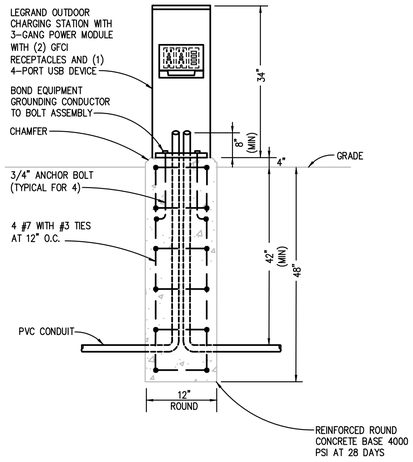


DRY TYPE DISTRIBUTION TRANSFORMER GROUNDING ARRANGEMENT

NO SCALE

(#) KEYED NOTES:

1. 480V, 3ø PRIMARY CIRCUIT BREAKER BASED ON DRY TYPE DISTRIBUTION TRANSFORMER CIRCUIT SIZING SCHEDULE ON ELECTRICAL STANDARD SCHEDULE DRAWING UNLESS OTHERWISE NOTED.
2. PRIMARY FEEDER BASED ON FEEDER AND BRANCH CIRCUIT SIZING TABLE ON ELECTRICAL STANDARD SCHEDULE DRAWING UNLESS OTHERWISE NOTED.
3. GROUNDING ELECTRODE CONDUCTOR TO NEAREST GROUNDING ELECTRODE (i.e. METAL IN GROUND SUPPORT STRUCTURE, METAL WATER PIPE, GROUND RING, OR GROUND BUS). SEE DRY TYPE DISTRIBUTION TRANSFORMER CIRCUIT SIZING SCHEDULE ON ELECTRICAL STANDARD SCHEDULE DRAWING FOR SIZE UNLESS OTHERWISE NOTED.
4. 208Y/120V, 3ø, 4W SECONDARY FEEDER BASED ON DRY TYPE DISTRIBUTION TRANSFORMER CIRCUIT SIZING SCHEDULE ON ELECTRICAL STANDARD SCHEDULE DRAWING UNLESS OTHERWISE NOTED.
5. SUPPLY SIDE BONDING JUMPER.
6. SYSTEM BONDING JUMPER.
7. GROUNDED CONDUCTOR (NEUTRAL).
8. NEUTRAL CONDUCTOR PROVIDED WITH EQUIPMENT.

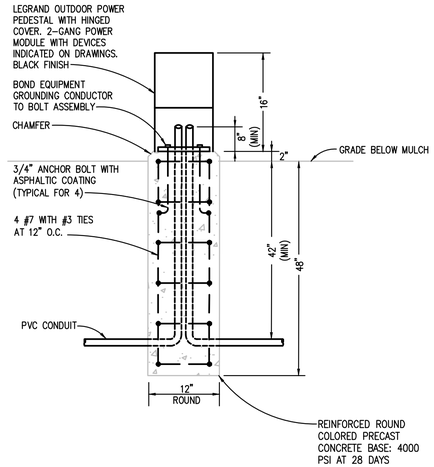


OUTDOOR POWER PEDESTAL DETAIL [PP]

NO SCALE

NOTES:

1. FURNISH AND INSTALL POWER PEDESTAL PER MANUFACTURER'S REQUIREMENTS.
2. PROVIDE PRECAST CONCRETE BASE AS MANUFACTURED BY NORTHERN CONCRETE PIPE, INC. OR APPROVED EQUAL.
3. CONCRETE REINFORCEMENTS SHALL BE BARE, ZINC GALVANIZED, OR ELECTRICALLY CONDUCTIVE COATED STEEL. BOND ALL CONCRETE REINFORCEMENTS AND ANCHOR BOLTS TOGETHER SO THAT SYSTEM IS ELECTRICALLY CONTINUOUS.
4. SEE LANDSCAPE DRAWINGS FOR AESTHETIC DETAIL NOTES.

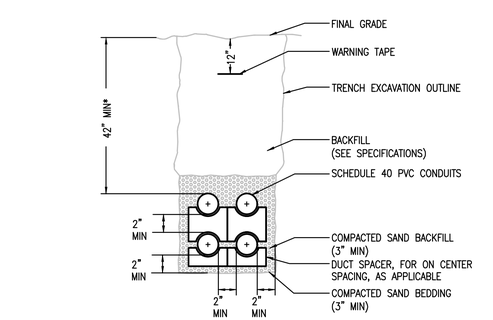


OUTDOOR HINGED PEDESTAL DETAIL [FOOD TRUCK]

NO SCALE

NOTES:

1. FURNISH AND INSTALL POWER PEDESTAL PER MANUFACTURER'S REQUIREMENTS.
2. PROVIDE PRECAST CONCRETE BASE AS MANUFACTURED BY NORTHERN CONCRETE PIPE, INC. OR APPROVED EQUAL.
3. CONCRETE REINFORCEMENTS SHALL BE BARE, ZINC GALVANIZED, OR ELECTRICALLY CONDUCTIVE COATED STEEL. BOND ALL CONCRETE REINFORCEMENTS AND ANCHOR BOLTS TOGETHER SO THAT SYSTEM IS ELECTRICALLY CONTINUOUS.
4. MULCH LINE TO REMAIN BELOW BOTTOM EDGE OF ACCESS DOOR.
5. CONDUITS TO BE EXTENDED ABOVE BOTTOM EDGE OF ACCESS DOOR TO LIMIT WATER INGRESS.
6. BASE TO HAVE SLIGHT SLOPE FROM CENTER TO PERIMETER TO ALLOW POSITIVE DRAINAGE AND PREVENT WATER FROM POOLING AT BASE.



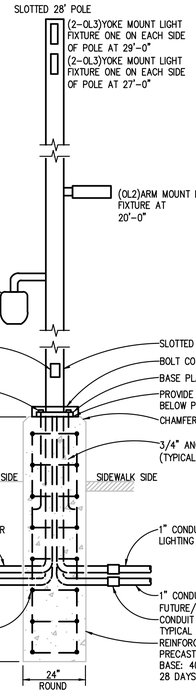
UNDERGROUND DIRECT BURIED CONDUIT DETAIL

NO SCALE

NOTES:

1. DETAIL FOR CONDUITS OF SAME SYSTEM. CONDUITS OF SEPARATE SYSTEMS IN SAME TRENCH MUST BE SEPARATED BY AT LEAST 12".

* UNLESS OTHERWISE NOTED. REFER TO CIVIL DRAWING PROFILE SECTIONS FOR ADDITIONAL DETAILS OF DUCT BANK ELEVATIONS.

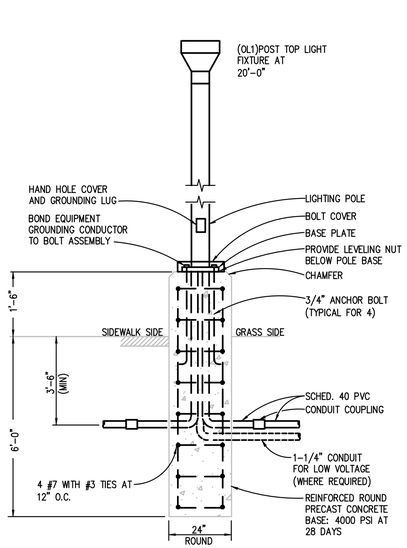


OL2/OL3 LIGHTING POLE BASE DETAIL

NO SCALE

NOTE:

1. PROVIDE PRECAST CONCRETE BASE AS MANUFACTURED BY NORTHERN CONCRETE PIPE, INC. OR APPROVED EQUAL.
2. CONCRETE REINFORCEMENTS SHALL BE BARE, ZINC GALVANIZED, OR ELECTRICALLY CONDUCTIVE COATED STEEL. BOND ALL CONCRETE REINFORCEMENTS AND ANCHOR BOLTS TOGETHER SO THAT SYSTEM IS ELECTRICALLY CONTINUOUS.

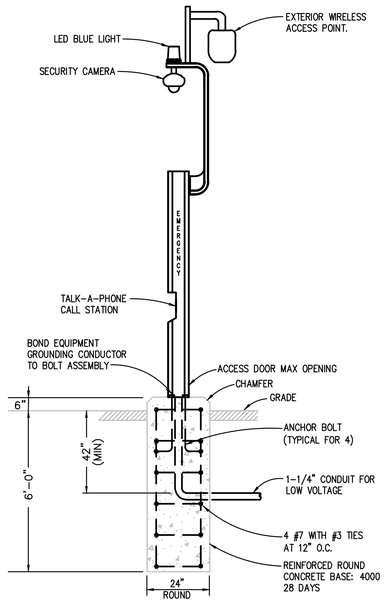


OL1 LIGHTING POLE BASE DETAIL

NO SCALE

NOTE:

1. PROVIDE PRECAST CONCRETE BASE AS MANUFACTURED BY NORTHERN CONCRETE PIPE, INC. OR APPROVED EQUAL.
2. CONCRETE REINFORCEMENTS SHALL BE BARE, ZINC GALVANIZED, OR ELECTRICALLY CONDUCTIVE COATED STEEL. BOND ALL CONCRETE REINFORCEMENTS AND ANCHOR BOLTS TOGETHER SO THAT SYSTEM IS ELECTRICALLY CONTINUOUS.

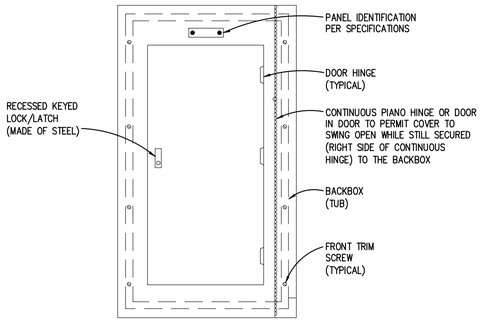


SECURITY PHONE BASE DETAIL

NO SCALE

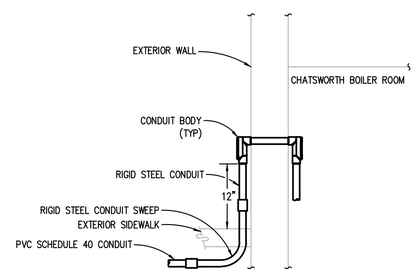
NOTES:

1. PROVIDE PRECAST CONCRETE BASE AS MANUFACTURED BY NORTHERN CONCRETE PIPE, INC. OR APPROVED EQUAL.
2. CONCRETE REINFORCEMENTS SHALL BE BARE, ZINC GALVANIZED, OR ELECTRICALLY CONDUCTIVE COATED STEEL. BOND ALL CONCRETE REINFORCEMENTS AND ANCHOR BOLTS TOGETHER SO THAT SYSTEM IS ELECTRICALLY CONTINUOUS.
3. PROVIDE ALL SYSTEM COMPONENTS AND INSTALLATION OF HYBRID BLUE LIGHT PHONE ACCORDING TO WAYNE STATE UNIVERSITY STANDARDS FOR TELECOMMUNICATIONS INFRASTRUCTURE PAGES 58-61 (https://tech.wayne.edu/docs/infrastructure-construction-comm-standards.pdf). CONFIRM ALL COMPONENTS WITH OWNER PRIOR TO PURCHASE AND INSTALLATION.
4. CONFIRM EXACT MOUNTING, CONCRETE BASE, AND ELECTRICAL REQUIREMENTS WITH FINAL HYBRID BLUE PHONE SELECTION PRIOR TO PURCHASE AND INSTALL.
5. ANCHOR BOLT TO BE AS RECOMMENDED BY PHONE MANUFACTURER.



PANELBOARD FRONT COVER DETAIL

NO SCALE



CONDUIT PENETRATION DETAIL

NO SCALE

NOTES:

1. PENETRATION SHALL AVOID PANEL JOINTS AND FLASHING. EXACT PENETRATION SHALL BE COORDINATED WITH OWNER PRIOR TO INSTALLATION.
2. SEAL AROUND CONDUITS WATERTIGHT.

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Section:	X

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2025-05-07	Design Development
2025-06-13	Construction Documents
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630 Merrick St
Detroit MI 48202

ELECTRICAL DETAILS AND DIAGRAMS

WSU Keast Commons

Detroit
Wayne
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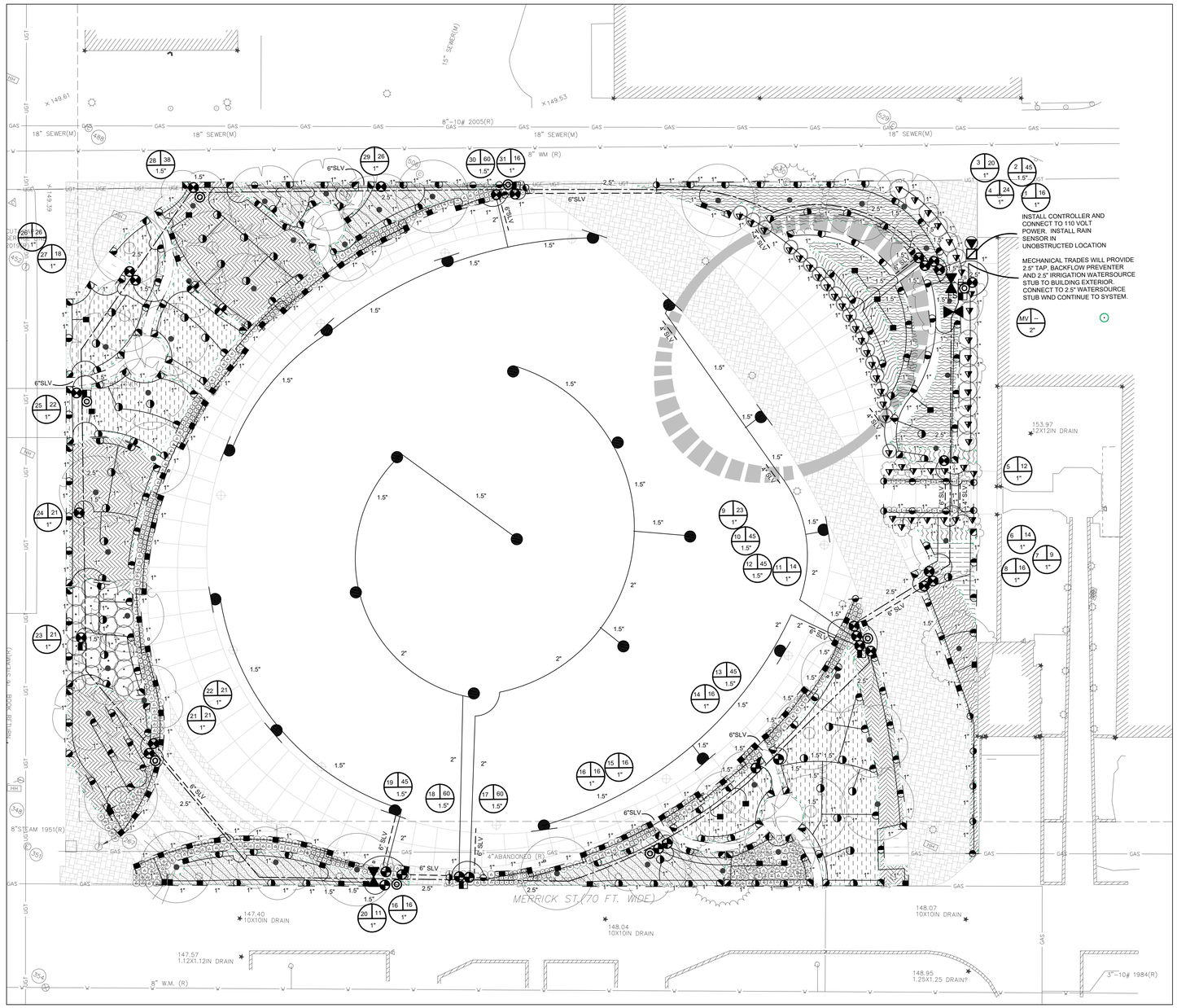
Date:	06.27.2025
Scale:	NTS
Sheet:	E-701
Project:	20572.10D



GRAPHIC SCALE: 1" = 20'

IRRIGATION LEGEND

KEY	EQUIPMENT	RAINBIRD
	Stream Bubbler	1404
	12" Pop Up Spray w/	1812-SAM-P45 w/ R-VAN Nozzles
	12' Radius Nozzle	R-VAN 18, 18-360 Series Nozzle
	10' Radius Nozzle	R-VAN 14, 14-360 Series Nozzle
	Strip Spray Nozzle	R-VAN-LCS, SST End and Side Strip
	Automatic Control Valve	PEB-IVM-SOL Series
	Master Valve	PEB-IVM-SOL Series
	Large Rotary Sprinkler 50' Radius	Falcon 6504 #12 Nozzle
	Quick Coupling Valve	5RC
	Isolation Valve	Nibco T113
	Control System	LX-IVM PRO w/ • LXMM CABINET AND LXMMPED • WR2-RFC Rain Sensor • IQ4G-USA CELLULAR CARTRIDGE • USF-200 Ultra Sonic Flow Sensor w/ IVM-OUT DEVICE
	Watersource	See Detail
FS	Flow Sensor	USF-200 Ultra Sonic Flow Sensor w/ IVM-OUT DEVICE
	Surge Arrestor	IVM-SD
	Rain Sensor	WR2-RFC

Timer Designation
GPM for new zones
Valve Size

MAINLINE PIPE, CLASS 200 PVC, REFER TO SPECIFICATIONS

LATERAL PIPE, PE 3408, 100 PSI, REFER TO SPECIFICATIONS

X" SLV — SLEEVE TO BE INSTALLED BENEATH NEW PAVING, 30" BURY- SIZE AS SHOWN, INSTALLATION SHALL BE PART OF IRRIGATION SCOPE OF WORK

NEATLY PAINT METAL CONTROLLER CABINET WITH RUST INHIBITING BLACK PAINT.

giffels webster

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Wayne State University

FACILITIES AND PLANNING MANAGEMENT

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IRRIGATION PLAN

WSU Keast Commons

City of Detroit
Wayne County
MICHIGAN

Date:	05.07.25
Scale:	1" = 20'-0"
Sheet:	IR-100
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MECHANICAL ABBREVIATION LIST

ABBREVIATION	DESCRIPTION
A	COMPRESSED AIR
A(__#)	COMPRESSED AIR (SPECIFIC PSIG)
AAV	AUTOMATIC AIR VENT
ACC	AIR COOLED CONDENSER
ACCU	AIR COOLED CONDENSING UNIT
AD	ACCESS DOOR
AD	AREA DRAIN
AE	AIR EXTRACTOR
AFF	ABOVE FINISHED FLOOR
AHU	AIR HANDLING UNIT
ALT	ALTERNATE
AMP	AMPERE
APD	AIR PRESSURE DROP
AR	ARGON
ASHRAE	AMERICAN SOCIETY OF HEATING, REFRIGERATION AND AIR-CONDITIONING ENGINEERS
ASR	AUTOMATIC SPRINKLER RISER
ATD	AIR TRANSFER DUCT
AUX	AUXILIARY
AV	ACID VENT
AVTR	ACID VENT THROUGH ROOF
AW	ACID WASTE
BAS	BUILDING AUTOMATION SYSTEM
BCU	BLOWER COIL UNIT
BDD	BACKDRAFT DAMPER
BFF	BELOW FINISHED FLOOR
BFP	BACKFLOW PREVENTER
BHP	BRAKE HORSEPOWER
BOD	BOTTOM OF DUCT
BOP	BOTTOM OF PIPE
BTU	BRITISH THERMAL UNIT
BTUH	BRITISH THERMAL UNIT PER HOUR
BVC	BEVERAGE CONDUIT
BWV	BACKWATER VALVE
C	COMMON
CAP	CAPACITY
CAV	CONSTANT AIR VOLUME
CB	CATCH BASIN
CC	COOLING COIL
CD	COLD DECK
CD	CONDENSATE DRAIN
CFCI	CONTRACTOR FURNISHED, CONTRACTOR INSTALLED
CFH	CUBIC FEET PER HOUR
CFM	CUBIC FEET PER MINUTE
CH	CHILLER
CHW	CHILLED WATER
CHWR	CHILLED WATER RETURN
CHWS	CHILLED WATER SUPPLY
CLG	COOLING
CNDS	CONDENSATE
CNDS (__#)	CONDENSATE (SPECIFIC PSIG)
CO	CLEAN OUT
CO2	CARBON DIOXIDE
CONT	CONTINUATION OR CONTINUED
CONTR	CONTRACTOR
CONV	CONVECTOR
COP	COEFFICIENT OF PERFORMANCE
CP	CIRCULATING PUMP
CRU	CONDENSATE RETURN UNIT
CSS	CLINICAL SERVICE SINK
CT	COOLING TOWER
CUH	CABINET UNIT HEATER
CW	DOMESTIC COLD WATER
CWF	DOMESTIC COLD WATER - FILTERED
CWR	CONDENSER WATER RETURN
CWS	CONDENSER WATER SUPPLY
D&T	DRIP AND TRAP
DA	DISCHARGE AIR
DAT	DISCHARGE AIR TEMPERATURE
DB	DRY BULB
DDC	DIRECT DIGITAL CONTROL
DEG	DEGREE
DFU	DRAINAGE FIXTURE UNITS
DIA	DIAMETER
DIR	DEIONIZED RETURN
DIS	DEIONIZED SUPPLY
DMPR	DAMPER
D/N	DAY/NIGHT
DN	DOWN
DNZ	DOWNSPOUT NOZZLE
DS	DUCT SILENCER
DT	DRAIN TILE
DTC	DRAIN TILE CONNECTION
DWH	DOMESTIC WATER HEATER
DWG	DRAWING
(E)	EXISTING
E	EXHAUST GRILLE OR REGISTER
EA	EACH
EA	EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE
EC	EXPANSION COMPENSATOR
ECM	ELECTRONICALLY COMMUTATED MOTOR
ECUH	ELECTRIC CABINET UNIT HEATER
EDB	ENTERING DRY BULB
EER	ENERGY EFFICIENCY RATIO
EES	EMERGENCY EYE WASH / SHOWER
EEW	EMERGENCY EYE WASH
EF	EXHAUST FAN
EFF	EFFICIENCY
EHC	ELECTRIC HEATING COIL
EJ	EXPANSION JOINT
EL	ELEVATION
ELEC	ELECTRICAL
EMS	ENERGY MANAGEMENT SYSTEM
ERL	ENERGY RECOVERY LOOP
ERLR	ENERGY RECOVERY LOOP RETURN
ERLS	ENERGY RECOVERY LOOP SUPPLY
ERU	ENERGY RECOVERY UNIT
ESH	EMERGENCY SHOWER
ESP	EXTERNAL STATIC PRESSURE
EUH	ELECTRIC UNIT HEATER
EWB	ENTERING WET BULB
EWC	ELECTRIC WATER COOLER
EWT	ENTERING WATER TEMPERATURE
EXH	EXHAUST
F	FIRE PROTECTION
°F	DEGREES FAHRENHEIT
F&B	FACE AND BYPASS
F&T	FLOAT AND THERMOSTATIC
FA	FACE AREA
FCU	FAN COIL UNIT
FD	FLOOR DRAIN
FFD	FUNNEL FLOOR DRAIN
FGR	FUEL GAS RETURN
FGS	FUEL GAS SUPPLY
FH	FIRE HYDRANT
FHC	FIRE HOSE CABINET
FHR	FIRE HOSE RACK
FHV	FIRE HOSE VALVE
FLA	FULL LOAD AMPS
FLR	FLOOR
FM	FLOW METER
FMS	FLOW MEASURING STATION
FOB	FLAT ON BOTTOM
FOT	FLAT ON TOP
FPM	FEET PER MINUTE
FP	FIRE PUMP
FPTU	FAN POWERED (AIR) TERMINAL UNIT
FS	FLOOR SINK
FSEC	FOOD SERVICE EQUIPMENT CONTRACTOR
FT	FEET
FTR	FINNED TUBE RADIATION
FV	FACE VELOCITY
G	NATURAL GAS
GA	GAUGE
GAL	GALLON
GRH	GRAVITY RELIEF HOOD
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GSAN	GREASE SANITARY WASTE
H	HYDROGEN
HB	HOSE BIBB
HC	HEATING COIL
HD	HOT DECK
HEPA	HIGH EFFICIENCY PARTICULATE ARRESTANCE
HL	HIGH LIMIT
HOA	HAND/OFF/AUTO
HP	HEAT PUMP
HP	HORSEPOWER
HPCW	HIGH PRESSURE DOMESTIC COLD WATER
HPHW	HIGH PRESSURE DOMESTIC HOT WATER
HPHWR	HIGH PRESSURE DOMESTIC HOT WATER RETURN
HPL	HEAT PUMP LOOP
HPLR	HEAT PUMP LOOP RETURN
HPLS	HEAT PUMP LOOP SUPPLY
HR	HOUR
HTG	HEATING
HV	HEATING VENTILATING
HVAC	HEATING, VENTILATING, AIR CONDITIONING
HWH	HOT WATER HEATING
HWHR	HOT WATER HEATING RETURN
HWHS	HOT WATER HEATING SUPPLY
HW	DOMESTIC HOT WATER
HW(___)	DOMESTIC HOT WATER (SPECIFIC TEMP °F)
HWR	DOMESTIC HOT WATER RETURN
HWR(___)	DOMESTIC HOT WATER RETURN (SPECIFIC TEMP °F)
HX	HEAT EXCHANGER
HZ	HERTZ
IAQ	INDOOR AIR QUALITY
ID	INSIDE DIAMETER
IE	INVERT ELEVATION
IH	INTAKE HOOD
IN	INCHES
IR	INFRARED HEATER
IW	INDIRECT WASTE
JC	JANITOR'S CLOSET
JP	JOCKEY PUMP
KA	THOUSAND AMP
KW	KILOWATT
KWH	KILOWATT-HOUR
LAT	LEAVING AIR TEMPERATURE
LAB	LABORATORY
LAV	LAVATORY
LBS	POUNDS
LDB	LEAVING DRY BULB
LL	LOW LIMIT
LPC	LOW PRESSURE CONDENSATE
LPS	LOW PRESSURE STEAM
LRA	LOCKED ROTOR AMPS
LWB	LEAVING WET BULB
LWT	LEAVING WATER TEMPERATURE
MA	MIXED AIR
MAT	MIXED AIR TEMPERATURE
MAU	MAKE-UP AIR UNIT
MAX	MAXIMUM
MBH	THOUSAND BRITISH THERMAL UNITS PER HOUR
MCA	MEDICAL COMPRESSED AIR
MCA	MINIMUM CIRCUIT AMPACITY
MCC	MOTOR CONTROL CENTER
MECH	MECHANICAL
MEZZ	MEZZANINE
MFR	MANUFACTURER
MH	MANHOLE
MIL	1/1000th INCH
MIN	MINIMUM
MISC	MISCELLANEOUS
MMBH	MILLION BRITISH THERMAL UNITS PER HOUR
MOP	MAXIMUM OVERCURRENT PROTECTION
M/S	MOTOR STARTER
MTD	MOUNTED
MTR	MOTOR
MV	MANUAL AIR VENT
MVAC	MEDICAL VACUUM
N2O	NITROUS OXIDE
NC	NOISE CRITERIA
NC	NORMALLY CLOSED
NCTC	NORMALLY CLOSED TIMED CLOSED
NCTO	NORMALLY CLOSED TIMED OPEN
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NOTC	NORMALLY OPEN TIMED CLOSED
NOTO	NORMALLY OPEN TIMED OPEN
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
NOM	NOMINAL
NPCW	NON POTABLE COLD WATER
NPHW	NON POTABLE HOT WATER
O2	OXYGEN
OA	OUTSIDE AIR
OAT	OUTSIDE AIR TEMPERATURE
OB	OUTLET BOX
OBD	OPPOSED BLADE DAMPER
OC	ON CENTER/CENTER TO CENTER
OD	OUTSIDE DIAMETER
OED	OPEN ENDED DUCT
OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED
OFOI	OWNER FURNISHED, OWNER INSTALLED
OL	OVERLOAD
ORC	OVERFLOW RAIN CONDUCTOR
ORD	OVERFLOW ROOF DRAIN
OS&Y	OUTSIDE SCREW AND YOKE
OV	OUTLET VELOCITY
OWS	OPERATOR WORKSTATION
PACU	PACKAGED AIR CONDITIONING UNIT
PBD	PARALLEL BLADE DAMPER
PC	PUMPED CONDENSATE
PCW	PROCESS COOLING WATER
PCWR	PROCESS COOLING WATER RETURN
PCWS	PROCESS COOLING WATER SUPPLY
PD	PRESSURE DROP (FEET OF WATER)
PH	PERIMETER HEAT
PHR	PERIMETER HEAT RETURN
PHS	PERIMETER HEAT SUPPLY
PNL	PANEL
PPM	PARTS PER MILLION
PRESS	PRESSURE
PRV	PRESSURE REDUCING VALVE
PSAN	PUMPED SANITARY
PST	PUMPED STORM
PSI	POUNDS PER SQUARE INCH
PSIA	POUNDS PER SQUARE INCH - ABSOLUTE
PSIG	POUNDS PER SQUARE INCH - GAUGE
(R)	RELOCATED
R	RETURN GRILLE OR REGISTER
RA	RETURN AIR
RAT	RETURN AIR TEMPERATURE
RC	RAIN CONDUCTOR
RCP	RADIANT CEILING PANEL
RD	ROOF DRAIN
REQD	REQUIRED
REF	ROOF EXHAUST FAN
RF	RETURN FAN
RH	RELATIVE HUMIDITY
RL	REFRIGERANT LIQUID
RLFA	RELIEF AIR
ROR	REVERSE OSMOSIS RETURN
ROS	REVERSE OSMOSIS SUPPLY
RPM	REVOLUTIONS PER MINUTE
RPDA	REDUCED PRESSURE BACKFLOW PREVENTION DETECTION ASSY
RPZA	REDUCED PRESSURE BACKFLOW PREVENTION ZONE ASSY
RS	REFRIGERANT SUCTION
RTU	ROOFTOP UNIT
S	SUPPLY AIR DIFFUSER OR GRILLE
SA	SOUND ATTENUATOR
SA	SUPPLY AIR
SAN	SANITARY WASTE
SAT	SUPPLY AIR TEMPERATURE
SECT	SECTION
SCCR	SHORT CIRCUIT CURRENT RATING
SF	SUPPLY FAN
SH	SHOWER
SK	SINK
SMR	SNOW MELT RETURN
SMS	SNOW MELT SUPPLY
SP	STATIC PRESSURE
SPEC	SPECIFICATION
SPKLR	SPRINKLER
SQFT	SQUARE FOOT/SQUARE FEET
S/S	START/STOP
SS	SERVICE SINK
ST	STORM
STD	STANDARD
STK	STACK
STM	STEAM
STM(__#)	STEAM (SPECIFIC PSIG)
S/W	SUMMER/WINTER
SW	SWITCH
T	TRANSFER GRILLE
TC	TEMPERATURE CONTROL
TC	TEMPERING COIL
TCP	TEMPERATURE CONTROL PANEL
TD	TRENCH DRAIN
TEMP	TEMPERATURE
TEMP	TEMPORARY
TH	TERMINAL HEATING
THA	TOTAL HEAT ABSORBED
THR	TERMINAL HEATING RETURN
THR	TOTAL HEAT REJECTED
THS	TERMINAL HEATING SUPPLY
TK	TANK
TMR	TIMER SWITCH
TPD	TEPID WATER
TSP	TOTAL STATIC PRESSURE
TU	(AIR) TERMINAL UNIT
TV	TURNING VANES
TW	TEMPERED WATER
TYP	TYPICAL
UH	UNIT HEATER
UL	UNDERWRITER'S LABORATORY
UON	UNLESS OTHERWISE NOTED
UR	URINAL
UV	UNIT VENTILATOR
V	VALVE
V	VENT
VAC	VACUUM
VAV	VARIABLE AIR VOLUME
VB	VACUUM BREAKER
VD	VOLUME DAMPER (MANUALLY ADJUSTABLE)
VOL	VOLUME
VFC	VARIABLE FREQUENCY CONTROLLER
VTR	VENT THROUGH ROOF
VTU	VENTURI TERMINAL UNIT
VUV	VERTICAL UNIT VENTILATOR
W	WASTE
W&V	WASTE AND VENT
WAGD	WASTE ANESTHETIC GAS DISPOSAL
WB	WET BULB
WC	WATER CLOSET
WC	WATER COLUMN
WG	WATER GAUGE
WH	WALL HYDRANT
WMSD	WASHING MACHINE SUPPLY AND DRAIN BOX
WPD	WATER PRESSURE DROP
WT	WEIGHT
XFMR	TRANSFORMER
ZVB	ZONE VALVE BOX

TEMPERATURE CONTROL - PARTIAL SYMBOLS LIST

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
CO2	CARBON DIOXIDE SENSOR	OS	OCCUPANCY SENSOR
CO	CARBON MONOXIDE SENSOR	PT	PRESSURE TRANSMITTER
DPT	DIFFERENTIAL PRESSURE TRANSMITTER	SP	STATIC PRESSURE SENSOR OR PROBE
FM	FLOW METER		VALVE - 2 WAY CONTROL VALVE
	GUARD FOR STAT OR SENSOR		VALVE - 3 WAY CONTROL VALVE
H	HUMIDISTAT OR HUMIDITY SENSOR (AS DEFINED ON TC DRAWINGS)	T	THERMOSTAT OR TEMPERATURE SENSOR (AS DEFINED ON TC DRAWINGS)

NOTE: LIST OF ADDITIONAL SYMBOLS & ABBREVIATIONS ASSOCIATED WITH TEMPERATURE CONTROLS ARE IDENTIFIED ON TC DRAWINGS.

MECHANICAL SYMBOL LIST

PIPING SYMBOLS

SYMBOL	DESCRIPTION
AAV	AIR VENT - AUTOMATIC
MV	AIR VENT - MANUAL
BFP	BACKFLOW PREVENTER
	CATCH BASIN
	CIRCULATING PUMP
CO	CLEAN OUT - IN FLOOR
CO	CLEAN OUT - FLANGE
	DIRECTION OF FLOW
	DIRECTION OF PITCH - DOWN
	FINNED TUBE RADIATION
	FIRE PROTECTION - SIAMESE CONNECTION - FREE STANDING
	FIRE PROTECTION - SIAMESE CONNECTION - WALL MOUNTED
	FIRE PROTECTION - SPRINKLER HEAD, CONCEALED
	FIRE PROTECTION - SPRINKLER HEAD, PENDANT
	FIRE PROTECTION - SPRINKLER HEAD, UPRIGHT
	FIRE PROTECTION - SPRINKLER HEAD, SIDEWALL
	FLOOR DRAIN
	FLOOR DRAIN - ELEVATION
	FLOOR DRAIN - FUNNEL
	FLOOR DRAIN - FUNNEL, ELEVATION
PS	FLOW MEASURING DEVICE (FOR TEST AND BALANCING)
FM	FLOW SWITCH
HB	FLOW METER
MH	HOSE BIBB
	MANHOLE
	OPEN SITE DRAIN
	PIPE - ANCHOR
	PIPE - CAP OR PLUG
	PIPE - ELBOW DOWN
	PIPE - ELBOW UP
	PIPE - EXPANSION JOINT OR COMPENSATOR
	PIPE - FLANGE
	PIPE - HOSE AND BRAID FLEXIBLE CONNECTION
	PIPE - RUBBER FLEXIBLE CONNECTION
	PIPE - GUIDE
	PIPE - TEE DOWN
	PIPE - TEE UP
	PIPE - UNION
P/T	PRESSURE AND TEMPERATURE TEST PLUG
	PRESSURE GAUGE AND COCK
	REDUCER - CONCENTRIC
	REDUCER - ECCENTRIC
	ROOF/OVERFLOW DRAIN
	STEAM TRAP - FLOAT AND THERMOSTATIC
	STEAM TRAP - BUCKET
	STRAINER
	STRAINER WITH VALVE AND BLOW-OFF
	THERMOMETER
	TRAP
	VALVE - ANGLE
	VALVE - BALL
	VALVE - BUTTERFLY
0.5	VALVE - BALANCE (i.e. BALANCE VALVE TO 0.5 GPM)
0.5	VALVE - COMBINATION BALANCE & FLOW MEASURING (i.e. BALANCE VALVE TO 0.5 GPM)
	VALVE - CHECK
	VALVE - SPRING CHECK
	VALVE - GAS (MANUAL)
	VALVE - GLOBE
	VALVE - ISOLATION
	VALVE - NEEDLE
	VALVE - OS&Y
	VALVE - PLUG
	VALVE - PRESSURE REGULATING
	VALVE - PRESSURE REDUCING
	VALVE - PRESSURE RELIEF
	VALVE - PRESSURE & TEMPERATURE RELIEF
VTR	VENT THROUGH ROOF
WH	WALL HYDRANT
	VENT
WM	WATER METER
GM	GAS METER

DOUBLE LINE PIPING SYMBOLS

SYMBOL	DESCRIPTION
	FLANGE
	FLEX CONNECTION
	STRAINER - BASKET
	STRAINER - Y TYPE
	VALVE - 2 WAY CONTROL
	VALVE - 3 WAY CONTROL
	VALVE - BUTTERFLY
	VALVE - CHECK
	VALVE - DETECTOR CHECK
	VALVE - OS&Y HORIZONTAL STEM
	VALVE - OS&Y VERTICAL STEM

DUCTWORK SYMBOLS

SYMBOL	DESCRIPTION
	AIR TERMINAL UNIT
TU-101	AIR TERMINAL UNIT WITH HEATING COIL
TU-101	VENTURI AIR TERMINAL UNIT
VTU-101	VENTURI AIR TERMINAL UNIT WITH HEATING COIL
	DAMPER - HORIZONTAL FIRE (EXISTING, NEW)
	DAMPER - HORIZONTAL FIRE / SMOKE (EXISTING, NEW)
	DAMPER - SMOKE (EXISTING, NEW)
	DAMPER - VERTICAL FIRE (EXISTING, NEW)
	DAMPER - VERTICAL FIRE / SMOKE (EXISTING, NEW)
BDD	DAMPER - BACK DRAFT
M	DAMPER - MOTORIZED
	DAMPER - VOLUME (MANUALLY ADJUSTABLE)
	DIFFUSER - BLANK OFF
	DIFFUSER - LINEAR SLOT
	DIFFUSER - SQUARE OR RECTANGULAR
	DUCT CROSS SECTION - SUPPLY
	DUCT CROSS SECTION - RETURN
	DUCT CROSS SECTION - EXHAUST
	DUCT - FLEXIBLE CONNECTION
	DUCT - FLEXIBLE DUCT
	DUCT TAKE-OFF - ROUND CONICAL
	DUCT TAKE-OFF - RECTANGULAR WITH SHOE TAP
	ELBOW - RECTANGULAR WITH TURNING VANES
	ELBOW - RECTANGULAR/ ROUND SMOOTH RADIUS
	ELBOW DOWN - RECTANGULAR
	ELBOW DOWN - ROUND
	ELBOW UP - RECTANGULAR
	ELBOW UP - ROUND
	FAN - AXIAL
	FAN - CENTRIFUGAL (ELEVATION)
VFC XX-#	VARIABLE FREQUENCY CONTROLLER SERVING EQUIPMENT XX-#
	HEATING COIL
D	INCLINED DROP IN DIRECTION OF AIRFLOW
R	INCLINED RISE IN DIRECTION OF AIRFLOW
	INTAKE OR RELIEF HOOD
	REGISTER - RETURN OR EXHAUST
	REGISTER - RETURN WITH BOOT
	REGISTER - TRANSFER GRILLE
	ROOF EXHAUST FAN
	TRANSITION - CONCENTRIC
	TRANSITION - ECCENTRIC
	UNIT HEATER - HORIZONTAL THROW
	UNIT HEATER - VERTICAL THROW

DOUBLE LINE DUCTWORK SYMBOLS

SYMBOL	DESCRIPTION
	DUCT TAKE-OFF - RECTANGULAR WITH SHOE TAP
	DUCT TAKE-OFF - ROUND CONICAL
	ELBOW - RECTANGULAR WITH TURNING VANES
	ELBOW - RECTANGULAR SHORT RADIUS WITH SPLITTER VANES
	ELBOW - ROUND
	ELBOW - RECTANGULAR SMOOTH RADIUS
	ELBOW DOWN - RECTANGULAR
	ELBOW DOWN - ROUND
	ELBOW UP - RECTANGULAR
	ELBOW UP - ROUND
	HEATING COIL
D	INCLINED DROP IN DIRECTION OF AIRFLOW
R	INCLINED RISE IN DIRECTION OF AIRFLOW
	TRANSITION - CONCENTRIC
	TRANSITION - ECCENTRIC

MECHANICAL DRAWING INDEX

STANDARD METHODS OF NOTATION

S-1 / 10ø / 350-4 — SUPPLY DIFFUSER WITH SCHEDULE TAG "1", 10" DIAMETER NECK SIZE, 350 CFM TYPICAL FOR 4

R-1 / 22x22 / 640-2 — RETURN REGISTER WITH SCHEDULE TAG "1", 22"x 22" NECK SIZE, 640 CFM TYPICAL FOR 2, EXHAUST REGISTER E DESIGNATION SIMILAR.

TU-101 — AIR TERMINAL UNIT WITH HEATING COIL NO. 101 WITH SERVICE CLEARANCE SHOWN

VTU-101 — VENTURI AIR TERMINAL WITH HEATING COIL NO. 101 WITH SERVICE CLEARANCE SHOWN

(2)WC-1 / FD-1 — PLUMBING FIXTURE UNIT IDENTIFICATION TAG, WATER CLOSET TYPE "1", TYPICAL FOR 2

8 — PIPE DIAMETER NOTATION, ALL SIZES IN INCHES

8ø / 22x10 / 18x14ø — DUCT SIZE NOTATION, ALL SIZES IN INCHES; OVAL DUCT; RECTANGULAR DUCT

1 — CONSTRUCTION KEY NOTE (NUMBER) OR DEMOLITION KEY NOTE (LETTER)

EF 1 — EQUIPMENT DESIGNATION, (i.e. EXHAUST FAN NUMBER 1)

HW-1 — PIPING RISER DESIGNATION (i.e. HOT WATER RISER NUMBER 1)

NEW SYSTEM COMPONENT; EXISTING SYSTEM COMPONENT TO REMAIN; POINT OF NEW CONNECTION SYMBOL

1 / M5.1 — SECTION OR PLAN NUMBER; SHEET WHERE SECTION IS DRAWN

AREA OF ENLARGEMENT; PLAN NUMBER; SHEET WHERE ENLARGED PLAN IS DRAWN

1 / M5.1 — SECTION OR PLAN NUMBER; SHEET WHERE SECTION IS CUT OR ENLARGED PLAN IS REFERENCED

SECTION OR ENLARGED PLAN

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

SHEET M1.0 / SHEET M1.1 — MATCH LINE

HEAVY LINE WEIGHT INDICATES NEW WORK

LIGHT LINE WEIGHT INDICATES EXISTING EQUIPMENT OR REFERENCED INFORMATION

GRAY LINE INDICATES BACKGROUND INFORMATION

DASHED LINES INDICATE PIPING ROUTED BELOW SLAB OR GRADE

HATCH MARKS INDICATE EQUIPMENT OR MATERIALS TO BE DISCONNECTED AND REMOVED.

NOTE: SOME SYMBOLS AND ABBREVIATIONS SHOWN MAY NOT APPLY TO THIS PROJECT.

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MECHANICAL STANDARDS AND DRAWING INDEX

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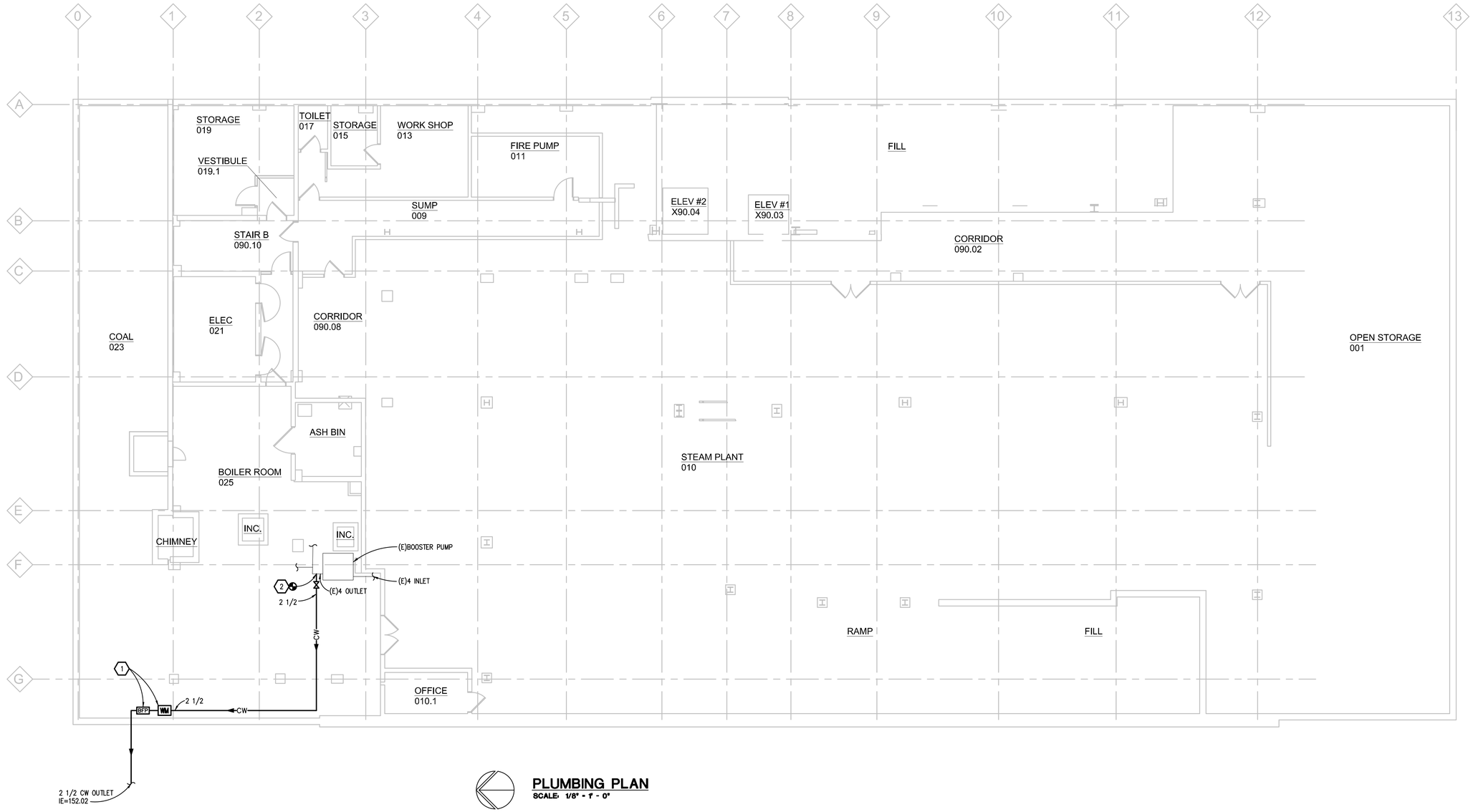


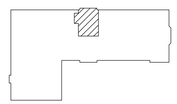
PLUMBING PLAN
SCALE: 1/8" = 1' - 0"

PLUMBING GENERAL NOTES:

1. THESE DRAWINGS ARE DIAGRAMMATIC, AND REPRESENT THE GENERAL INTENT AND ARRANGEMENT OF SYSTEMS. THEY ARE NOT TO BE CONSIDERED FABRICATION/COORDINATION/SHOP DRAWINGS. COORDINATION WITH OTHER TRADES IS REQUIRED. PROVIDE THE ADDITIONAL FITTINGS AND OFFSETS THAT WILL BE REQUIRED TO COMPLETE EACH SYSTEM AND TO AVOID INTERFERENCES WITH ALL OTHER SYSTEMS INCLUDING THE STRUCTURE, SHEET METAL, OTHER PIPING SYSTEMS, ELECTRICAL CONDUITS, BUS DUCTS, CABLE TRAY, LIGHT FIXTURES, ETC. AND/OR OTHER SPACE CONSTRAINTS.
2. INSTALL SYSTEMS SUCH THAT REQUIRED CLEARANCE AND SERVICE ACCESS SPACE IS PROVIDED AROUND ALL MECHANICAL AND ELECTRICAL EQUIPMENT, AND AROUND ANY COMPONENTS WHICH REQUIRE SERVICE ACCESS.
3. PIPING SHALL NOT BE INSTALLED ABOVE ELECTRICAL TRANSFORMERS, SWITCHBOARDS, PANELBOARDS OR MOTOR CONTROL CENTERS.
4. PROVIDE SUPPLEMENTARY STEEL AS REQUIRED FOR THE PROPER SUPPORT OF ALL SYSTEMS.
5. WATER SERVICE ENTRANCE PIPING SHALL BE BURIED WITH DEPTH OF COVER OVER TOP OF PIPE OF AT LEAST 72", OR WITH TOP OF PIPE AT LEAST 12" BELOW LEVEL OF MAXIMUM FROST PENETRATION, OR AS REQUIRED BY AUTHORITIES HAVING JURISDICTION, WHICHEVER IS DEEPEST.

(#) CONSTRUCTION KEY NOTES:

1. DOMESTIC WATER METER AND BACKFLOW ASSEMBLY. REFER TO WATER METER ASSEMBLY PIPING DIAGRAM ON DRAWING M-601 FOR FURTHER DETAIL.
2. CONNECTION TO EXISTING DOMESTIC WATER SHALL BE PERFORMED DURING OFF HOURS AT NIGHT OR ON WEEKEND. COORDINATE WITH WSU FACILITIES PRIOR TO CONNECTION.



KEY PLAN
NO SCALE

THE FOLLOWING DIMENSION EQUALS ONE INCH WHEN PRINTED TO SCALE. 1"

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Designer:	SCM
Quality Control:	X
Section:	X

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DATE:	ISSUE:
2025-05-07	Design Development
2025-06-13	Construction Documents
2025-06-27	Issue for Bid

Developed For:
Wayne State University
630 Merrick St
Detroit MI 48202

PLUMBING PLAN

WSU Keast Commons
Detroit
Wayne
MICHIGAN

Date:	06.27.2025
Scale:	1/8"=1'-0"
Sheet:	M-201
Project:	20572.10D

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PLUMBING PIPING & VALVE APPLICATION SCHEDULE

	MATERIAL																	PRESSURE CONNECTIONS										GRAVITY DWV CONNECTIONS				ISOLATION VALVES					
PIPE SIZE (INCHES)	SOFT COPPER TYPE K	HARD COPPER TYPE L	HARD COPPER TYPE M	CARBON STEEL (SCHED. 40)	CARBON STEEL (STD.)	GALV. STEEL (SCHED. 40)	STAINLESS STEEL (SCHED. 10)	PEX	PE PIPE	PE SHEATHED CARBON STEEL PIPE	CSST	NO-HUB CISP	PVC TYPE DWV	PP DRAINAGE PIPE	COPPER TYPE DWV	DUCTILE IRON PIPE	SOLDERED	BRAZED	WELDED	THREADED	FLANGED	GROOVED	INSERT & CRIMP	FUSION	PRESSURE-SEAL	MECHANICALLY-FORMED TEE	MECHANICAL JOINT	PUSH-ON-JOINT	SOLVENT WELDED	SOLDERED	FUSION	CISP HUBLESS	HEAVY-DUTY HUBLESS	BALL	AGA BALL	GENERAL SERVICE BUTTERFLY	LUBRICATED PLUG	GATE	KEYED NOTES
ABOVEGROUND DOMESTIC WATER (POTABLE AND NON-POTABLE) ON DISTRIBUTION SIDE OF METER - MIN. WORKING PRESS. & TEMP.; 125 PSIG AT 200 DEG F																																						
UP TO 4		X															X	X			X	X			X	X							X		X			A
ABOVEGROUND INDIRECT SANITARY WASTE - MIN. WORKING PRESS.; 10-FOOT HEAD OF WATER																																						
UP TO 8			X													X														X								

GENERAL NOTES

1. 'X' INDICATES ACCEPTABLE SELECTION. IF MORE THAN ONE SELECTION IS INDICATED FOR A PIPING SYSTEM, CONTRACTOR MAY SELECT FROM THOSE INDICATED SELECTIONS.
2. DISSIMILAR-METAL PIPING JOINTS: CONSTRUCT JOINTS USING DIELECTRIC FITTINGS COMPATIBLE WITH BOTH PIPING MATERIALS.
   a. NPS 2 AND SMALLER: USE DIELECTRIC NIPPLE/WATERWAY.
   b. NPS 2-1/2 AND LARGER: USE DIELECTRIC FLANGE KITS.
3. USE UNIONS OR FLANGES AT VALVE AND EQUIPMENT CONNECTIONS.
4. PLUMBING EQUIPMENT DRAINS, VENTS, SAFETY VALVE PIPING, BLOWDOWN PIPING AND THE LIKE SHALL BE SAME PIPING MATERIAL AS ASSOCIATED PIPING SYSTEM.
5. GROOVED END VALVES MAY BE USED WITH GROOVED PIPING.

KEYED NOTES

A. GROOVED AND FLANGED FITTINGS, JOINTS, AND COUPLINGS, IF INDICATED AS AN ACCEPTABLE SELECTION, MAY BE USED IN ACCESSIBLE LOCATIONS ONLY FOR THIS PIPING SYSTEM. ACCESSIBLE LOCATIONS ARE DEFINED AS EXPOSED CONSTRUCTION OR ABOVE LAY-IN CEILINGS.

ABOVEGROUND PLUMBING PIPE & ACCESSORY INSULATION APPLICATION SCHEDULE

	INSULATION MATERIAL & THICKNESS (INCHES)								FIELD-APPLIED JACKET MATERIAL						
	FLEXIBLE ELASTOMERIC	FIBERGLASS	MINERAL WOOL	POLYISOCYANURATE	PHENOLIC	CELLULAR GLASS	CALCIUM SILICATE	ALUMINUM	STAINLESS STEEL	PVC	SELF-ADHESIVE (FOR OUTDOOR APPLICATIONS)	PVDC (INDOOR)	PVDC (OUTDOOR)	KEYED NOTES
INDOOR PIPE SYSTEM AND SIZE (INCHES)														
DOMESTIC COLD WATER	1	1						X		X				A

UNLESS OTHERWISE INDICATED OR SCHEDULED, DO NOT INSULATE THE FOLLOWING:
UNDERGROUND PIPING

GENERAL NOTES

1. 'X' OR THICKNESS IN INCHES INDICATES ACCEPTABLE SELECTION. IF MORE THAN ONE SELECTION IS INDICATED FOR A SYSTEM, CONTRACTOR MAY SELECT FROM THOSE INDICATED SELECTIONS.
2. INSULATE PIPING WITHIN AIR HANDLING EQUIPMENT THE SAME AS INDOOR PIPING. PROVIDE ALUMINUM OR STAINLESS STEEL JACKET.

KEYED NOTES

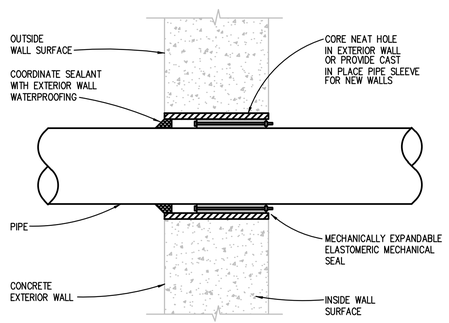
A. PROVIDE FIELD APPLIED JACKET FOR PIPING EXPOSED IN EQUIPMENT ROOMS, STORAGE ROOMS, JANITORS CLOSETS, RECEIVING ROOMS, TEST AREAS, CIRCULATION AREAS

HORIZONTAL PIPING AND SUPPORT APPLICATION SCHEDULE

	HANGER OR SUPPORT TYPE								SHIELD TYPE			
METAL PIPE TYPE & SIZE	MSS TYPE 1 CLEVIS HANGER	MSS TYPE 10 SWIVEL RING BAND HANGER	MSS TYPE 41 DOUBLE ROD PIPE ROLLER	MSS TYPE 43 SINGLE ROD ROLLER HANGER	MSS TYPE 44 PIPE ROLLER & STAND	MSS TYPE 46 ADJUSTABLE PIPE ROLL STAND	MSS TYPE 39 PROTECTION SADDLE	MSS TYPE 40 INSULATION PROTECTION SHIELD	THERMAL-HANGER SHIELD	KEYED NOTES
INSULATED SINGLE COLD PIPES										
2-1/2 INCH TO 4 INCH	X								X	

GENERAL NOTES

1. "X" INDICATES APPROVED HANGER OR SUPPORT ELEMENTS. IF MORE THAN ONE HANGER OR SUPPORT ELEMENT IS INDICATED, SELECTION FROM APPROVED ELEMENTS IS CONTRACTOR'S OPTION.
2. REFER TO HANGER AND SUPPORT SECTION FOR APPROVED MANUFACTURERS.
3. HANGER ELEMENTS IN CONTACT WITH BARE COPPER PIPE SHALL BE COPPER PLATED, PLASTIC COATED, FELT LINED, OR USE MANUFACTURED COPPER TUBE ISOLATORS.
4. REFER TO INDIVIDUAL PIPING SPECIFICATION SECTIONS FOR HANGER SPACING.
5. REFER TO INDIVIDUAL PIPING SPECIFICATION SECTIONS FOR ADDITIONAL SYSTEM SPECIFIC HANGER APPLICATIONS.

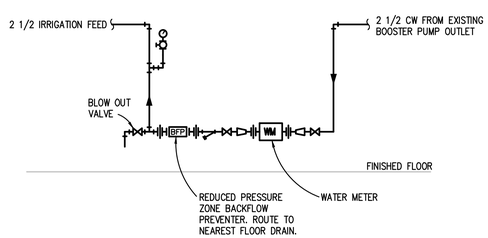


EXTERIOR BELOW GRADE WALL PIPE PENETRATION DETAIL

NO SCALE

NOTES:

1. ALL PIPING SHALL BE SUPPORTED INDEPENDENTLY FROM WATER METER.
2. WHERE UNIONS ARE INDICATED FLANGED COMPONENTS MAY BE SUBSTITUTED.
3. BFP SHALL BE SIZED FOR 50 GPM @ 14 PSI PRESSURE DROP.



WATER METER ASSEMBLY PIPING DIAGRAM

NO SCALE

SCHEDULES GENERAL NOTES:

TYPICAL FOR ALL SCHEDULE SHEETS:

1. REFER TO ELECTRICAL STANDARD SCHEDULES, ONE LINE DIAGRAM AND PANEL SCHEDULES FOR ADDITIONAL ELECTRICAL INFORMATION
2. PROVIDE THE FOLLOWING FACTORY-WIRED ELECTRICAL OPTIONS/ACCESSORIES WHERE INDICATED IN SCHEDULE:
   A - NON-FUSED DISCONNECT SWITCH
   B - UNIT SHALL BE SINGLE POINT ELECTRICAL CONNECTION WITH FACTORY INSTALLED DISCONNECTING MEANS AND ALL REQUIRED STARTERS AND CONTROLS
   C - SERVICE RECEPTACLE
   D - FUSED DISCONNECT SWITCH
   E - COMBINATION STARTER
   F - UNIT SHALL HAVE (2) SINGLE POINT CONNECTIONS WITH FACTORY INSTALLED DISCONNECTING MEANS AND ALL REQUIRED STARTERS AND CONTROLS. (1) CONNECTION SHALL BE FOR CONDENSING SECTION AND (1) CONNECTION SHALL BE FOR THE REMAINDER OF THE UNIT.
3. FOR MODULATION/CONTROL TYPE COLUMN, "VFC" INDICATES VARIABLE FREQUENCY CONTROLLERS, "AUTO" INDICATES AUTOMATIC OPERATION (CONTROLLED BY TEMPERATURE CONTROLS OR SELF CONTAINED CONTROLS), "MANUAL" INDICATES HAND OPERATION.
4. IF VARIABLE FREQUENCY CONTROLLERS ARE INDICATED TO BE PROVIDED AND ARE NOT INSTALLED INTEGRAL TO THE UNIT, VARIABLE FREQUENCY CONTROLLERS SHALL BE SUPPLIED BY THE MECHANICAL CONTRACTOR (UNLESS OTHERWISE NOTED) AND INSTALLED BY THE ELECTRICAL CONTRACTOR INCLUDING THE LINE SIDE AND LOAD SIDE WIRING TO THE MOTOR AND INCLUDING MISCELLANEOUS STEEL REQUIRED FOR THE SUPPORT AND MOUNTING OF THE VFC. REFER TO FLOOR PLANS FOR LOCATION.
5. WHERE EQUIPMENT IS INDICATED TO HAVE A SINGLE POINT ELECTRICAL CONNECTION, THAT EQUIPMENT SHALL COME COMPLETE WITH FACTORY INSTALLED STARTERS, MOTOR OVERLOAD PROTECTION, CONTACTORS, FUSING AND ALL NECESSARY INTERNAL WIRING AND CONTROLS. PROVIDE A FACTORY MOUNTED UNIT DISCONNECTING MEANS WHERE THE ELECTRICAL CONTRACTOR SHALL MAKE SINGLE POINT CONNECTION. INSTALL PACKAGED EQUIPMENT SUCH THAT THE ELECTRICAL CONNECTION AND CONTROLS ARE ACCESSIBLE AND HAVE CLEARANCES MEETING THE NATIONAL ELECTRICAL CODE.
6. WHERE PACKAGED EQUIPMENT IS PROVIDED, NAMEPLATE MUST INDICATE MAXIMUM OVERCURRENT PROTECTION BY HACR RATED CIRCUIT BREAKERS OR FUSES. IF FUSE PROTECTION ONLY IS INDICATED, PROVIDE A FUSIBLE DISCONNECT AND FUSES WITH THE UNIT.
7. WHERE EQUIPMENT IS DESIGNATED BY MANUFACTURER AND MODEL NUMBER, THIS IS THE BASIS OF DESIGN. IF THE CONTRACTOR ELECTS TO PROVIDE EQUIPMENT BY OTHER SPECIFIED MANUFACTURERS OR PROPOSED ALTERNATE EQUIPMENT BY THE BASIS OF DESIGN MANUFACTURER, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY REVISIONS TO ELECTRICAL REQUIREMENTS, STRUCTURAL LOADING, OR ARCHITECTURAL APPURTENANCES AND SHALL INCLUDE THE COST OF SUCH REVISIONS IN THEIR BID.
8. WHERE EQUIPMENT IS SCHEDULED TO INCLUDE A SERVICE RECEPTACLE, PROVIDE A FACTORY MOUNTED SERVICE RECEPTACLE WITH APPROPRIATE FUSES AND TRANSFORMERS CONNECTED ON THE LINE SIDE OF THE UNIT DISCONNECT. PROVIDE A NAMEPLATE ON THE DISCONNECT SWITCH INDICATING THE PRESENCE OF LIVE POWER TO THE SERVICE RECEPTACLE WHEN THE UNIT DISCONNECT IS IN THE OFF POSITION.
9. SIZE ALL EQUIPMENT FEEDERS BASED ON THE LISTED MOP (MAXIMUM OVERCURRENT PROTECTION). REFER TO THE FEEDER AND BRANCH CIRCUIT SIZING SCHEDULE ON THE ELECTRICAL STANDARD SCHEDULES SHEET.

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Professional Seal:

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Detroit MI 48202

MECHANICAL DETAILS AND SCHEDULES

WSU Keast Commons

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Date:	06.27.2025
Scale:	NTS
Sheet:	M-601
Project:	20572.10D

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