Canton Western Wayne Project

Growth Works Renovation

44582 Geddes Rd, Canton, MI 48188

PARTNERS

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PARTNERS in Architecture, PLC

65 Market Street
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586-469-3600

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Canton Township

1150 Canton Ctr Rd,
Canton, MI 48188
734-394-5160

Civil Engineer:

Spalding DeDecker

905 South Blvd. East
Rochester Hills, Michigan 48307
248-844-5400

MEP Engineer:

Unified Building Systems Engineering

69 Southbound Gratiot Ave.,
Mount Clemens, Michigan 48043
586-500-7055

Structural Engineer:

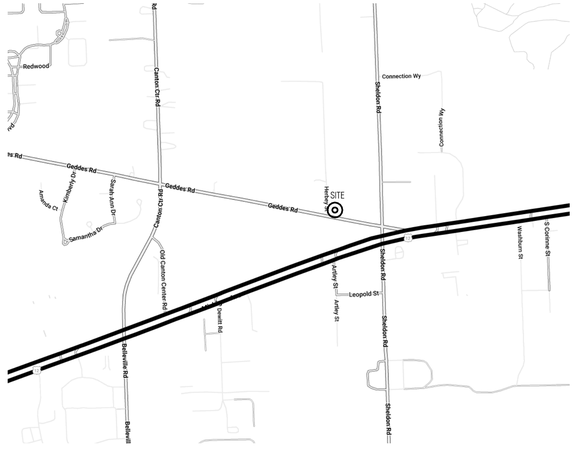
Shymanski & Associates

33426 Five Mile Road
Livonia MI 48154 US
734-855-4810



Perspective Rendering

Scale: NTS



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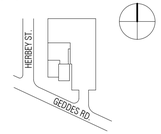
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CONSULTANT

KEY PLAN

NORTH



OWNER

Charter Township of Canton - Western Wayne

PROJECT NAME

Growth Works

44582 Geddes Rd, Canton, MI 48188

PROJECT NO.

23-175

ISSUES / REVISIONS

Site Plan Approval	7/31/2025

DRAWN BY

BB

CHECKED BY

APPROVED BY

SHEET NAME

Cover Sheet

SHEET NO.

A0-00

LEGEND

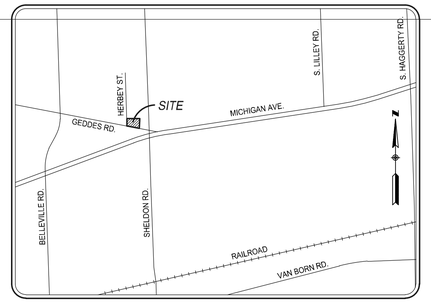
- MANHOLE
- CATCH BASIN
- SEWER CLEAN OUT
- GAS METER
- GAS SHUT OFF VALVE
- VALVE BOX
- GATE VALVE & WELL
- WATER SHUT OFF VALVE
- FIRE HYDRANT
- SPRINKLER VALVE BOX
- LAWN SPRINKLER HEAD
- UNVERIFIED MAPPED OBJECT
- ELECTRIC RISER OR METER
- TELEPHONE RISER
- CABLE TV RISER
- AIR CONDITION UNIT
- UTILITY POLE
- UTILITY POLE W/ LAMP EXTENSION (ARROW INDICATES DIRECTION OF ARM)
- LIGHT POLE
- LIGHT POLE WITH LAMP EXTENSION
- TRAFFIC SIGNAL
- POLE W/ TRAFFIC SIGNAL (OVER ROAD)
- GUY WIRE
- GROUND LEVEL / DECORATIVE LIGHTING
- FLAG POLE
- METAL OR CONC. POST
- MAILBOX
- SIGN
- WATER FOUNTAIN
- PARKING METER
- BILLBOARD OR LARGE SIGN
- BASKETBALL HOOP
- BOULDER
- STATUE OR SCULPTURE
- BENCH — BENCH
- BIKE RACK — BIKE RACK
- PICNIC TABLE
- SOCCER GOAL — SOCCER GOAL
- STUMP
- DS-S — DOWNSPOUT INTO STORM DRAIN
- DS-G — DOWNSPOUT TO GROUND
- CONIFEROUS TREE
- DECIDUOUS TREE
- DECIDUOUS SHRUB
- CONIFEROUS SHRUB
- SECTION CORNER
- SDA#10 — TRAVERSE POINT
- 1 — STRUCTURE NUMBER
- 10 — SDA POINT No.
- 655.59 — SPOT ELEVATION

TC	TOP OF CURB ELEVATION
GU	GUTTER ELEVATION
TP	TOP OF PAVEMENT ELEVATION
EM	EDGE OF METAL ELEVATION
TW	TOP OF WALK ELEVATION
T/WALL	TOP OF WALL ELEVATION
B/WALL	BOTTOM OF WALL ELEVATION
GR	GROUND ELEVATION
UG	UNDERGROUND
FO	FIBER OPTIC
CONC	CONCRETE
ASPH	ASPHALT
FF	FINISH FLOOR ELEVATION
DL	DOOR LEDGE ELEVATION

- F.I. — FOUND IRON
- F.I.P. — FOUND IRON PIPE
- MON — FOUND MONUMENT
- F.P.K. — FOUND P.K. NAIL
- S.I. — SET IRON W/SDA CAP
- S.P.K. — SET P.K. NAIL
- S.P.K./TAG — SET P.K. NAIL W/SDA TAG
- MAG/TAG — SET MAGNETIC NAIL W/SDA TAG

M	MEASURED
R	RECORD
C	CALCULATED
INV.	INVERT ELEVATION
CMP	CORRUGATED METAL PIPE

- G — GAS
- SN — SANITARY SEWER (SAN)
- ST — STORM SEWER (STM)
- WM — WATERMAIN (WM)
- OH — OVERHEAD WIRE
- CS — COMBINED SEWER
- STE — STEAM LINE
- O — OIL LINE
- F — UG FIBER (COMM.)
- E — UG ELECTRIC (ELEC.)
- P — UG PHONE (PH)
- C — UG CABLE (CBL)
- CHAIN LINK FENCE (CL)
- WOOD FENCE
- WOVEN WIRE FENCE (WW)
- GUARD RAIL
- EDGE OF BRUSH/WOODS
- CENTERLINE OF DITCH
- CULVERT
- 650 — MAJOR CONTOUR
- 651 — MINOR CONTOUR
- BOUNDARY LINES
- ROW LINES
- SECTION LINES
- PROPERTY LINES
- ASPHALT
- CONCRETE
- GRAVEL/ DIRT/ MULCH
- BRICK / PAVERS
- WATER
- WATER W/ VEGETATION



LOCATION MAP

NOT TO SCALE

BENCHMARK DESCRIPTIONS

DATUM: GPS-DERIVED NAVD'88

SITE BM#100	ARROW ON HYDRANT, LOCATED ON THE NORTH SIDE OF GEDDES ROAD ±190' SOUTHEAST OF #44582 SOUTHEAST BUILDING CORNER. ELEV.=682.18
SITE BM#101	ARROW ON HYDRANT, LOCATED ON THE NORTHWEST CORNER OF GEDDES ROAD AND HERBEY STREET. ELEV.=684.47
SITE BM#102	CHISELED "+" ON THE NORTHWEST CORNER OF CONCRETE PAD, LOCATED ON THE NORTH SIDE OF GEDDES ROAD ±120' SOUTHEAST OF #44582 SOUTHEAST BUILDING CORNER. ELEV.=679.65

SURVEYOR'S COMMENTS

1. THIS TOPOGRAPHICAL MAP IS BASED UPON A FIELD SURVEY PERFORMED BY SPALDING DEDECKER DURING FEBRUARY OF 2024.
2. THE PROPERTY LINES/RIGHT-OF-WAY LINES SHOWN ON THIS TOPOGRAPHICAL SURVEY ARE INTENDED TO BE AN APPROXIMATE GRAPHICAL REPRESENTATION OF THE PROPERTY LINES. SPALDING DEDECKER HAS BASED THE PROPERTY LINES AND RIGHT OF WAY LINES UPON A COMBINATION OF A PROVIDED LEGAL DESCRIPTION, FOUND FIELD MONUMENTATION AND OCCUPATION. PROPERTY LINES AS SHOWN IN DRAWING ARE BASED UPON THIS WORK. VARIATIONS MAY EXIST BETWEEN THE EXISTING PROPERTY DESCRIPTION AS SHOWN AND THE GRAPHICAL LINES COMPUTED IN THE DRAWING. A COMPLETE PROPERTY LINE ANALYSIS IS NOT PART OF THE SCOPE OF SERVICES AND PROPERTY CORNERS HAVE NOT BEEN SET IN THE FIELD PER THE AGREED TO SCOPE OF SERVICES.
3. THIS SURVEY HAS BEEN PREPARED WITH THE BENEFIT OF A CURRENT INFORMATIONAL TITLE SEARCH WHICH INCLUDES THE LAST DEED OF RECORD AND A 100 YEAR SEARCH FOR ENCUMBRANCES. THE INFORMATIONAL TITLE SEARCH WAS PREPARED BY ASK SERVICES HAVING AN REF. NUMBER OF 19762050 AND AN EFFECTIVE DATE OF 02-09-2024. ALL PLOTTABLE ENCUMBRANCES LISTED ON SCHEDULE B-II EXCEPTIONS OF THIS TITLE SEARCH HAVE BEEN SHOWN ON THIS SURVEY IF THEY FALL WITHIN THE LIMITS OF DETAILED MAPPING. FURTHERMORE, EACH PLOTTABLE EXCEPTION IS DETAILED ON THE "INFORMATIONAL TITLE EXCEPTION COMMENTS" TABLE ON THIS SURVEY.
4. NO EASEMENT WAS FOUND IN THE TITLE WORK FOR THE 42" STORM SEWER.
5. THE BASIS OF BEARINGS IS THE STATE PLANE GRID.
6. THE COORDINATE SYSTEM FOR THIS SURVEY IS THE STATE PLANE COORDINATE SYSTEM, MICHIGAN SOUTH ZONE (2113), BASED ON NAD83 (NSRS2011). UNITS ARE INTERNATIONAL FEET. COORDINATES WERE ESTABLISHED USING A DATA LINK TO THE MDOT CONTINUOUSLY OPERATING REFERENCE STATIONS (CORS).
7. THE VERTICAL DATUM OF THIS SURVEY IS BASED UPON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) AS ESTABLISHED WITH RTK GPS MEASUREMENTS USING A DATA LINK TO THE MDOT CONTINUOUSLY OPERATING REFERENCE STATIONS (CORS).
8. THE UTILITY INFORMATION SHOWN ON THIS SURVEY IS BASED UPON A COMBINATION OF RECORD INFORMATION AND FIELD MEASUREMENTS. A MISS DIG DESIGN TICKET NUMBER OF 2024021303487 HAS BEEN REFERENCED TO THIS PROJECT AND A UTILITY PROVIDER CHART IS SHOWN ON THIS DRAWING. THERE ARE NO ASSURANCES THAT ALL PROVIDERS HAVE RESPONDED AND THE SURVEYOR DOES NOT GUARANTEE THAT ALL UNDERGROUND UTILITIES ARE SHOWN AND/OR POSITIONED PROPERLY ON THIS DRAWING DUE TO AMBIGUOUS PLANS AND RECORDS PROVIDED TO US. THE INFORMATION SHOWN ON THIS DRAWING IS INTENDED TO BE USED AS A GUIDE FOR POSSIBLE UNDERGROUND UTILITY CONFLICTS. IT IS THE RESPONSIBILITY OF OTHERS TO RESOLVE THE ACTUAL LOCATION OF ANY UNDERGROUND UTILITY THROUGH THE MISS DIG FIELD VERIFICATION SYSTEM PRIOR TO ANY SITE EXCAVATION. CALL 811 OR 800-482-7171.

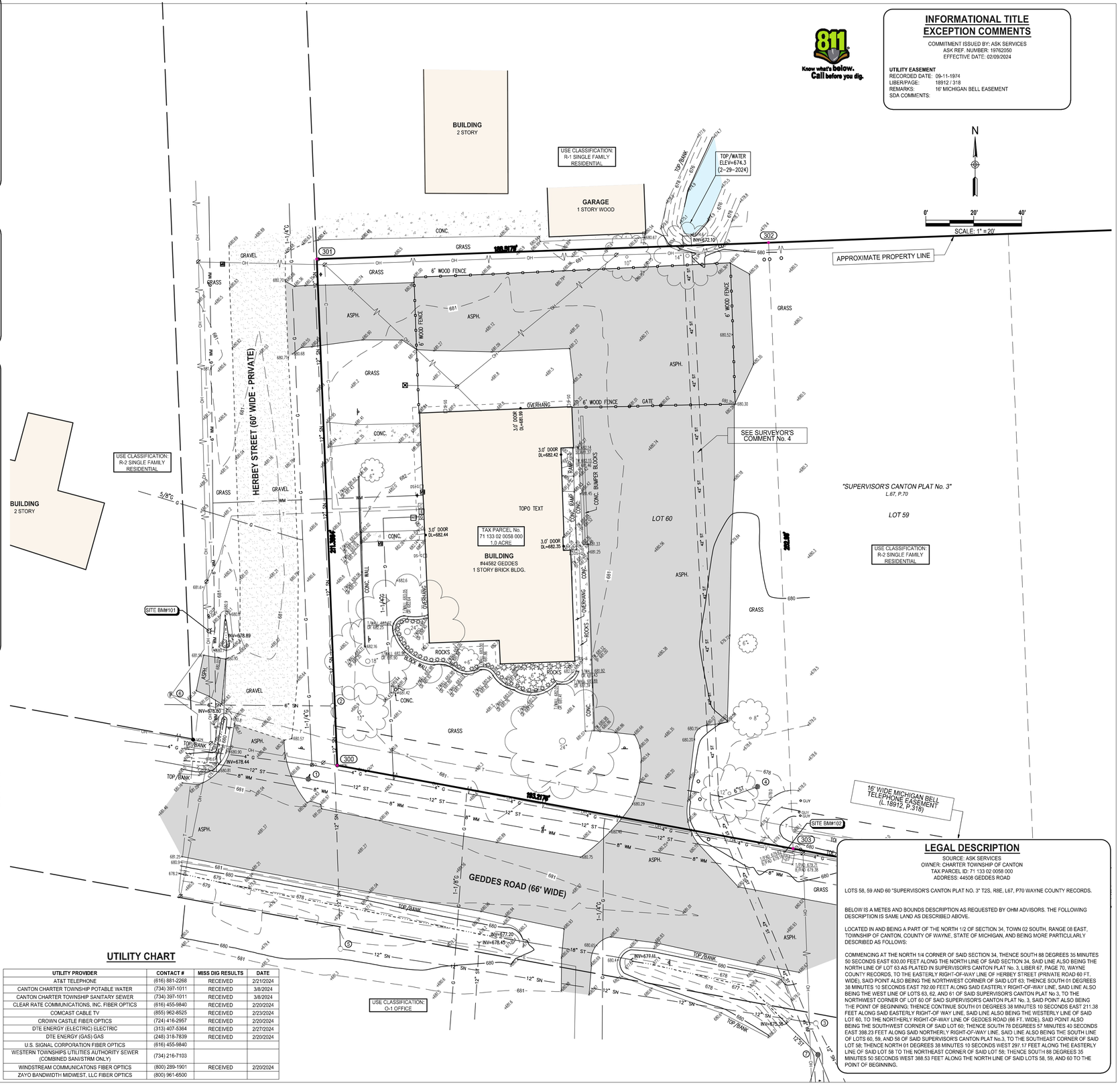
STRUCTURE TABLE

THE STRUCTURE TABLE ON THIS DRAWING IDENTIFIES THE AS-SURVEYED UNDERGROUND UTILITY MANHOLES THAT WERE FIELD MEASURED USING REASONABLE AND TRADITIONAL SURVEYING PRACTICES. PIPE SIZES, DIRECTIONS AND ELEVATIONS ARE INDICATED BY A COMBINATION OF FIELD EVIDENCE AND AVAILABLE RECORD INFORMATION. UNDERGROUND UTILITY PIPE SIZES AND CONNECTIONS ARE MANY TIMES AMBIGUOUS. SOME STRUCTURES MAY HAVE PIPES WITH UNKNOWN CONNECTIONS, SUMPS AND / OR PIPES THAT ARE FILLED WITH DEBRIS. IT WILL BE UP TO THE DESIGN ENGINEER TO LOOK AT THE PRESENTED SURVEY RESULTS AND DECIDE IF FURTHER INVESTIGATION BY OTHER METHODS SUCH AS VACUUM CLEAN OUT, UNDERGROUND RADAR, SMOKE TESTING AND PHYSICAL EXCAVATION IS REQUIRED AS AN ADDITIONAL SERVICE.

#	TYPE	RIM	SIZE	MTRL	INVERT	DIRECTION	CONNECT
1	**BEE-HIVE CATCH BASIN**	679.98	12"	CPP	677.73	EAST	
			12"	CPP	677.73	WEST	ES
2	**SANITARY MANHOLE**	680.22	12"	PVC	656.97	SOUTH	5
			12"	PVC	656.92	NORTH	
			6"	PVC	657.20	WEST	
	FLOW DIRECTION:	NORTH					
3	**SANITARY MANHOLE**	678.95	12"	PVC	657.45	SOUTH	
			12"	PVC	657.30	WEST	5
4	**BEE-HIVE CATCH BASIN**	677.58	6"	PVC	675.08	WSW	
	BURIED UNABLE TO OPEN						
	TOP / WATER	675.08					
5	**SANITARY MANHOLE**	679.39	12"	PVC	657.23	EAST	3
			12"	PVC	657.19	NORTH	2
	TOP / WATER	657.39					
	FLOW DIRECTION:	NORTH					
6	**PHONE MANHOLE**	681.14					
	TOP / WIRE	679.91					
7	**STORM MANHOLE**	680.05	12"	PVC	674.83	SOUTH	
			42"	RCP	671.78	NNW	ES
			42"	RCP	672.70	SOUTH	
			12"	RCP	673.55	SOUTH	
			12"	PVC	674.90	NW	ES
	TOP / WATER	674.70					
	BOTTOM	671.55					

UTILITY CHART

UTILITY PROVIDER	CONTACT #	MISS DIG RESULTS	DATE
AT&T TELEPHONE	(616) 881-2268	RECEIVED	2/21/2024
CANTON CHARTER TOWNSHIP POTABLE WATER	(734) 397-1011	RECEIVED	3/8/2024
CANTON CHARTER TOWNSHIP SANITARY SEWER	(734) 397-1011	RECEIVED	3/8/2024
CLEAR RATE COMMUNICATIONS, INC. FIBER OPTICS	(616) 455-9840	RECEIVED	2/20/2024
COMCAST CABLE TV	(855) 962-8525	RECEIVED	2/23/2024
CROWN CASTLE FIBER OPTICS	(724) 416-2957	RECEIVED	2/20/2024
DTE ENERGY (ELECTRIC) ELECTRIC	(313) 407-5364	RECEIVED	2/27/2024
DTE ENERGY (GAS) GAS	(248) 318-7839	RECEIVED	2/20/2024
U.S. SIGNAL CORPORATION FIBER OPTICS	(616) 455-9840		
WESTERN TOWNSHIPS UTILITIES AUTHORITY SEWER (COMBINED SANI/STRM ONLY)	(734) 216-7103		
WINDSTREAM COMMUNICATONS FIBER OPTICS	(800) 289-1901	RECEIVED	2/20/2024
ZAYO BANDWIDTH MIDWEST, LLC FIBER OPTICS	(800) 961-6500		



INFORMATIONAL TITLE EXCEPTION COMMENTS

COMMITMENT ISSUED BY: ASK SERVICES
ASK REF. NUMBER: 19762050
EFFECTIVE DATE: 02/09/2024

UTILITY EASEMENT
RECORDED DATE: 09-11-1974
LIBER/PAGE: 18912 / 318
REMARKS: 16' MICHIGAN BELL EASEMENT
SDA COMMENTS:

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

LEGAL DESCRIPTION

SOURCE: ASK SERVICES
OWNER: CHARTER TOWNSHIP OF CANTON
TAX PARCEL ID: 71 133 02 0058 000
ADDRESS: 44508 GEDDES ROAD

LOTS 58, 59 AND 60 "SUPERVISOR'S CANTON PLAT NO. 3" T2S, R8E, L67, P70 WAYNE COUNTY RECORDS.

BELOW IS A METES AND BOUNDS DESCRIPTION AS REQUESTED BY OHM ADVISORS. THE FOLLOWING DESCRIPTION IS SAME LAND AS DESCRIBED ABOVE.

LOCATED IN AND BEING A PART OF THE NORTH 1/2 OF SECTION 34, TOWN 02 SOUTH, RANGE 08 EAST, TOWNSHIP OF CANTON, COUNTY OF WAYNE, STATE OF MICHIGAN, AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTH 1/4 CORNER OF SAID SECTION 34, THENCE SOUTH 88 DEGREES 35 MINUTES 50 SECONDS EAST 630.00 FEET ALONG THE NORTH LINE OF SAID SECTION 34, SAID LINE ALSO BEING THE NORTH LINE OF LOT 63 AS PLATED IN SUPERVISOR'S CANTON PLAT No. 3, LIBER 67, PAGE 70, WAYNE COUNTY RECORDS, TO THE EASTERLY RIGHT-OF-WAY LINE OF HERBEY STREET (PRIVATE ROAD 60 FT. WIDE), SAID POINT ALSO BEING THE NORTHWEST CORNER OF SAID LOT 63; THENCE SOUTH 01 DEGREES 38 MINUTES 10 SECONDS EAST 792.00 FEET ALONG SAID EASTERLY RIGHT-OF-WAY LINE, SAID LINE ALSO BEING THE WEST LINE OF LOTS 63, 62, AND 61 OF SAID SUPERVISOR'S CANTON PLAT No 3, TO THE NORTHWEST CORNER OF LOT 60 OF SAID SUPERVISOR'S CANTON PLAT No. 3, SAID POINT ALSO BEING THE POINT OF BEGINNING; THENCE CONTINUE SOUTH 01 DEGREES 38 MINUTES 10 SECONDS EAST 211.38 FEET ALONG SAID EASTERLY RIGHT-OF WAY LINE, SAID LINE ALSO BEING THE WESTERLY LINE OF SAID LOT 60, TO THE NORTHERLY RIGHT-OF-WAY LINE OF GEDDES ROAD (66 FT. WIDE), SAID POINT ALSO BEING THE SOUTHWEST CORNER OF SAID LOT 60; THENCE SOUTH 78 DEGREES 57 MINUTES 40 SECONDS EAST 398.23 FEET ALONG SAID NORTHERLY RIGHT-OF-WAY LINE, SAID LINE ALSO BEING THE SOUTH LINE OF LOTS 60, 59, AND 58 OF SAID SUPERVISOR'S CANTON PLAT No.3, TO THE SOUTHEAST CORNER OF SAID LOT 58; THENCE NORTH 01 DEGREES 38 MINUTES 10 SECONDS WEST 297.17 FEET ALONG THE EASTERLY LINE OF SAID LOT 58 TO THE NORTHEAST CORNER OF SAID LOT 58; THENCE SOUTH 88 DEGREES 35 MINUTES 50 SECONDS WEST 388.53 FEET ALONG THE NORTH LINE OF SAID LOTS 58, 59, AND 60 TO THE POINT OF BEGINNING.

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MOUNT CLEMENS, MI 48043
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CONSULTANT

CIVIL ENGINEER

SPALDING DEDECKER
Engineering and Surveying
Excellence Since 1954
905 South Blvd. East
Rochester Hills, MI 48307
Phone: (248) 844-5400
Fax: (248) 844-5404
www.sda-eng.com
(800) 598-1600

KEY PLAN

STATE OF MICHIGAN · THOMAS J. SOVEL · License No. 6201030268 · REGISTERED PROFESSIONAL ENGINEER

OWNER

Charter Township of Canton - Western Wayne

PROJECT NAME

Growth Works

44582 Geddes Rd, Canton, MI 48188

PROJECT NO.

23-175

ISSUES / REVISIONS

Schematic Design	12/19/2024
Design Development	06/26/2025
Site Plan Approval	07/31/2025
Site Plan Approval Rev.1	02/13/2026
Bidding/Construction	03/05/2026

DRAWN BY

TG

CHECKED BY

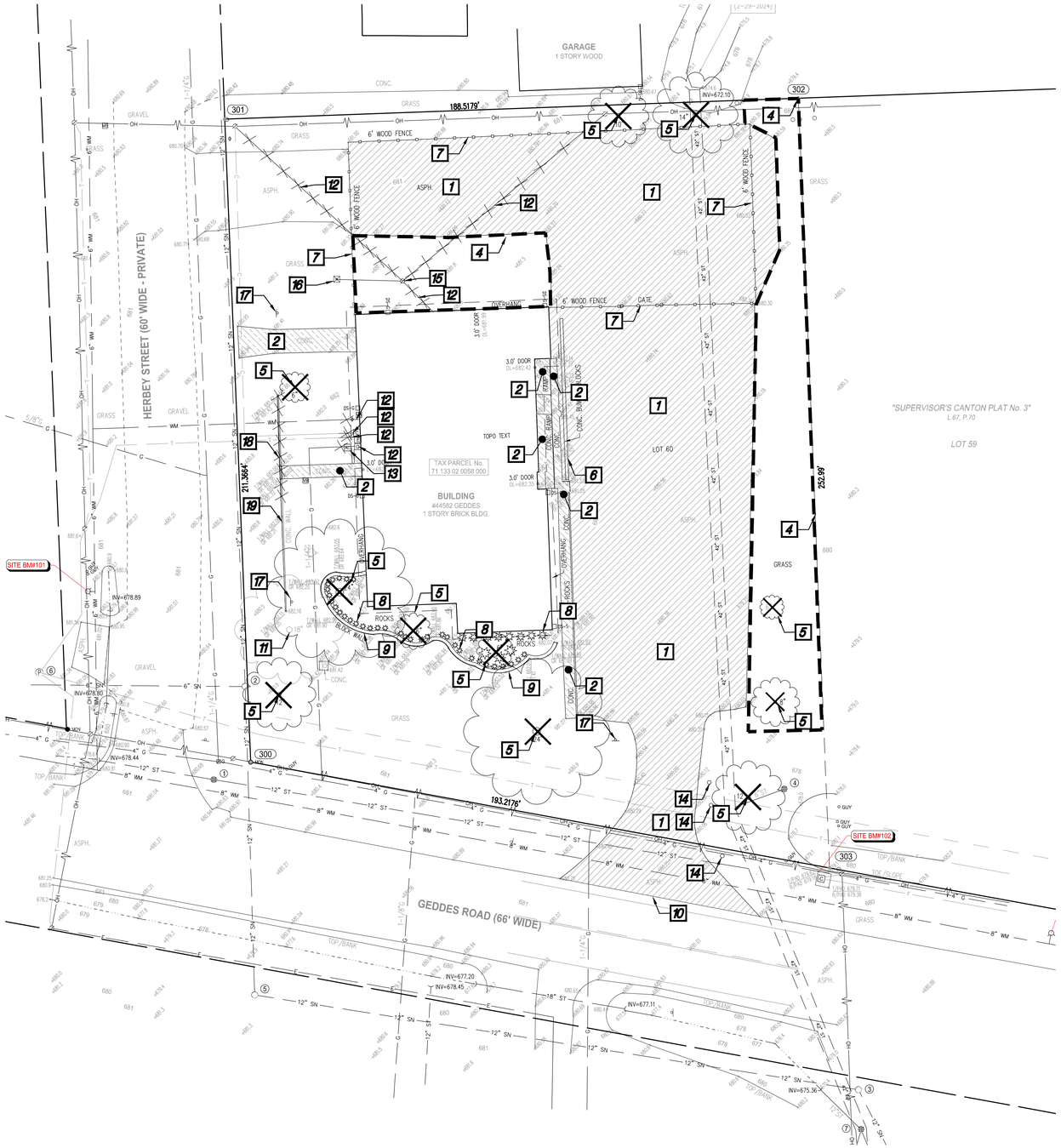
APPROVED BY

SHEET NAME

TOPOGRAPHIC SURVEY

SHEET NO.

C1.0



N

GRAPHIC SCALE

0 10 20 40

(IN FEET)
1 inch = 20 ft.

DEMOLITION NOTES

1. REMOVE ASPHALT PAVEMENT TO FULL DEPTH (REFER TO GEOTECHNICAL REPORT FOR EXISTING PAVEMENT DEPTH). SAWCUT FULL DEPTH WHERE NEW PAVEMENT WILL BE PLACED ADJACENT TO EXISTING PAVEMENT. EXCAVATE EXISTING AGGREGATE BASE AND SUBGRADE INSTALL NEW PAVEMENT SECTION AS SHOWN ON THE PAVING PLANS, INCLUDING NEW AGGREGATE BASE.
2. REMOVE CONCRETE PAVEMENT TO FULL DEPTH. SAWCUT FULL DEPTH TO NEAREST JOINT WHERE NEW PAVEMENT WILL BE PLACED ADJACENT TO EXISTING PAVEMENT.
3. REMOVE EXISTING GRAVEL TO FULL DEPTH.
4. CLEAR AND GRUB TO THE LIMITS SHOWN. INCLUDE REMOVAL OF ALL SIGNS, POSTS, FOOTINGS, GRAVEL, BRUSH, SHRUBS, GRASS, AND TREES NOT INDICATED FOR PROTECTION, INCLUDING ROOTS. STRIP TOPSOIL AND STOCKPILE ON SITE IN DESIGNATED LOCATION.
5. REMOVE EXISTING TREE/SHRUB (INCLUDING STUMPS AND ROOTS).
6. REMOVE AND DISPOSE OF EXISTING CONCRETE BUMPER BLOCKS.
7. REMOVE EXISTING FENCE AND FENCE POSTS. SALVAGE FENCE AND RELOCATE.
8. REMOVE ALL EXISTING PLANTS AND SHRUBS IN LANDSCAPING BED.
9. REMOVE EXISTING EXISTING LANDSCAPE PAVER BLOCK WALL.
10. PROTECT EXISTING PAVEMENT TO REMAIN. IF EDGE OF EXISTING PAVEMENT IS DAMAGED DURING CONSTRUCTION SAWCUT PAVEMENT TO PROVIDE CLEAN EDGE.
11. PROTECT EXISTING TREE AND TREE ROOTS TO REMAIN.
12. REMOVE EXISTING UTILITY UNLESS OTHERWISE NOTED TO BE ABANDONED. BACKFILL WITH CLASS II SAND AND COMPACT TO 95% MAXIMUM DENSITY. INSTALL WATERTIGHT BULKHEADS AT STRUCTURES. GROUT PIPE ENDS THAT REMAIN.
13. PROTECT EXISTING A/C UNIT TO REMAIN.
14. REMOVE EXISTING POST AND POST FOOTING.
15. REMOVE EXISTING UTILITY POLE. BACKFILL WITH CLASS II SAND AND COMPACT TO 95% OF MAXIMUM DENSITY. COORDINATE UNDERGROUND RELOCATION WITH UTILITY PROVIDER.
16. PROTECT EXISTING TORNADO SIREN AND SIREN POLE TO REMAIN. PROTECT EXISTING UNDERGROUND SIREN CONDUIT.
17. SALVAGE AND RELOCATE SIGN. COORDINATE LOCATION ON SITE WITH OWNER.
18. DEMO EXISTING RETAINING WALL. SAW CUT RETAINING WALL AT LIMITS OF REMOVAL TO PROVIDE CLEAN EDGE.
19. PROTECT EXISTING RETAINING WALL TO REMAIN.

ALL DEPRESSIONS CREATED BY DEMOLITION PROCEDURES SHALL BE BACKFILLED WITH CLASS II FILL MATERIAL, IN 8" LIFTS COMPACTED TO 95% OF MAXIMUM UNIT WEIGHT, UP TO PROPOSED SUBGRADE.

CONTRACTOR IS RESPONSIBLE FOR DOING AN EARTHWORK CALCULATION FOR CUT AND FILL REQUIREMENTS, AND IS RESPONSIBLE FOR INCLUDING IMPORT AND EXPORT OF MATERIALS IN THEIR BID. ALL EXCESS MATERIAL (INCLUDING TOPSOIL, CLEAN FILL, AND WASTE MATERIAL) SHALL BE REMOVED FROM THE SITE.

CONTRACTOR TO PROVIDE UNIT PRICES ($/CY) IN THE BID DOCUMENTS FOR UNDERCUT AND REPLACEMENT OF POOR SOILS. UNIT PRICE TO INCLUDE DISPOSAL OF POOR SOILS AND IMPORT AND PLACEMENT OF CLASS II ENGINEERED FILL, IN 8" LIFTS, COMPACTED TO 95% OF MAXIMUM UNIT WEIGHT, UP TO PROPOSED SUBGRADE.

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KEY PLAN

STATE OF MICHIGAN
THOMAS J. SOVEL
License No. 6201030268
LICENSED PROFESSIONAL ENGINEER

OWNER

Charter Township of Canton - Western Wayne

PROJECT NAME

Growth Works

44582 Geddes Rd, Canton, MI 48188

PROJECT NO.

23-175

ISSUES / REVISIONS

Schematic Design	12/19/2024
Design Development	06/26/2025
Site Plan Approval	07/31/2025
Site Plan Approval Rev.1	02/13/2026
Bidding/Construction	03/05/2026

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SHEET NAME

DEMOLITION PLAN

SHEET NO.

C2.0

1. OVERALL OBJECTIVE
TO RECEIVE SITE PLAN APPROVAL FOR CANTON TOWNSHIP WESTERN WAYNE BUILDING ADDITION.

2. PARCEL INFORMATION
CURRENT ZONING: R2 (SINGLE FAMILY RESIDENTIAL)
SITE ADDRESS: 44508 GEDDES RD, CANTON TOWNSHIP, MI 48188
PARCEL NUMBER: 71-133-02-0058-000
SITE AREA: 1.0 ACRE

PROPOSED USE CLASSIFICATION: OFFICE
ZONING OF ADJACENT PARCELS
NORTH: R-1 (SINGLE FAMILY RESIDENTIAL)
EAST: R-2 (SINGLE FAMILY RESIDENTIAL)
SOUTH: O-1 (OFFICE)
WEST: R-2 (SINGLE FAMILY RESIDENTIAL)

3. BUILDING
TOTAL BUILDING AREA: 7,100 SF
– SEE ARCHITECTURAL SHEETS FOR ADDITIONAL BUILDING DETAILS

	PROVIDED
BUILDING LOT COVERAGE	16%
HEIGHT	26'

4. SETBACKS

	REQUIRED	PROVIDED
FRONT (MIN.)	40 FT	40 FT
LEAST SIDE (MIN.)	15 FT	80.09 FT
TOTAL SIDE (MIN.)	35 FT	80.09 FT
REAR (MIN.)	50 FT	56.03 FT

5. REGULATORY APPROVALS
THE PROJECT WILL REQUIRE THE FOLLOWING APPROVALS, AT A MINIMUM (OTHER PERMITS/APPROVAL MAY ALSO BE REQUIRED)
– CANTON TOWNSHIP SITE PLAN APPROVAL.
– CANTON TOWNSHIP ENGINEERING APPROVAL.
– WAYNE COUNTY DPS ROAD COMMISSION APPROVAL/DRIVEWAY PERMIT.
– WAYNE COUNTY S.E.S.C. PERMIT.

6. IMPACT ON PUBLIC SERVICES
NO NEGATIVE IMPACTS ARE EXPECTED ON PUBLIC SERVICES.

7. IMPACT TO SURROUNDING PROPERTIES
USE OF PROPERTY WILL BE CONSISTENT WITH OTHER USES IN THIS ZONING DISTRICT AND IN THE SURROUNDING AREA.

8. PARKING & TRAFFIC

AUTO PARKING	REQUIRED	PROVIDED
90 DEGREE PARKING ANGLE	9' X 19'	9'x19'
AISLE WIDTH	22'	22'

REQUIRED PARKING SPACES = 1 PER 250 SF OF FLOOR AREA
= 7100 / 250 = 29 SPACES

PARKING COUNT	REQUIRED	PROVIDED
STANDARD PARKING SPACES	–	27
ADA PARKING SPACES	2	2

9. SIGNAGE
A SIGNAGE PERMIT IS REQUIRED, ARCHITECT WILL SUBMIT FOR APPROVAL SEPARATELY.

10. STORM WATER MANAGEMENT
ADDED/REPLACED IMPERVIOUS AREA IS LESS THAN 0.5 ACRES AND TOTAL DISTURBED AREA IS LESS THAN 1 ACRE, THUS WAYNE COUNTY STORMWATER MANAGEMENT APPROVAL IS NOT REQUIRED.

11. WATER/SEWER SERVICE
THE SITE WILL USE RE-USE THE EXISTING WATER LEAD.

12. WETLANDS
SUBJECT PARCEL HAS NO INDICATION OF WETLANDS

13. FLOODPLAINS
THIS NORTHEAST CORNER OF THE SITE IS WITHIN SPECIAL FLOOD HAZARD ZONE A. FEMA ZONE: 26163C0215E. SEE C8.0 FOR CUT/FILL SUMMARY.

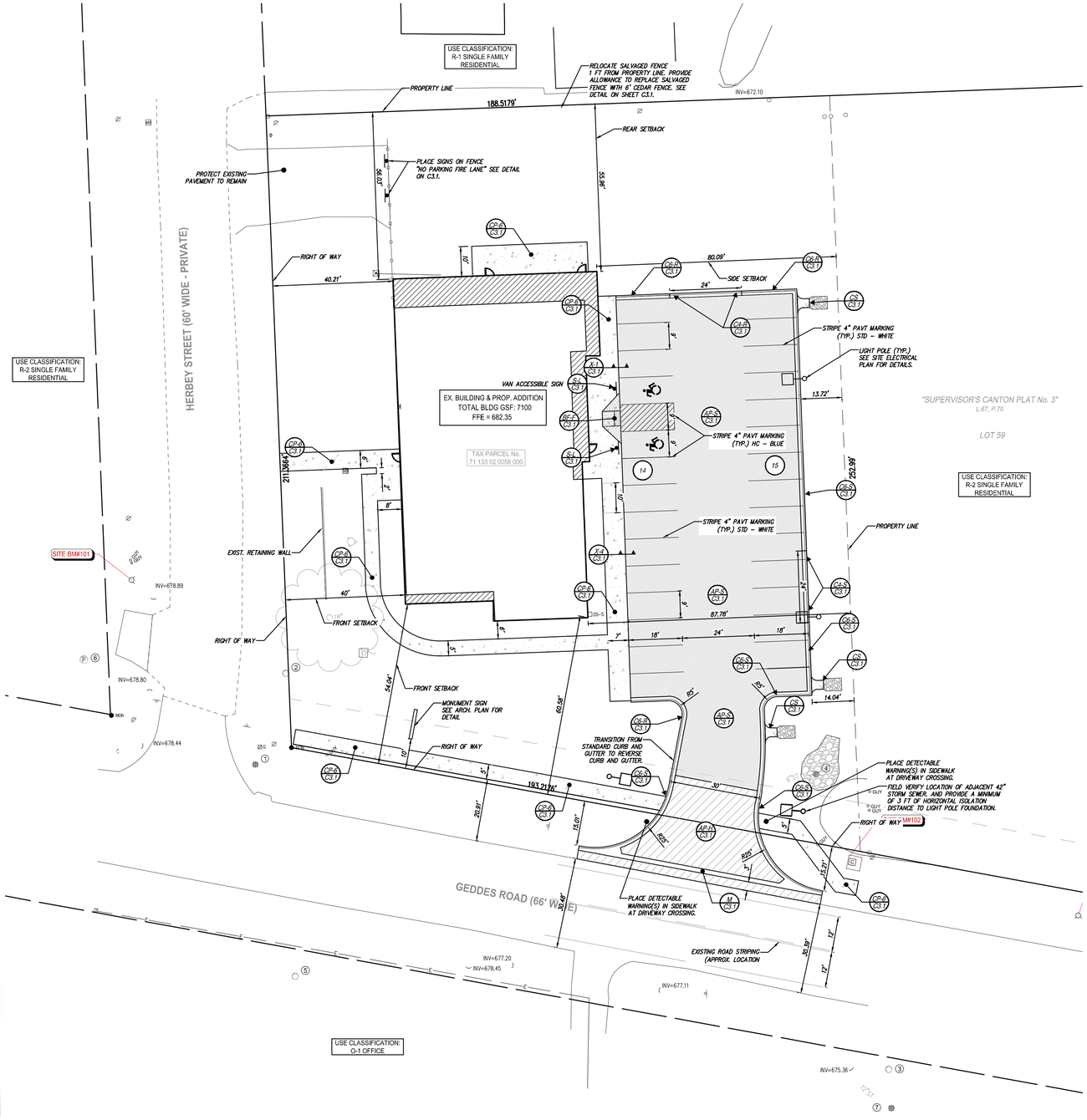
14. LANDSCAPING
A DETAILED LANDSCAPING PLAN TO BE INCLUDED SEPARATELY THAT MEETS CANTON TOWNSHIP STANDARDS.

15. SITE LIGHTING
A DETAILED LIGHTING PLAN TO BE INCLUDED SEPARATELY THAT MEETS CANTON TOWNSHIP REQUIREMENTS.

16. LOADING/UNLOADING OPERATIONS
LOADING AND UNLOADING OPERATIONS WILL TAKE PLACE AT THE NORTHWEST DRIVEWAY.

17. REFUSE MANAGEMENT
A NEW DUMPSTER ENCLOSURE WILL BE CONSTRUCTED TO SCREEN WASTE STORAGE AT THE NORTHWEST CORNER OF THE SITE.

18. CONSTRUCTION SCHEDULE
CONSTRUCTION IS EXPECTED TO BEGIN IN SPRING/SUMMER 2026.



N

GRAPHIC SCALE
0 10 20 40
(IN FEET)
1 inch = 20 ft.

LEGEND

- PROPOSED WATERMAIN
- PROPOSED SANITARY
- PROPOSED STORM SEWER
- PROPOSED GAS MAIN
- PROPOSED ELECTRIC
- PROPOSED HYDRANT
- PROPOSED GATE VALVE & WELL (GVW)
- PROPOSED TAPPING SLEEVE, VALVE & WELL (TSVW)
- PROPOSED SAN MANHOLE (SAN)
- PROPOSED STORM MANHOLE (MH)
- PROPOSED CATCH BASIN (CB)
- PROPOSED INLET (INL)
- PROPOSED END SECTION (ES)
- PROPOSED FIELD CATCH BASIN (FCB) W/BEEHIVE COVER OR STANDPIPE (SP) W/ BAR GRATE COVER
- STANDARD BITUMINOUS PAVEMENT
- HEAVY-DUTY BITUMINOUS PAVEMENT
- DEEP-STRENGTH BITUMINOUS PAVEMENT
- CONCRETE PAVEMENT
- CONCRETE SIDEWALK
- MILL PAVEMENT
- UTILITY CROSSING (SEE DATA TABLE)
- STORM SEWER STRUCTURE: CB 2 — STRUCT. TYPE; STRUCT. NO.
- SANITARY SEWER STRUCTURE: 20
- WATERMAIN STRUCTURE: 10 XXX — STRUCT. NO.; STRUCT. TYPE

PAVING CONSTRUCTION NOTES

1. EARTHWORK AND PAVEMENT CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH THE CURRENT MDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION UNLESS OTHERWISE NOTED IN THE FOLLOWING ITEMS.
2. REMOVE ANY EXISTING TOPSOIL, VEGETATION, TREES AND OTHER DELETERIOUS MATERIALS TO EXPOSE THE SUBGRADE SOIL. TREE ROOTS SHALL BE COMPLETELY REMOVED.
3. EXCAVATE TO THE DEPTH OF THE FINAL SUBGRADE ELEVATION TO ALLOW FOR GRADE CHANGES AND THE PLACEMENT OF THE RECOMMENDED PAVEMENT SYSTEM.
4. THE TOP 12 INCHES OF THE EXPOSED SUBGRADE SHALL BE COMPACTED TO A DENSITY NO LESS THAN 95 PERCENT OF THE MAXIMUM DENSITY AS DETERMINED BY THE MODIFIED PROCTOR (ASTM D 1557-91).
5. THE FINAL SUBGRADE SHALL BE THOROUGHLY PROOFROLLED UNDER THE OBSERVATION OF A GEOTECHNICAL/PAVEMENT ENGINEER. LOOSE OR YIELDING AREAS WHICH CANNOT BE MECHANICALLY STABILIZED SHALL BE REMOVED AND REPLACED WITH ENGINEERED FILL OR AS DICTATED BY FIELD CONDITIONS.
6. THE AGGREGATE BASE SHALL BE COMPACTED TO A DENSITY NO LESS THAN 95 PERCENT OF THE MAXIMUM DENSITY AS DETERMINED BY THE MODIFIED PROCTOR (ASTM D 1557-91). THE BASE SHALL EXTEND A MINIMUM OF 1 FOOT BEYOND THE PAVED EDGE.
7. ALL BITUMINOUS MATERIAL SHALL BE COMPACTED TO A DENSITY NO LESS THAN 97 PERCENT OF THE MAXIMUM DENSITY AS DETERMINED BY THE MARSHALL METHOD.
8. A BOND COAT OF SS-1H EMULSION IS REQUIRED BETWEEN THE LEVELING COURSE AND THE WEARING COURSE WHEN EITHER 24 HOURS HAVE ELAPSED BETWEEN PLACEMENT OF THE BITUMINOUS COURSES OR THE SURFACE OF THE PAVEMENT HAS BEEN CONTAMINATED WITH DIRT, DUST, OR FOREIGN MATERIAL. THE BOND COAT SHALL BE APPLIED IN A UNIFORM MANNER OVER THE SURFACE AT A RATE OF 0.1 GALLONS/S.Y. IN THE EVENT A BOND COAT IS NOT REQUIRED, THE LEVELING COURSE MAY REQUIRE LOCALIZED BROOM CLEANING.
9. PERFORMANCE GRADE **PG58-28** ASPHALT CEMENT SHALL BE USED IN THE PRODUCTION OF ALL BITUMINOUS MIXTURES. RECLAIMED ASPHALT PAVEMENT (RAP) SHALL BE LIMITED TO TIER 1 (0-17%) BY WEIGHT AND CONFORM TO THE CURRENT MDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION, UNLESS NOTED ON THE PROJECT DETAILS.
10. CONSTRUCTION TRAFFIC SHALL BE MINIMIZED ON THE NEW PAVEMENT. IF CONSTRUCTION TRAFFIC IS ANTICIPATED ON THE PAVEMENT STRUCTURE, THE PLACEMENT OF THE FINAL LIFT SHALL BE DELAYED UNTIL THE MAJORITY OF THE CONSTRUCTION ACTIVITIES HAVE BEEN COMPLETED. THIS ACTION WILL ALLOW REPAIR OF LOCALIZED FAILURE, IF ANY DOES OCCUR, AS WELL AS REDUCE LOAD DAMAGE ON THE PAVEMENT SYSTEM. THE CONTRACTOR IS RESPONSIBLE FOR REPAIR TO ANY DAMAGED SECTION RESULTING FROM CONSTRUCTION ACTIVITY.
11. TAPER CURB HEIGHT DOWN TO ZERO HEIGHT IN FIVE FEET AT ALL CURB ENDINGS UNLESS OTHERWISE NOTED ON THE PLAN.
12. WHERE CURB AND GUTTER SECTION IS ADJACENT TO A BARRIER FREE RAMP, DROP CURB HEIGHT TO MAXIMUM 1/4" ACROSS THE RAMP OPENING.
13. RESTRIPE PARKING LOTS AS SHOWN, USING 4" PAVEMENT MARKING – BLUE FOR BARRIER FREE SPACES, YELLOW FOR STANDARD SPACES. IF NEW PARKING LAYOUT IS NOT INDICATED, MATCH ORIGINAL STRIPING PATTERN.
14. DIRECTIONAL ARROW PAVEMENT MARKINGS AND PAVEMENT MARKING LETTERING WHERE INDICATED SHALL BE WHITE PREFORMED THERMOPLASTIC UNLESS OTHERWISE NOTED. INSTALLATION OF THESE PERMANENT PAVEMENT MARKINGS SHALL BE PERFORMED PER THE MDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION SECTIONS 811 AND 920.
15. CONTRACTOR SHALL PROTECT EXISTING CURB, GUTTER, SIDEWALK, WALLS, FENCES AND ALL OTHER EXISTING SITE FEATURES NOT INDICATED FOR REMOVAL OR REHABILITATION.
16. PLACE EXPANSION JOINTS WHERE NEW CONCRETE PAVEMENT OR WALKS ABUT BUILDING WALLS (PROPOSED OR EXISTING), COLUMN WALLS OR BASES, CONCRETE FOUNDATIONS OR BASES, CURBS, OR EXISTING CONCRETE PAVEMENT. PLACE JOINT SEALANT ON ALL EXPANSION JOINTS.
17. CONTRACTOR TO CONSTRUCT CONTRACTION AND EXPANSION JOINTS IN ALL NEW CONCRETE PAVEMENT. CONTRACTION JOINTS SHALL BE TOOLED WHERE SIDEWALK WIDTH IS 8' OR LESS, AND SHALL BE SPACED EQUAL TO THE WIDTH OF THE PAVEMENT (I.E. 8' SPACING FOR 8' WIDE WALK), BUT NOT MORE THAN 10' APART. PLACE EXPANSION JOINTS WITH JOINT SEALANT AT MAXIMUM 50' SPACING. CONTRACTOR SHALL GENERALLY MATCH THE JOINT PATTERNS FOR CONCRETE PAVEMENT WHEN SHOWN ON THE PLANS.
18. WHERE THESE PLANS DIFFER FROM THE STANDARD DETAILS OR STANDARD SPECIFICATIONS OF CANTON TOWNSHIP, CANTON TOWNSHIP REQUIREMENTS SHALL GOVERN.
19. CONCRETE PAVEMENT SHALL MEET THE REQUIREMENTS FOR MDOT GRADE 4000 CONCRETE PER THE CURRENT MDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION.
20. APPLY SILENCURE SRT (OR APPROVED EQUIVALENT) ACRYLIC CURING COMPOUND ON ALL CONCRETE PAVING, CURBS, AND WALKS (APPLY PER MANUFACTURER RECOMMENDATIONS).
21. ALL AREAS TO BE RESTORED WITHIN A TIMELY MANNER. THE PERMIT WAYNE COUNTY RIGHT OF WAY PERMIT WILL NOT BE RELEASED UNTIL THE PERMIT OFFICE IS SATISFIED THAT VEGETATION HAS BEEN RE-ESTABLISHED.
22. ALL PAVEMENT JOINTS IN THE RIGHT OF WAY SHALL BE CONSTRUCTED CONSTRUCT ALL PAVEMENT JOINTS PER WAYNE COUNTY DETAIL RS-02 OR AS DIRECTED BY THE COUNTY ENGINEER.

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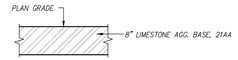
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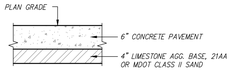
APPROVED BY

SHEET NAME
SITE LAYOUT PLAN

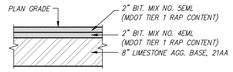
SHEET NO.
C3.0



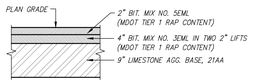
DETAIL
STANDARD GRAVEL (G-S C3.1)



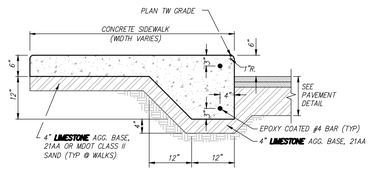
DETAIL
6" CONCRETE WALK (CP-B C3.1)



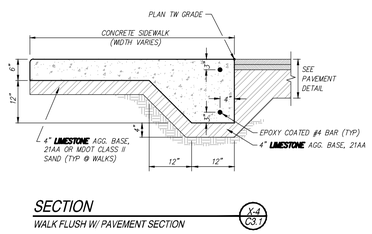
DETAIL
STANDARD BITUMINOUS PAVEMENT (AP-S C3.1)



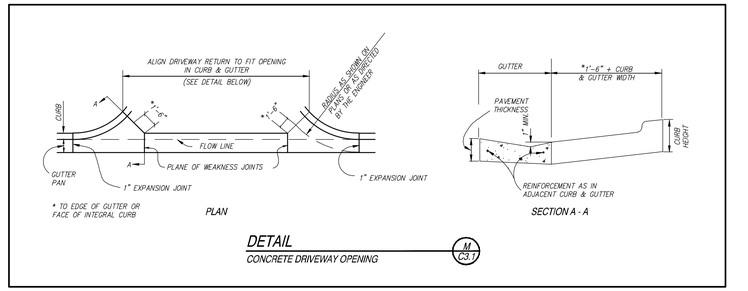
DETAIL
HEAVY DUTY BITUMINOUS PAVEMENT (AP-H C3.1)



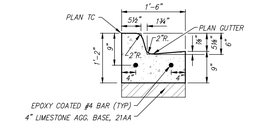
SECTION
INTEGRAL WALK/CURB (X-1 C3.1)



SECTION
WALK FLUSH W/ PAVEMENT SECTION (X-4 C3.1)

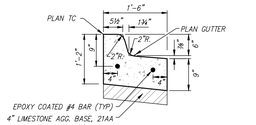


DETAIL
CONCRETE DRIVEWAY OPENING (M C3.1)

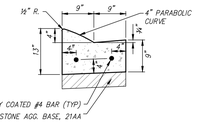


NOTE: CURB AND GUTTER SHOWN ADJACENT TO CONCRETE PAVEMENT SHALL BE CONSTRUCTED AS INTEGRAL CURB AND GUTTER.

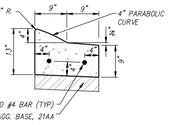
DETAIL
6" CURB & GUTTER STANDARD PAN
(MDOT TYPE F1) (C6-S C3.1)



DETAIL
6" CURB & GUTTER REVERSE PAN
(MDOT TYPE F1) (C6-R C3.1)

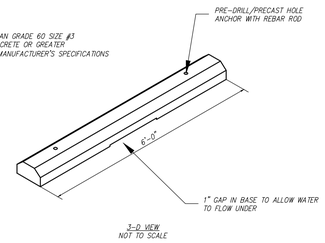


DETAIL
4" MOUNTABLE CURB & GUTTER
STANDARD PAN (C4-S C3.1)



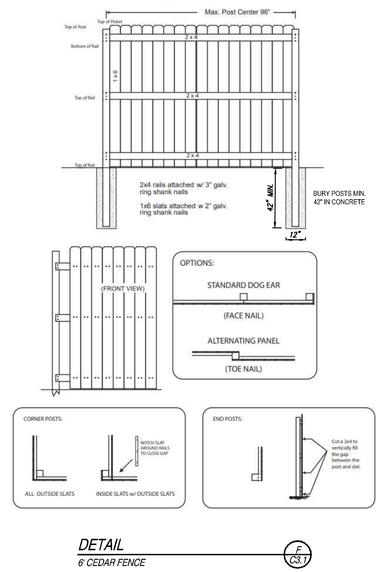
DETAIL
4" MOUNTABLE CURB & GUTTER
REVERSE PAN (C4-R C3.1)

NOTE:
1. REBAR AMERICAN GRADE 60 SIZE #3
2. 3,000 PSI CONCRETE OR GREATER
3. INSTALL PER MANUFACTURER'S SPECIFICATIONS

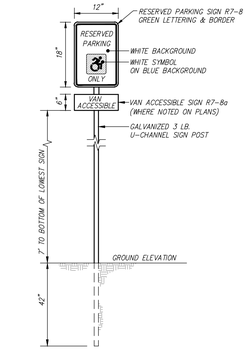


DETAIL
PRECAST CONC. WHEEL STOP (WS C3.1)

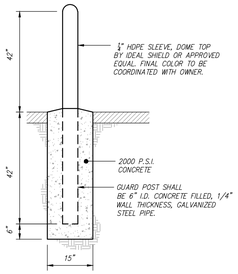
6' CEDAR FENCE



DETAIL
6' CEDAR FENCE (F C3.1)



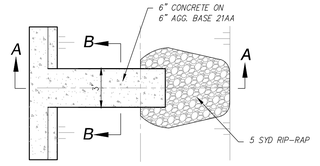
DETAIL
BARRIER FREE SIGN DETAIL (S-L C3.1)



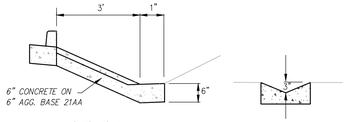
DETAIL
BOLLARD DETAIL (B C3.1)



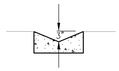
DETAIL
NO PARKING FIRE LANE SIGN



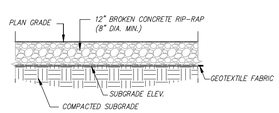
PLAN VIEW



SECTION A-A

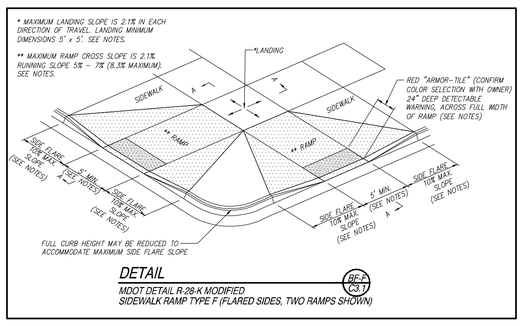


SECTION B-B



RIP-RAP

DETAIL
CONCRETE SPILLWAY - RIP-RAP DETAIL (CS C3.1)
NO SCALE



DETAIL
MDOT DETAIL R-28-K MODIFIED
SIDEWALK RAMP TYPE F (FLARED SIDES, TWO RAMPS SHOWN) (RF-F C3.1)

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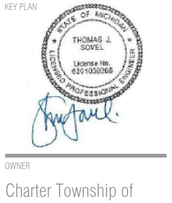
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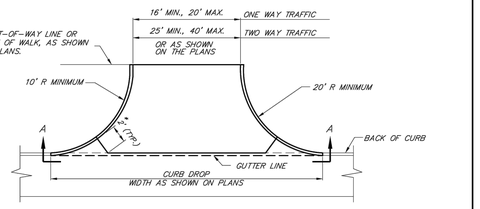
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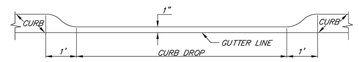
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SHEET NAME
PAVING DETAILS

SHEET NO.
C3.1



* 4" FOR ASPHALT DRIVE PAVEMENT



SECTION A–A

NOT TO SCALE

NOTES:

CONSTRUCT THE DRIVE APPROACH WITH 8" NON-REINFORCED CONCRETE ON 6" OF 21AA AGGREGATE BASE COURSE COMPACTED IN PLACE (CIP) OR 6" HMA LEVELING ON 9" OF 21AA AGGREGATE BASE COURSE (CIP).

CURBS SHALL BE CONSTRUCTED WITH HEIGHT VARYING FROM 6" AT BACK OF CURB TO 0" HEIGHT AT FACE OF SIDEWALK OR RIGHT-OF-WAY LINE.

AT ALL CONCRETE DRIVES, PLACE A 1" EXPANSION JOINT AT BACK OF CURB AND ½" EXPANSION JOINT AT FACE OF SIDEWALK OR RIGHT-OF-WAY LINE. MAINTAIN NORMAL SIDEWALK GRADE ACROSS DRIVE, 2% SLOPE UP FROM FACE OF SIDEWALK.

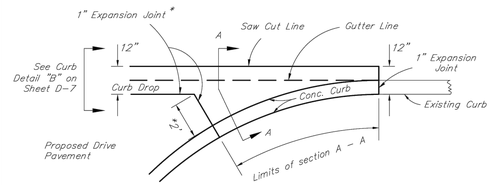
INBOUND OR OUTBOUND RADIUS SHALL BE REDUCED TO 5' FOR ONE-WAY TRAFFIC DRIVE APPROACH.

DRIVE APPROACH SHALL NOT ENCROACH ACROSS PROPERTY LINE EXTENDED WITHOUT WRITTEN APPROVAL FROM THE ADJOINING PROPERTY OWNER.

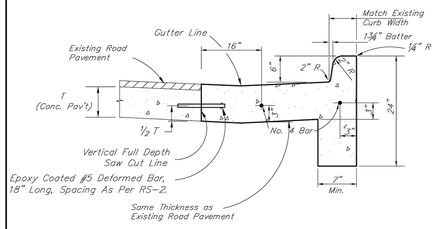
WORK THIS SHEET WITH THE GENERAL NOTES ON RS-1 AND D-6 SHEET 2-2.

REVISION DATE: 08/01/07	WAYNE COUNTY DEPARTMENT OF PUBLIC SERVICES ENGINEERING DIVISION/PERMIT OFFICE PERMIT STANDARDS	SCALE NOT TO SCALE
DIRECTOR OF ENGINEERING		D-6
DIVISION PERMIT ENGINEER	COMMERCIAL DRIVE APPROACH	SHEET 1 OF 2

CURB RETURN JOINING EXISTING PAVEMENT



* 4' for HMA Drive Pavement. No Expansion Joint Required.



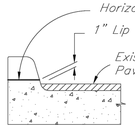
Section "A – A"

WORK THIS SHEET WITH THE GENERAL NOTES ON RS-1.

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DIVISION PERMIT ENGINEER	COMMERCIAL DRIVE APPROACH	SHEET 2 OF 2

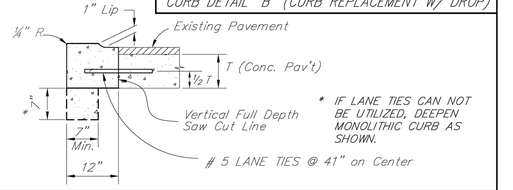
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CURB DETAIL "A" (CURB CUT)

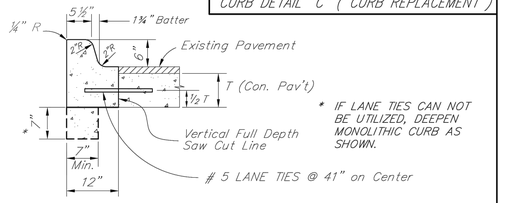


CURB DROP SHALL BE HORIZONTAL SAW CUT AT 1" ABOVE GUTTER LINE. IF THE CURB HAS NOT BEEN HORIZONTALLY CUT SATISFACTORILY, THE CURB CUT WILL HAVE TO BE REMOVED BY SAW CUTTING VERTICALLY AND REPLACED AS PER CURB DETAIL "B".

CURB DETAIL "B" (CURB REPLACEMENT W/ DROP)



CURB DETAIL "C" (CURB REPLACEMENT)

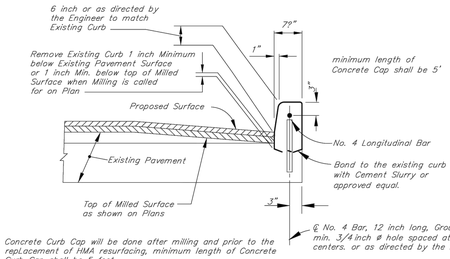


WORK THIS SHEET WITH THE GENERAL NOTES ON RS-1.

REVISION DATE: 08/01/07	WAYNE COUNTY DEPARTMENT OF PUBLIC SERVICES ENGINEERING DIVISION/PERMIT OFFICE PERMIT STANDARDS	SCALE NOT TO SCALE
DIRECTOR OF ENGINEERING		D-7
DIVISION PERMIT ENGINEER	CURB DETAIL A , B , C	SHEET 1 OF 3

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CONCRETE CURB CAP



Concrete Curb Cap will be done after milling and prior to the replacement of HMA resurfacing, minimum length of Concrete Curb Cap shall be 5 feet.

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DIRECTOR OF ENGINEERING		D-7
DIVISION PERMIT ENGINEER	CONCRETE CURB CAP	SHEET 2 OF 3

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KEY PLAN



OWNER

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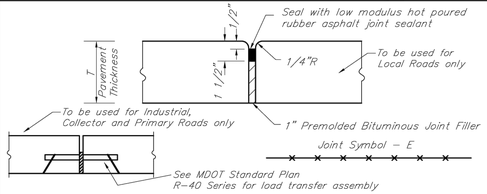
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PAVING DETAILS

SHEET NO.

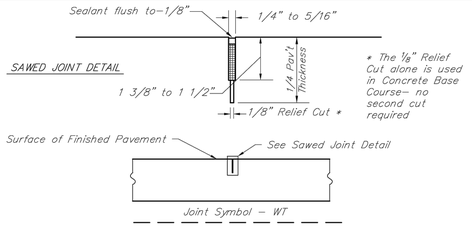
C3.2

TRANSVERSE EXPANSION JOINT (E)



Expansion Joints shall be placed at the ends of radii at street intersections, at end connections with structures or existing pavements; and as shown on sheets RS-6 and RS-7 for Cul-de-sac and Eyebrow. Maximum spacing of 300 feet shall be maintained.

TRANSVERSE PLANE OF WEAKNESS JOINT (WT)



Transverse Plane of Weakness Joints shall be constructed immediately after the finishing operation has been completed. The Transverse Plane of Weakness Joints shall be placed at 12.5 foot intervals between transverse expansion joints.

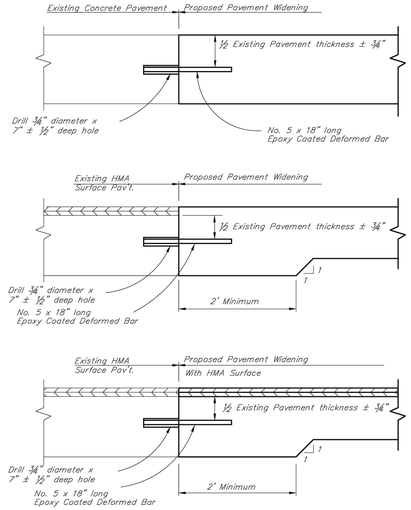
Transverse Plane of Weakness Joints shall be sealed with low modulus hot-poured rubber-asphalt type joint sealing compound except for in Concrete Base Course.

Work This Sheet with the General Notes on RS-1

REVISION DATE: 08/01/07	WAYNE COUNTY DEPARTMENT OF PUBLIC SERVICES ENGINEERING DIVISION/PERMIT OFFICE PERMIT STANDARDS	SCALE NOT TO SCALE
DIRECTOR OF ENGINEERING	PAVEMENT JOINTS	RS-2
DIVISION PERMIT ENGINEER		SHEET 1 OF 7

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LONGITUDINAL EPOXY–ANCHORED LANE–TIES



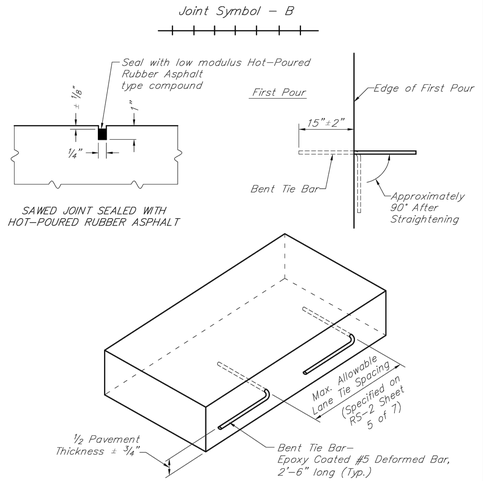
Epoxy-Anchored Lane-Tie Spacing Shall be in Accordance with RS-2 Sheet 5 of 7.

Work This Sheet with the General Notes on RS-1

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DIVISION PERMIT ENGINEER		SHEET 2 OF 7

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LONGITUDINAL FORMED BULKHEAD CONSTRUCTION JOINT WITH LANE TIES (B)



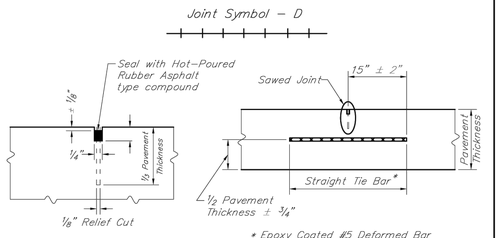
All Symbol B Joints Shall be Sawed and Sealed Except Joints Without Lane Ties and Joints Adjacent to Vertical Faces Which Would Prohibit Sawing.

Work This Sheet with the General Notes on RS-1

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DIVISION PERMIT ENGINEER		SHEET 4 OF 7

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LONGITUDINAL LANE TIE JOINT (D)



SAWED JOINT SEALED WITH HOT-POURED RUBBER ASPHALT

* Epoxy Coated #5 Deformed Bar 30" Long (See below for Max. Allowable Lane Tie Spacing)

All Symbol D Tie Bars Shall be Placed at the Proper Spacing Longitudinally, and Transversely at 90° with the Joint.

MAXIMUM ALLOWABLE LANE TIE SPACING

MAX. ALLOWABLE LANE TIE SPACING SYMBOLS B AND D		TOTAL DISTANCE OF TIED JOINT FROM NEAREST FREE EDGE **
B Grade 40	D Grade 60	
2'-10"	3'-7"	12' or less
1'-11"	2'-7"	over 12' through 17'
1'-5"	1'-11"	over 17' through 24'
1'-2"	1'-9"	over 24' through 28'
1'-2"	1'-4"	over 28' through 36'
1'-1"	1'-1"	36' or greater ***

** Includes any Tied Combination of Lane Width, Valley Gutter, Curb & Gutter, or Shoulder.

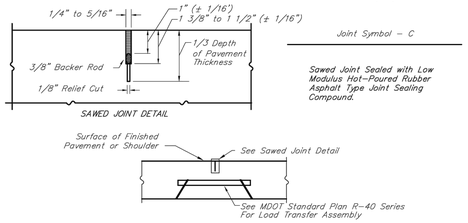
*** For Widths Greater than 48' use #6 Deformed Bars at 1'-2" Spacing.

Work This Sheet with the General Notes on RS-1

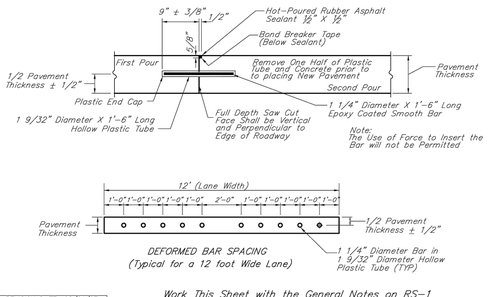
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DIVISION PERMIT ENGINEER		SHEET 5 OF 7

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TRANSVERSE CONTRACTION JOINT (C)



TRANSVERSE END OF POUR JOINT (H) PLASTIC TUBE METHOD

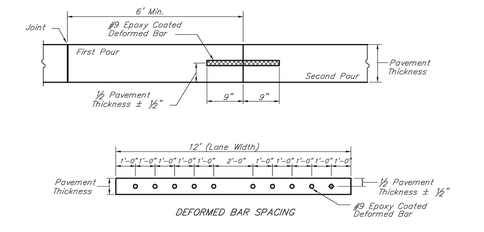


Work This Sheet with the General Notes on RS-1

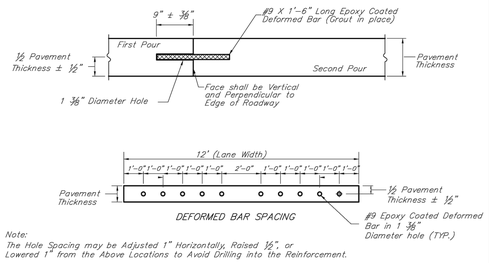
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DIVISION PERMIT ENGINEER		SHEET 6 OF 7

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TRANSVERSE END OF POUR JOINT (H) SPLIT HEADER METHOD



TRANSVERSE END OF POUR JOINT (H) DRILLED IN METHOD



Note:
The Hole Spacing may be Adjusted 1" Horizontally, Raised ½", or Lowered 1" from the Above Locations to Avoid Drilling into the Reinforcement.

Work This Sheet with the General Notes on RS-1

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DIVISION PERMIT ENGINEER		SHEET 7 OF 7

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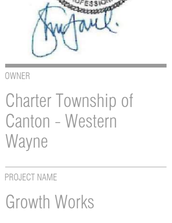
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KEY PLAN



OWNER

Charter Township of Canton - Western Wayne

PROJECT NAME

Growth Works

44582 Geddes Rd, Canton, MI 48188

PROJECT NO.

23-175

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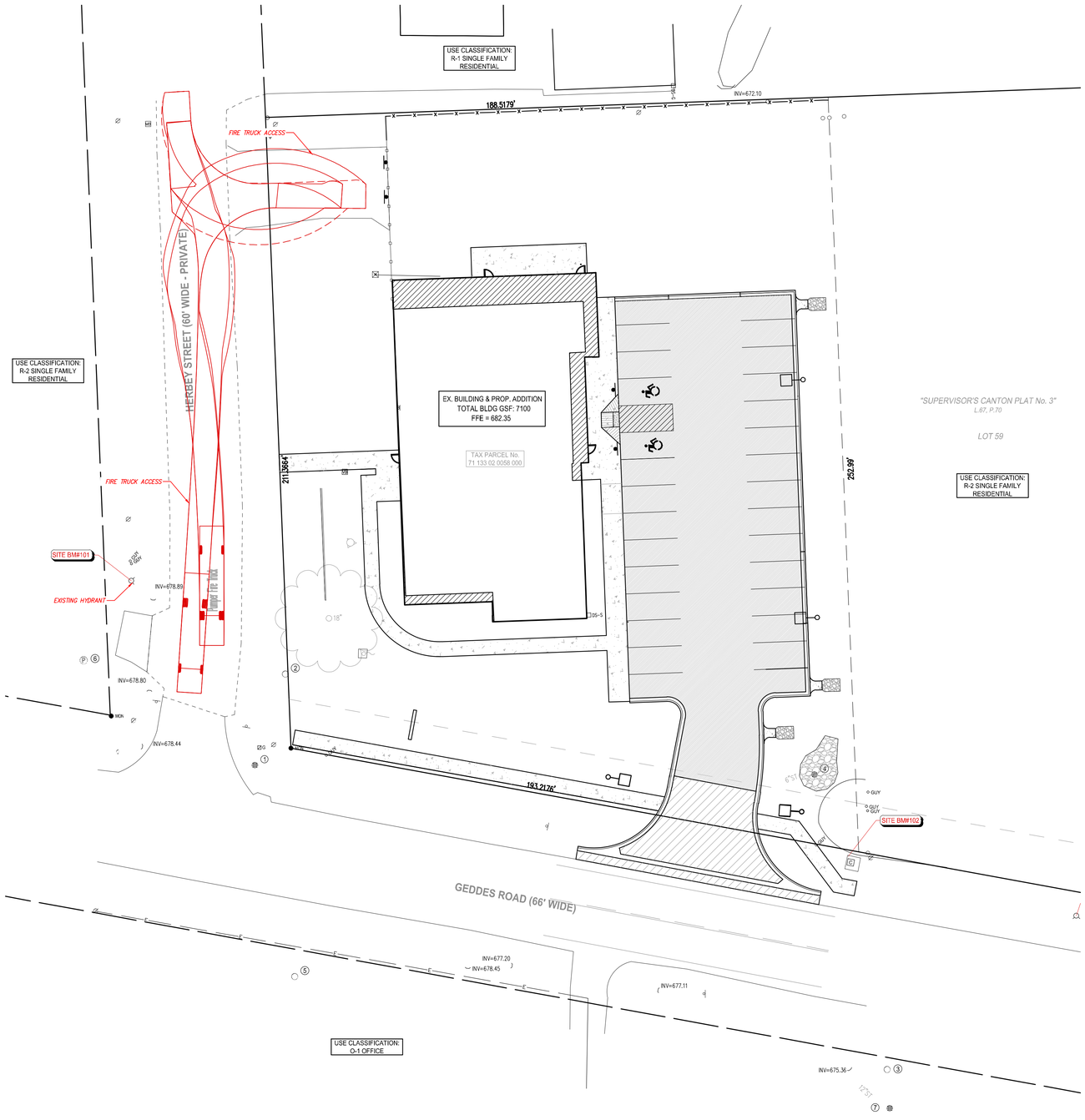
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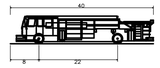


GRAPHIC SCALE
0 10 20 40
(IN FEET)
1 inch = 20 ft.

N

LEGEND

- PROPOSED WATERMAIN
- PROPOSED SANITARY
- PROPOSED STORM SEWER
- PROPOSED GAS MAIN
- PROPOSED ELECTRIC
- PROPOSED HYDRANT
- PROPOSED GATE VALVE & WELL (GVW)
- PROPOSED TAPPING SLEEVE, VALVE & WELL (TSVW)
- PROPOSED SAN MANHOLE (SAN)
- PROPOSED STORM MANHOLE (MH)
- PROPOSED CATCH BASIN (CB)
- PROPOSED INLET (INL)
- PROPOSED END SECTION (ES)
- PROPOSED FIELD CATCH BASIN (FCB) W/BEEHIVE COVER OR STANDPIPE (SP) W/ BAR GRATE COVER
- STANDARD BITUMINOUS PAVEMENT
- HEAVY-DUTY BITUMINOUS PAVEMENT
- DEEP-STRENGTH BITUMINOUS PAVEMENT
- CONCRETE PAVEMENT
- CONCRETE SIDEWALK
- MILL PAVEMENT
- (2) UTILITY CROSSING (SEE DATA TABLE)
- STORM SEWER STRUCTURE: CB 2 — STRUCT. TYPE / STRUCT. NO.
- SANITARY SEWER STRUCTURE: 20
- WATERMAIN STRUCTURE: 10 XXX — STRUCT. NO. / STRUCT. TYPE



Pumper Fire Truck	
Overall Length	40.000ft
Overall Width	8.167ft
Overall Body Height	7.745ft
Min Body Ground Clearance	0.656ft
Track Width	8.167ft
Lock-to-lock time	5.00s
Max Wheel Angle	45.00°

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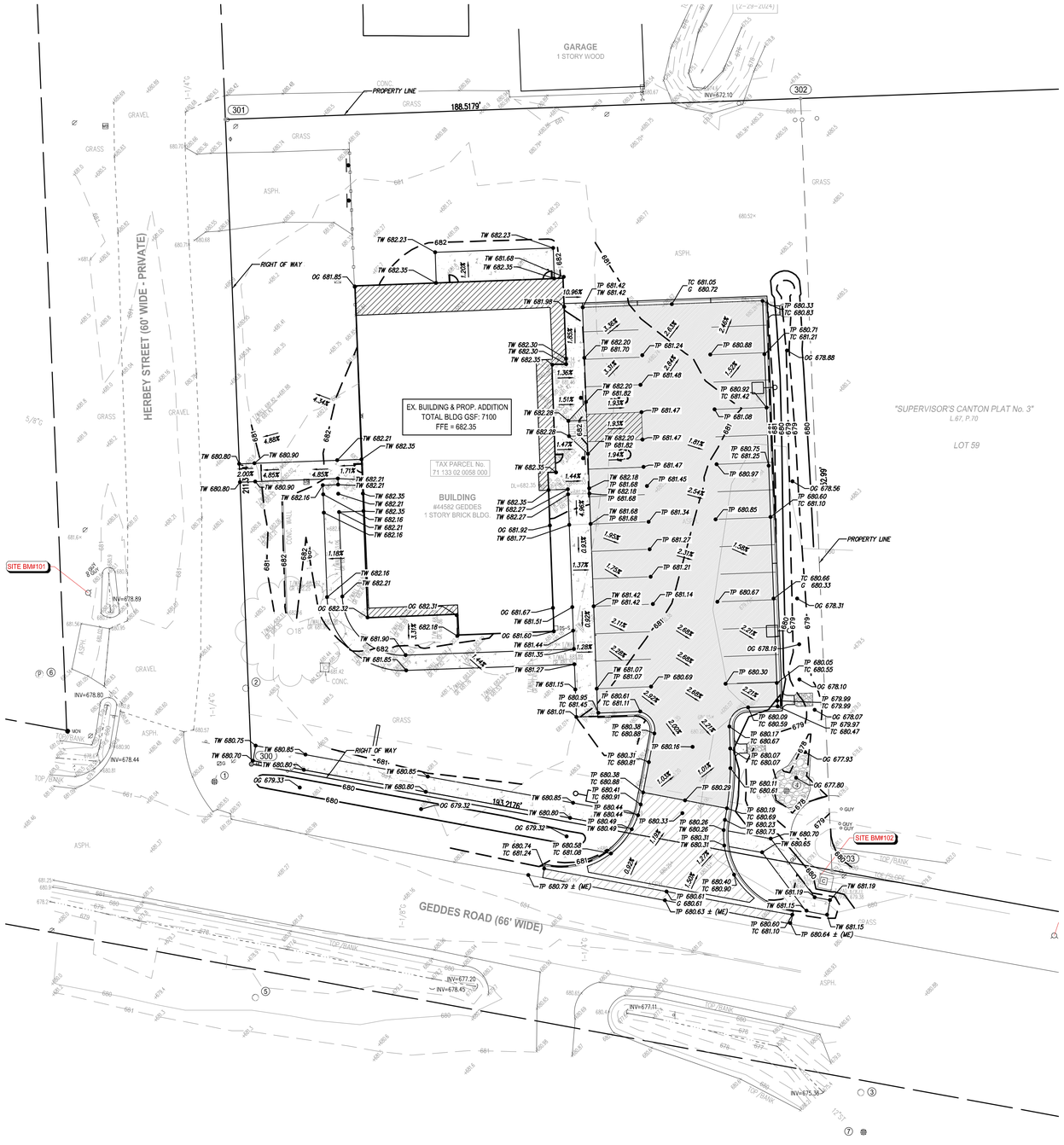
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FIRE ACCESS PLAN

SHEET NO. C3.4



N

GRAPHIC SCALE

0 10 20 40

(IN FEET)

1 inch = 20 ft.

LEGEND

- PROPOSED WATERMAIN
- PROPOSED SANITARY
- PROPOSED STORM SEWER
- PROPOSED GAS MAIN
- PROPOSED ELECTRIC
- PROPOSED HYDRANT
- PROPOSED GATE VALVE & WELL (GVW)
- PROPOSED TAPPING SLEEVE, VALVE & WELL (TSVW)
- PROPOSED SAN MANHOLE (SAN)
- PROPOSED STORM MANHOLE (MH)
- PROPOSED CATCH BASIN (CB)
- PROPOSED INLET (INL)
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- PROPOSED FIELD CATCH BASIN (FCB) W/BEEHIVE COVER OR STANDPIPE (SP) W/ BAR GRATE COVER
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- CONCRETE PAVEMENT
- CONCRETE SIDEWALK
- MILL PAVEMENT
- (2) UTILITY CROSSING (SEE DATA TABLE)
- STORM SEWER STRUCTURE: CB 2 — STRUCT. TYPE / STRUCT. NO.
- SANITARY SEWER STRUCTURE: 20
- WATERMAIN STRUCTURE: 10 XXX — STRUCT. NO. / STRUCT. TYPE

GRADING LEGEND

- 000.00 — EXISTING ELEVATION
- TC 000.00 / C 000.00 — PROPOSED TOP OF CURB ELEVATION / PROPOSED GUTTER ELEVATION
- OG 000.00 — OUTSIDE GRADE ELEVATION
- 1130 — EXISTING CONTOURS
- 1130 — PROPOSED CONTOURS
- TP 000.00 — TOP OF PAVEMENT ELEVATION
- TW 000.00 — TOP OF WALK ELEVATION
- FG 000.00 — FINISH GRADE ELEVATION
- TG 000.00 — TOP OF GRAVEL ELEVATION
- T/WALL 000.00 — TOP OF WALL ELEVATION
- ME 000.00 — MATCH EXISTING ELEVATION
- FLOW ARROW

GRADING NOTES

1. CONTRACTOR TO PLACE ALL NEW PAVEMENT TO THE GRADES INDICATED, OR MATCH ORIGINAL GRADES IF NEW GRADES ARE NOT SHOWN. CONTRACTOR SHALL CONFIRM MINIMUM 1% PAVEMENT SLOPES ARE ATTAINED IN ALL AREAS.
2. PROPOSED GRADES MAY BE BASED ON AN INTERPOLATION OF DATA SHOWN ON THE TOPOGRAPHIC SURVEY. THIS INTERPOLATED DATA IS APPROXIMATE AND COULD DIFFER SLIGHTLY BASED ON THE ACCURACY OF THE SURVEY. CONTRACTOR SHALL CONFIRM THAT THE PROPOSED GRADES SHOWN ON THIS PLAN WILL NOT CREATE A STANDING WATER CONDITION (I.E. A LOW SPOT OR PAVEMENT SLOPES LESS THAN 1%) OR AN UNSAFE CONDITION WITH SLOPES IN EXCESS OF 5%. CONTRACTOR SHALL NOTIFY ENGINEER IMMEDIATELY IF THEY BELIEVE THAT ONE OF THESE SITUATIONS WILL OCCUR BASED ON THE PROPOSED GRADES.
3. ALL PAVEMENT PLACED WITHIN BARRIER FREE PARKING AREAS (STALLS AND ACCESS AISLES) SHALL HAVE A MAXIMUM SLOPE OF 2% IN ANY DIRECTION, INCLUDING MEASURED DIAGONALLY ACROSS THE AREAS. CONTRACTOR SHALL ADJUST SLOPES AS NECESSARY TO PROVIDE ADA COMPLIANT SLOPES AS WELL AS PROVIDING RE-GRADED TRANSITION SLOPES OUTSIDE OF THE BARRIER FREE PARKING AREAS. CONTRACTOR SHALL NOTIFY ENGINEER IMMEDIATELY IF TRANSITION ZONES WILL EXCEED MAXIMUM 5% SLOPES. CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE PATTERNS WITH ALL NECESSARY PAVEMENT RE-GRADING.
4. ALL BARRIER FREE RAMPS AND ADA ACCESSIBLE ROUTES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT VERSION OF MDOT DETAIL R-28 "SIDEWALK RAMP AND DETECTABLE WARNING DETAILS".
5. CONTRACTOR IS RESPONSIBLE FOR CONTROLLING STORM WATER RUNOFF DURING CONSTRUCTION OPERATIONS. OF PARTICULAR CONCERN WILL BE THE TIME PERIOD AFTER THE SITE HAS BEEN STRIPPED AND NOT YET RESTORED, BUILT UPON, OR PAVED. CONTRACTOR MUST INSTALL OR CONSTRUCT APPROPRIATE TEMPORARY MEASURES TO PROTECT ADJACENT PROPERTIES.

RESTORATION NOTE

RESTORE ALL NON-PAVED AREAS WITH 3" OF CLEAN TOPSOIL AND SEED MIX (30% KENTUCKY BLUEGRASS, 20% PERENNIAL RYEGRASS, 50% CREEPING RED FESCUE). PLACE MULCH IN ALL SEEDED AREAS. ON SLOPES IN EXCESS OF 10 HORIZONTAL TO 1 VERTICAL PLACE NORTH AMERICAN GREEN DS150 MULCH BLANKET IMMEDIATELY AFTER SEEDING. USE METAL STAPLES PER MANUFACTURERS RECOMMENDATIONS TO HOLD MATTING IN PLACE.

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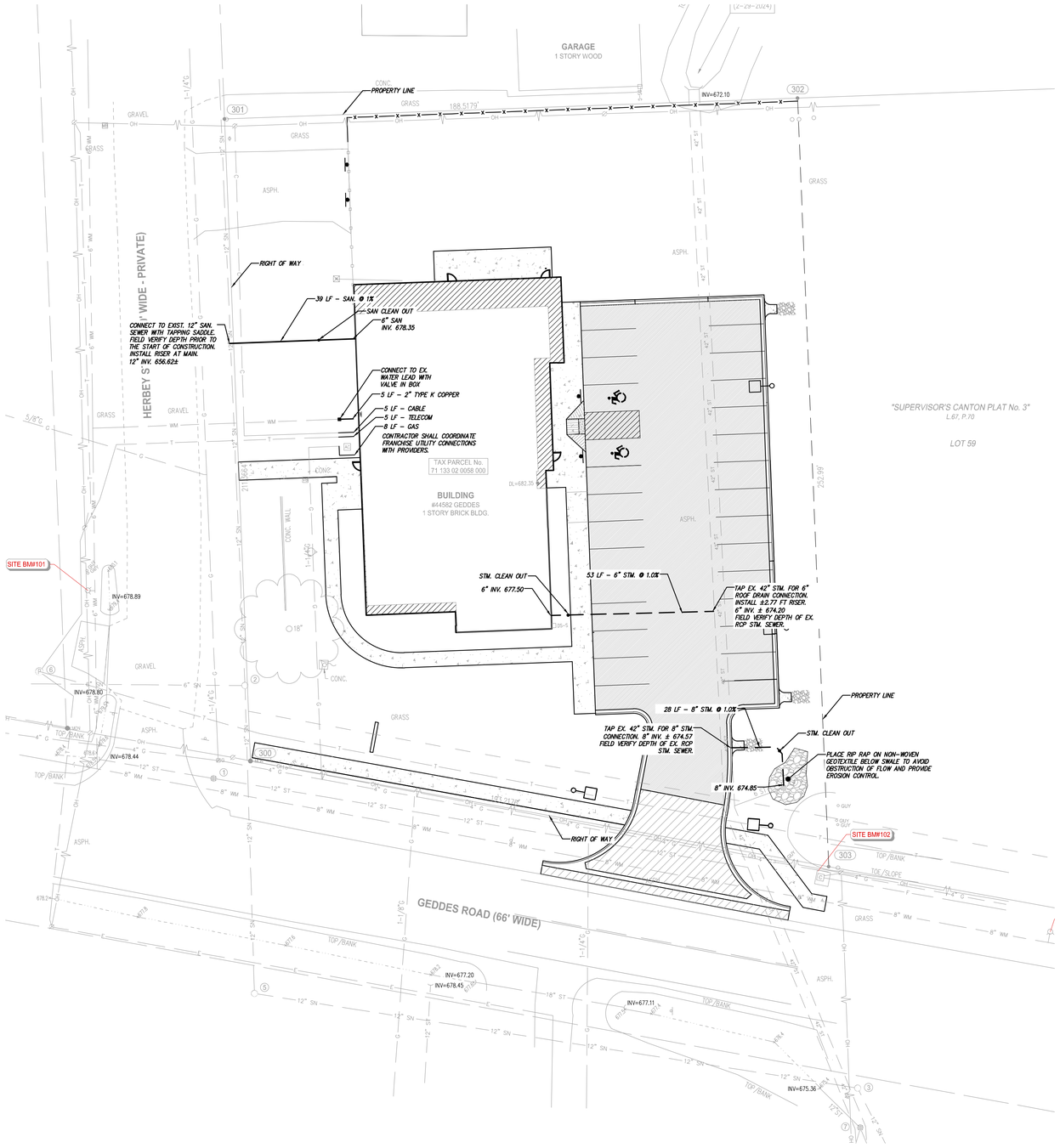
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SHEET NAME

GRADING PLAN

SHEET NO.

C4.0



N

GRAPHIC SCALE

0 10 20 40

(IN FEET)

1 inch = 20 ft.

LEGEND

- PROPOSED WATERMAIN
- PROPOSED SANITARY
- PROPOSED STORM SEWER
- PROPOSED GAS MAIN
- PROPOSED ELECTRIC
- PROPOSED HYDRANT
- PROPOSED GATE VALVE & WELL (GVW)
- PROPOSED TAPPING SLEEVE, VALVE & WELL (TSVW)
- PROPOSED SAN MANHOLE (SAN)
- PROPOSED STORM MANHOLE (MH)
- PROPOSED CATCH BASIN (CB)
- PROPOSED INLET (INL)
- PROPOSED END SECTION (ES)
- PROPOSED FIELD CATCH BASIN (FCB) W/BEEHIVE COVER OR STANDPIPE (SP) W/ BAR GRATE COVER
- STANDARD BITUMINOUS PAVEMENT
- HEAVY-DUTY BITUMINOUS PAVEMENT
- DEEP-STRENGTH BITUMINOUS PAVEMENT
- CONCRETE PAVEMENT
- CONCRETE SIDEWALK
- MILL PAVEMENT

STORM SEWER STRUCTURE: CB 2 — STRUCT. TYPE / STRUCT. NO.

SANITARY SEWER STRUCTURE: 20

WATERMAIN STRUCTURE: 10 XXX — STRUCT. NO. / STRUCT. TYPE

2 — UTILITY CROSSING (SEE DATA TABLE)

UTILITY NOTES

GENERAL

1. ALL UTILITIES SHALL BE INSTALLED IN ACCORDANCE WITH THE STANDARDS, SPECIFICATIONS, AND GENERAL CONDITIONS OF THE CANTON TOWNSHIP COMMUNITY.
2. WHERE THESE PLANS DIFFER FROM THE STANDARD DETAILS, STANDARD SPECIFICATIONS, AND GENERAL CONDITIONS OF CANTON TOWNSHIP AND WAYNE COUNTY, THE TOWNSHIP AND COUNTY REQUIREMENTS SHALL GOVERN.
3. ALL UTILITIES SHALL BE INSTALLED ON CLASS "B" BEDDING OR BETTER.
4. ALL UTILITIES SHALL BE PLACED AT LEAST 10' FROM OTHER UTILITIES, SIGNIFICANT TREES, AND FIXED STRUCTURES.
5. LOCATIONS OF LIGHT POLES, IF SHOWN ON THESE DRAWINGS, MAY BE APPROXIMATE. CONFIRM EXACT LOCATION (I.E. CURB OFFSETS, SIDEWALK OFFSETS, ETC.) PRIOR TO STAKING AND CONSTRUCTION. REFER TO SITE ELECTRICAL PLAN FOR DETAILS, AND COORDINATE WITH ELECTRICAL ENGINEER, ARCHITECT, AND CIVIL ENGINEER TO DETERMINE PROPER PLACEMENT.
6. THE USE, PROCESSING, OR MOVEMENT OF HAZARDOUS MATERIALS OR CHEMICALS ON SITE IS NOT ANTICIPATED.
7. CONCRETE ENCASEMENT OF UTILITIES IS REQUIRED AT ALL CROSSINGS WITH LESS THAN 18" OF SEPARATION BETWEEN PIPES, SEE DETAIL SHEET C4.2.
8. REQUIRED PIPE BEDDING IS MAXIMUM ¾" DIA. CRUSHED STONE MEETING MDOT 6A ANGULAR MATERIAL SPECIFICATIONS.
9. TRENCH BACKFILL MUST BE MDOT CLASS II GRANULAR MATERIAL COMPACTED TO 95% OF MODIFIED PROCTOR MAX. DRY DENSITY FOR UTILITY TRENCHES LOCATED WITHIN 3 FT OF PAVEMENT.
10. CALL MISS-DIG 72 HOURS IN ADVANCE OF ANY CONSTRUCTION.
11. ROOF DRAIN LEADS SHALL BE PVC SDR 23.5.
12. CONTRACTOR SHALL CONTACT CANTON TOWNSHIP ENGINEERING TO SCHEDULE INSPECTION PRIOR TO COMMENCING UTILITY CONSTRUCTION (734) 394-5142.

SANITARY SEWER LEAD

1. 6" SANITARY SEWER LEAD SHALL BE PVC TRUSS PIPE. LEADS SHALL BE SOLID WALL, PVC, SDR 23.5.
2. THE SLOPE OF THE 6 SEWER LEAD SHALL NOT BE LESS THAN 1.0%.

WATER MAIN

1. ALL WATER MAIN 3" OR LARGER SHALL BE CLASS 54 DUCTILE IRON (DIP). WATER MAINS SHALL BE LEAKAGE AND PRESSURE TESTED IN ACCORDANCE WITH AWWA STANDARD C600. WATER MAINS SHALL BE DISINFECTED IN ACCORDANCE WITH AWWA STANDARD C651 PRIOR TO BEING PUT INTO SERVICE.
2. ALL WATER MAIN SHALL BE BURIED WITH 6' OF COVER FROM PROPOSED GRADES. USE 22.5° BENDS TO LOWER WATER MAIN WHERE NOTED AT UTILITY CROSSING.
3. WHERE HYDRANTS ARE INDICATED ON THE PLAN, COMPLETE HYDRANT ASSEMBLIES ARE REQUIRED, INCLUDING SHUT-OFF VALVE AND BOX (REFER TO THE STANDARD DETAIL SHEET FOR DETAILED REQUIREMENTS) THE ELEVATION OF THE VALVE BOX SHALL BE EQUAL TO THE FINISH GRADE (FG) ELEVATION OF THE HYDRANT UNLESS OTHERWISE NOTED.
4. ALL HYDRANTS MUST BE AT LEAST 5' FROM THE BACK OF CURB OR EDGE OF PAVEMENT.
5. NO WATER MAIN DEEPER THAN 10 FEET WITHOUT CASING.
6. REPLACEMENT OR RELOCATION OF EXISTING HYDRANTS AND VALVES MUST MEET CURRENT CANTON TOWNSHIP STANDARDS.
7. THE WATER MAIN BEDDING MUST BE MICHIGAN DEPARTMENT OF TRANSPORTATION CLASS II SAND.
8. TRENCH "B" SAND BACKFILL IS REQUIRED FOR WATER MAIN TRENCH LOCATED UNDER OR WITHIN THREE FEET OF PAVEMENT.
9. TRENCH "A" BACKFILL MATERIAL USED MUST BE FREE OF LARGE LUMPS OF CLAY, DEBRIS, AND ROCKS.
10. ALL BOLTS FOR UNDERGROUND MECHANICAL CONNECTIONS MUST BE COR-BLUE T-BOLT TYPE.
11. THRUST BLOCKS AND "MEGA-LUGS" ARE REQUIRED AT ALL BENDS, TEES, CROSSES, HYDRANTS, PLUGS AT THE END OF A LINE, AND VERTICAL OR HORIZONTAL BENDS.
12. ALL TAPPING SLEEVES SHALL BE STAINLESS STEEL.

STORMWATER MANAGMENT NARRATIVE

PER WAYNE COUNTY, A STORMWATER MANAGEMENT PLAN AND REVIEW IS NOT REQUIRED BECAUSE OF THE LIMITED SITE DISTURBANCE AND LESS THAN 0.5 ACRES OF ADDED IMPERVIOUS SURFACES. RUNOFF FROM THE SITE IS ROUTED VIA SHEET FLOW AND ROOF DRAINS TO THE 42" RCP. RICH DRAIN OWNED BY WAYNE COUNTY LOCATED UNDER THE PARKING LOT AREA.

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SHEET NAME

UTILITY PLAN

SHEET NO.

C5.0

SOIL EROSION/SEDIMENTATION CONTROL CONSTRUCTION SEQUENCE

1. INSTALL INLET FILTERS, AND SILT FENCE AROUND DEFINED PERIMETER AS SHOWN.
2. COMPLETE SITE DEMOLITION ACTIVITIES INCLUDING PAVEMENT REMOVAL AND DISPOSAL. CLEAR, GRUB AND STRIP TOPSOIL IN AREAS OF EARTH DISRUPTION.
3. COMPLETE ROUGH GRADING LAND BALANCING OPERATIONS.
4. INSTALL PROPOSED UNDERGROUND UTILITIES AND PLACE INLET FILTERS IN NEW STORM STRUCTURES WHERE INDICATED. REPLACED INLET FILTERS WITHIN AFFECTED EXISTING STRUCTURES AS NECESSARY.
5. PERFORM FINE GRADING, PAVING OPERATIONS, AND FIELD.
6. COMPLETE LANDSCAPING ACTIVITIES INCLUDING LAWN RESTORATION.
7. EROSION CONTROL MEASURES ARE NOT TO BE REMOVED UNTIL THE CITY AND/OR COUNTY GRANTS ITS APPROVAL. INLET FILTERS SHALL BE PERIODICALLY INSPECTED AND CLEANED/REPLACED AS NECESSARY.

ALL EROSION CONTROL MEASURES SHALL BE INSTALLED APPROXIMATELY ACCORDING TO THE FOLLOWING SEQUENCE OF CONSTRUCTION.

PROJECT COMMENCEMENT ON OR ABOUT MAY 2024.

SCHEDULE

A.	INSTALL SILT FENCE, AND INLET FILTERS IN EXISTING STRUCTURES.	1~2 DAYS
B.	STRIP AND STOCKPILE TOPSOIL, SITE DEMOLITION, AND ROUGH GRADE SITE.	2~3 WEEKS
C.	BUILDING ADDITION CONSTRUCTION	12 MONTHS
D.	FINE GRADE SITE, PAVE, INSTALL LANDSCAPING AND ESTABLISH VEGETATION.	2~3 WEEKS
E.	CLEAN PAVEMENTS, WALKS, CULVERTS, AND WATERCOURSES OF ALL ACCUMULATED SEDIMENT IN CONJUNCTION WITH REMOVAL ALL TEMPORARY DEVICES.	1~2 WEEKS

PROJECT COMPLETION ON OR ABOUT NOVEMBER 2026

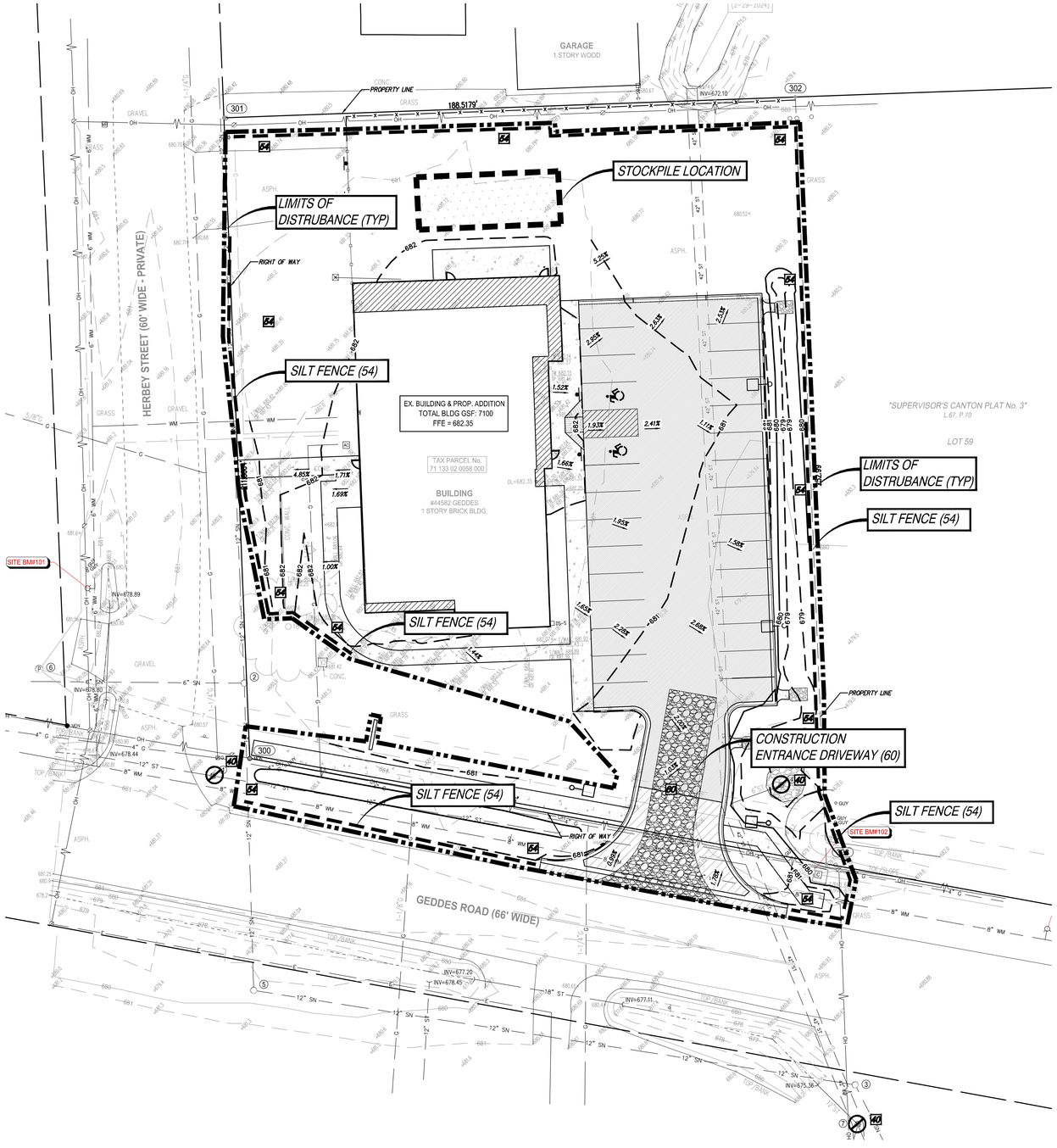
SOIL EROSION/SEDIMENTATION CONTROL NOTES

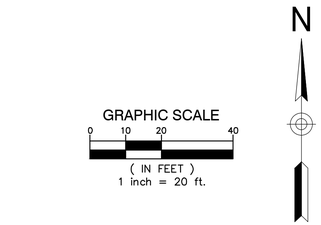
1. ALL EROSION AND SEDIMENT CONTROL WORK SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF WAYNE COUNTY AND THE TOWNSHIP OF CANTON.
2. DAILY INSPECTIONS SHALL BE MADE BY THE CONTRACTOR TO DETERMINE EFFECTIVENESS OF EROSION AND SEDIMENTATION CONTROL DEVICES, AND ANY NECESSARY REPAIRS SHALL BE PERFORMED WITHOUT DELAY.
3. EROSION AND ANY SEDIMENT FROM WORK ON THIS SITE SHALL BE CONTAINED ON THE SITE AND NOT ALLOWED TO COLLECT ON ANY OFF-SITE AREAS OR IN WATER WAYS. WATERWAYS INCLUDE BOTH NATURAL AND MANMADE OPEN DITCHES, STREAMS, STORM DRAINS, LAKES AND PONDS.
4. EROSION AND SEDIMENT CONTROL DEVICES ARE TO BE PLACED PRIOR TO OR AS THE FIRST STEP IN CONSTRUCTION; SEDIMENT CONTROL PRACTICES WILL BE APPLIED AS A PERIMETER DEFENSE AGAINST ANY TRANSPORTING OF SILT OFF THE SITE.
5. CONTRACTOR SHALL APPLY TEMPORARY EROSION AND SEDIMENTATION CONTROL DEVICES AS REQUIRED AND AS DIRECTED ON THESE PLANS. HE SHALL REMOVE TEMPORARY DEVICES AS SOON AS PERMANENT STABILIZATION OF SLOPES, DITCHES, AND OTHER EARTH CHANGES HAVE BEEN ACCOMPLISHED AND APPROVED BY THE CITY AND/OR COUNTY.
6. DEBRIS FROM PROJECT WILL BE LEFT ON THE SITE BY DELIVERY OR CONSTRUCTION VEHICLES THROUGH THE USE OF CLEAN STONE EXITS. SHOULD THE STONE BECOME LESS EFFECTIVE IT WILL BE REPLACED. ALL CONSTRUCTION TRAFFIC WILL USE THE CLEAN STONE EXIT.
7. DUST CONTROL WILL BE EXERCISED AT ALL TIMES WITHIN THE PROJECT BY THE CONTRACTORS. SPRINKLING TANK TRUCKS WILL BE AVAILABLE AT ALL TIMES TO BE USED ON HAUL ROUTES OR OTHER PLACES WHERE DUST BECOMES A PROBLEM.
8. IMMEDIATELY AFTER SEEDING, MULCH ALL SEEDED AREAS WITH UNWEATHERED SMALL GRAIN STRAW OR HAY. SPREAD UNIFORMLY AT A RATE OF 1 1/2 TO 2 TONS PER ACRE OR 0.10 POUNDS PER SQUARE FEET. ANCHOR MULCH WITH DISC TYPE MULCH ANCHORING TOOL.
9. ALL MUD, DIRT, AND DEBRIS TRACKED ONTO EXISTING ROADS FROM THIS SITE SHALL BE PROMPTLY REMOVED BY THE CONTRACTOR OR BUILDER. ALL MUD, DIRT, AND DEBRIS TRACKED OR SPILLED ONTO PAVED SURFACES WITHIN THIS SITE SHALL BE PROMPTLY REMOVED BY THE CONTRACTOR.
10. PERMANENT SOIL EROSION CONTROL DEVICES FOR ALL SLOPES, CHANNELS, DITCHES OR ANY DISTURBED LAND AREA SHALL BE COMPLETED WITHIN 15 CALENDAR DAYS AFTER FINAL GRADING OR FINAL EARTH CHANGES HAVE BEEN COMPLETED. WHEN IT IS NOT POSSIBLE TO PERMANENTLY STABILIZE A DISTURBED AREA AFTER AN EARTH CHANGE HAS BEEN COMPLETED OR WHERE SIGNIFICANT EARTH CHANGE ACTIVITY CEASES TEMPORARY SOIL EROSION CONTROL DEVICES SHALL BE IMPLEMENTED WITHIN 30 CALENDAR DAYS. ALL TEMPORARY SOIL EROSION CONTROL DEVICES SHALL BE MAINTAINED UNTIL PERMANENT SOIL EROSION DEVICES ARE IMPLEMENTED AND/OR ESTABLISHED. ALL PERMANENT SOIL EROSION CONTROL DEVICES WILL BE IMPLEMENTED AND ESTABLISHED BEFORE A CERTIFICATE OF COMPLIANCE IS ISSUED.
11. ALL CONTRACTORS ARE TO KEEP EXCAVATED MATERIAL ON SITE. PARTICULAR CARE SHOULD BE TAKEN WHEN WORKING ALONG THE PERIMETER OF THE SITE. IN NO EVENT SHALL THE WORK AREA EXTEND BEYOND THE LIMITS INDICATED ON THE PLANS.
12. THE SOIL EROSION CONTROLS WILL BE MAINTAINED WEEKLY AND AFTER EVERY STORM EVENT BY THE CONTRACTOR.
13. IN THE EVENT THAT DEWATERING IS REQUIRED, A TEMPORARY SEDIMENTATION BASIN SHALL BE CONSTRUCTED ON SITE FOR THE PURPOSE OF REDUCING SEDIMENT PRIOR TO PUMPED DISCHARGE TO THE S. LILLEY ROAD ROW.
14. STORMWATER FROM SITE SHALL NOT ADVERSELY IMPACT EROSION OF NEIGHBORING PROPERTIES DURING AND AFTER CONSTRUCTION.
15. NO WETLANDS HAVE BEEN FOUND ON SITE.
16. ONE SOIL STOCKPILE LOCATION IS PROPOSED AS SHOWN.
17. THE DETENTION BASIN SIDE SLOPES MUST BE STABILIZED, BY PLACING A MULCH BLANKET PEGGED IN PLACE OVER SEED. THE REMAINDER OF THE POND MAY BE SEEDED.
18. THE DEVELOPER IS RESPONSIBLE FOR RESOLVING ANY DRAINAGE PROBLEMS ON ADJACENT PROPERTIES WHICH ARE A RESULT OF THE DEVELOPER'S ACTIVITIES.
19. ALL AREAS IN THE RIGHT OF WAY TO BE RESTORED WITHIN A TIMELY MANNER. WAYNE COUNTY ROW PERMIT WILL NOT BE RELEASED UNTIL PERMIT OFFICE IS SATISFIED WITH THE VEGETATION HAS BEEN REESTABLISHED.
20. FOLLOWING SEEDING AND PLANTING IN THE DETENTION BASIN, SNOW FENCE SHALL BE INSTALLED AT THE FREEBOARD ELEVATION AROUND ALL PONDS. THIS SNOW FENCE SHALL REMAIN IN PLACE AND MAINTAINED PROPERLY DURING THE DURATION OF THE PROJECT UNTIL THE FINAL CERTIFICATE OF OCCUPANCY IS GRANTED AT THE SITE.
21. ALL EROSION AND SEDIMENT CONTROL WORK SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF WAYNE COUNTY AND THE TOWNSHIP OF CANTON.

GROSS ACREAGE DISTURBED = 0.91± ACRES
DISTANCE TO NEAREST BODY OF WATER = 1,700 ± LF SOUTHEAST (MCKINSEY DRAIN)

SOIL TYPES:
BLOUNT-PEWAMO LOAMS, 0 TO 2% SLOPES (HYDROLOGIC SOIL GROUP C/D) PER USDA WEB SOIL SURVEY.

THIS PROJECT SHALL BE CONSTRUCTED IN COMPLIANCE WITH PART 91 OF ACT 451 OF 1994, AS AMENDED. THE SOIL EROSION AND SEDIMENT CONTROL ACT.





LEGEND

- PROPOSED WATERMAIN
- PROPOSED SANITARY
- PROPOSED STORM SEWER
- PROPOSED GAS MAIN
- PROPOSED ELECTRIC
- PROPOSED HYDRANT
- PROPOSED GATE VALVE & WELL (GVW)
- PROPOSED TAPPING SLEEVE, VALVE & WELL (TSVW)
- PROPOSED SAN MANHOLE (SAN)
- PROPOSED STORM MANHOLE (MH)
- PROPOSED CATCH BASIN (CB)
- PROPOSED INLET (INL)
- PROPOSED END SECTION (ES)
- PROPOSED FIELD CATCH BASIN (FCB) W/BEEHIVE COVER OR STANDPIPE (SP) W/ BAR GRATE COVER
- STANDARD BITUMINOUS PAVEMENT
- HEAVY-DUTY BITUMINOUS PAVEMENT
- DEEP-STRENGTH BITUMINOUS PAVEMENT
- CONCRETE PAVEMENT
- CONCRETE SIDEWALK
- MILL PAVEMENT
- (2) UTILITY CROSSING (SEE DATA TABLE)
- STORM SEWER STRUCTURE: CB-2 STRUCT. TYPE / STRUCT. NO.
- SANITARY SEWER STRUCTURE: 20
- WATERMAIN STRUCTURE: 10 / XXX STRUCT. NO. / STRUCT. TYPE

GRADING LEGEND

000.00	EXISTING ELEVATION	• TP 000.00	TOP OF PAVEMENT ELEVATION
• TC 000.00 / G 000.00	PROPOSED TOP OF CURB ELEVATION / PROPOSED GUTTER ELEVATION	• TW 000.00	TOP OF WALK ELEVATION
		• FG 000.00	FINISH GRADE ELEVATION
• OG 000.00	OUTSIDE GRADE ELEVATION	• T/WALL 000.00	TOP OF WALL ELEVATION
11.30	EXISTING CONTOURS	• ME 000.00	MATCH EXISTING ELEVATION
11.30	PROPOSED CONTOURS		FLOW ARROW

SOIL EROSION CONTROL DEVICES

- 40 — INLET SEDIMENT TRAP (SILT SACK)
- 54 — SILT FENCE
- LIMITS OF DISTURBANCE
- 60 — CONSTRUCTION ENTRANCE

RESTORATION NOTE

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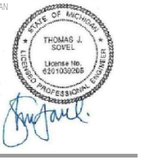
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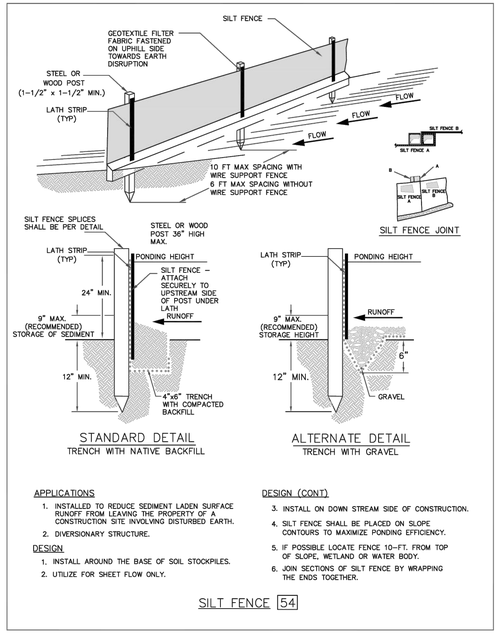
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SHEET NAME

SOIL EROSION AND SEDIMENTATION CONTROL PLAN

SHEET NO.

C6.0



APPLICATIONS

1. INSTALLED TO REDUCE SEDIMENT LADEN SURFACE RUNOFF FROM LEAVING THE PROPERTY OF A CONSTRUCTION SITE INVOLVING DISTURBED EARTH.
2. DIVERSIONARY STRUCTURE.

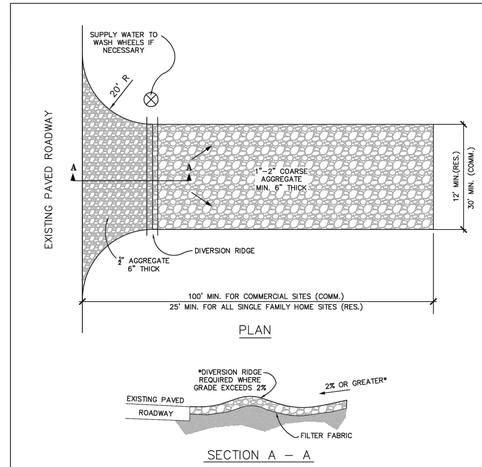
DESIGN

1. INSTALL AROUND THE BASE OF SOIL STOCKPILES.
2. UTILIZE FOR SHEET FLOW ONLY.

DESIGN (CONT)

3. INSTALL ON DOWN STREAM SIDE OF CONSTRUCTION.
4. SILT FENCE SHALL BE PLACED ON SLOPE CONTOURS TO MAXIMIZE PONDING EFFICIENCY.
5. IF POSSIBLE LOCATE FENCE 10-FT. FROM TOP OF SLOPE, WETLAND OR WATER BODY.
6. JOIN SECTIONS OF SILT FENCE BY WRAPPING THE ENDS TOGETHER.

SILT FENCE 54



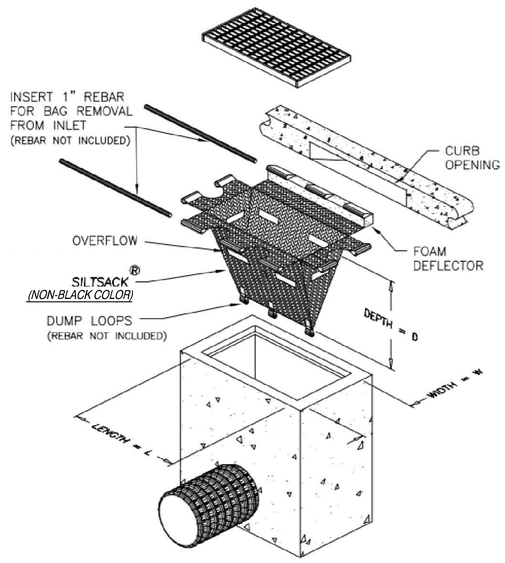
APPLICATIONS

1. ASSISTS IN REMOVING SOIL FROM THE TIRES OF CONSTRUCTION EQUIPMENT/VECHICLES WHEN EXITING THE CONSTRUCTION SITE. THIS REDUCES TRACKING EXCESSIVE SEDIMENT/SOIL ONTO THE ADJACENT ROAD.

DESIGN

1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ON PUBLIC RIGHTS-OF-WAY.
3. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.

TEMPORARY GRAVEL CONSTRUCTION ENTRANCE 60



SILT SACK (40)

CONTACTOR IS RESPONSIBLE FOR TEMPORARY S.E.S.C. MEASURES

CHART A

MAINTENANCE TASKS AND SCHEDULE DURING CONSTRUCTION

TASKS	COMPONENTS										SCHEDULE
	Storm Sewer System	Catch Basin Sumps	Catch Basin Inlet Casings	Ditches and Swales	Outflow Control Structure	Rip-Rap	Filtration Basins	Storm Detention Areas	Wetlands	Emergency Overflow	
Inspect for sediment accumulation	X	X		X	X		X	X			Weekly
Removal of sediment accumulation	X	X		X	X		X	X			As needed* & prior to turnover
Inspect for floatables and debris			X	X	X		X	X			Quarterly
Cleaning of floatables and debris			X	X	X		X	X			Quarterly & at turnover
Inspection for erosion				X	X		X	X			Weekly
Re-establish permanent vegetation on eroded slopes				X			X	X			As needed & at turnover
Replacement of Stone					X						As needed* & prior to turnover
Mowing			X	X	X	X	X	X			0 to 2 times per year
Inspect Stormwater system components during wet weather and compare to as-built plans (by professional engineer reporting to XYZ Co.)				X	X		X	X			Annually and at turnover
Make adjustments or replacements as determined by annual wet weather inspection	X	X	X	X	X	X	X	X	X	X	As needed

*as needed means when sediment has accumulated to a maximum of one foot depth

OWNER IS RESPONSIBLE FOR PERMANENT S.E.S.C. MEASURES

CHART B

PERMANENT MAINTENANCE TASKS AND SCHEDULE

TASKS	COMPONENTS								SCHEDULE
	Catch Basin Inlet Casings	Ditches and Swales	Outflow Control Structure	Rip-Rap	Filtration Basins	Storm Detention Areas	Wetlands	Emergency Overflow	
Inspect for sediment accumulation		X	X		X	X			Annually
Removal of sediment accumulation		X	X		X	X			Every 2 years as needed
Inspect for floatables and debris	X	X	X		X	X			Annually
Cleaning of floatables and debris	X	X	X		X	X			Annually
Inspection for erosion		X	X		X	X			Annually
Re-establish permanent vegetation on eroded slopes		X			X	X			As Needed
Replacement of Stone			X						Every 3-5 years as needed
Clean Streets									Semi-Annually
Mowing		X			X	X			0-2 times per year
Inspect Stormwater system components during wet weather and compare to as-built plans (by professional engineer reporting to XYZ Co.)	X	X	X	X	X	X	X	X	Annually
Make adjustments or replacements as determined by annual wet weather inspection	X	X	X	X	X	X	X	X	As needed
Keep records of all inspections and maintenance activities and report to XYZ Co.									Annually
Keep records of all costs for inspections, maintenance and repairs. Report to XYZ Co.									Annually

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KEY PLAN

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OWNER

Charter Township of Canton - Western Wayne

PROJECT NAME

Growth Works

44582 Geddes Rd, Canton, MI 48188

PROJECT NO.

23-175

ISSUES / REVISIONS

Schematic Design	12/19/2024
Design Development	06/26/2025
Site Plan Approval	07/31/2025
Site Plan Approval Rev.1	02/13/2026
Bidding/Construction	03/05/2026

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TG

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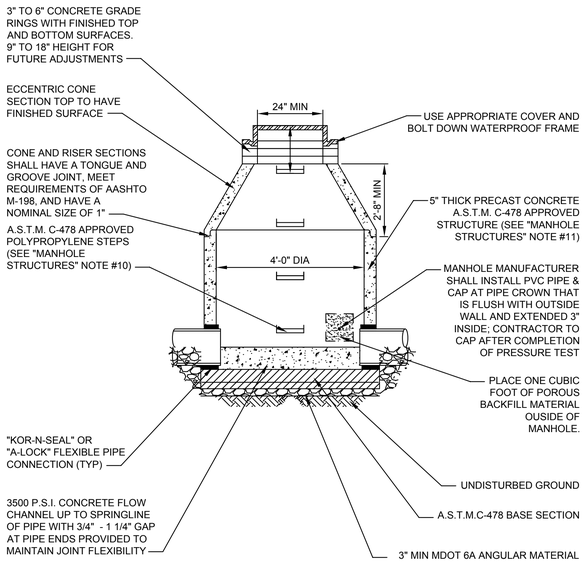
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SOIL EROSION AND SEDIMENTATION CONTROL DETAILS

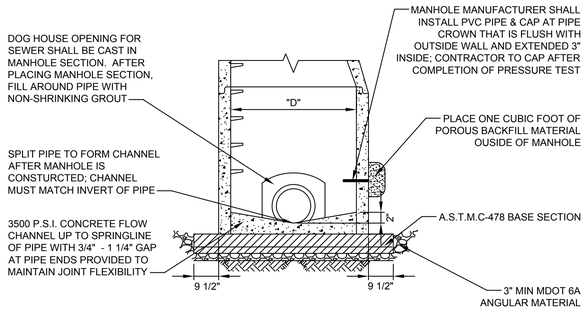
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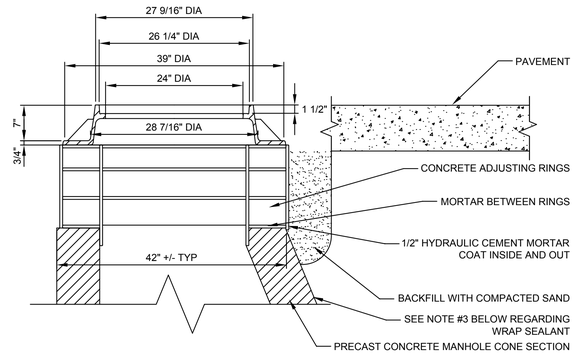


MANHOLE FOR SEWERS 8" THROUGH 18"

DOG HOUSE CUT OUT SIZES
1. 8" THROUGH 10" : 17 1/2" MAX CUT OUT SIZE
2. 12" THROUGH 15" : 20" MAX CUT OUT SIZE
3. "D" = 4'-0" DIA FOR 8" TO 18" SEWER
4. "D" = 5'-0" DIA FOR 21" TO 42" SEWER



MANHOLE INSTALLED ON EXISTING SEWERS



NOTES:
1. THIS DETAIL TO BE USED IN PAVED AREAS.
2. OUTSIDE DIAMETER OF FRAME SHALL NOT EXCEED OUTSIDE DIAMETER OF RINGS.
3. WHEN MANHOLES ARE LOCATED IN IMPERVIOUS AREAS, A WRAP SEALANT IS REQUIRED. SEE "MANHOLE STRUCTURES" NOTE #9 FOR DETAILS.

EXTERNAL FRAME SEAL DETAIL

SANITARY SEWER NOTES CONTINUED:

MANHOLE STRUCTURES CONTINUED
3. ALL MANHOLE RIMS SHALL BE SET TO GRADE OR AS INDICATED ON THE PLANS.

4. DIFFERENTIAL OF EXCAVATION AROUND EXISTING MANHOLES SHALL NOT EXCEED 6 FEET.

5. ALL STRUCTURES SHALL HAVE 95% CRUSHED ANGULAR STONE BEDDING (MDOT 6A).

6. FINISH GRADE FOR MANHOLES SHALL BE 3/4 OF AN INCH PER FOOT ABOVE THE TOP OF THE SIDEWALK.

7. EXTERIOR DROP CONNECTIONS ARE REQUIRED WHENEVER A SEWER INVERT IS 18 INCHES OR GREATER ABOVE THE MANHOLE FLOW CHANNEL INVERT. INTERIOR DROP CONNECTIONS MUST BE APPROVED BY THE CANTON TOWNSHIP ENGINEER.

8. ALL PRE-CAST PRODUCTS SHALL CONFORM TO THE REQUIREMENTS OF ASTM C-478.

9. "WRAPID SEAL" (OR APPROVED EQUAL) MUST BE USED WHEN A MANHOLE IS WITHIN, OR A PORTION IS TOUCHING A PAVED AREA (INCLUDING SIDEWALKS AND DRIVEWAYS) TO A DEPTH OF 18 INCHES FROM THE TOP OF THE MANHOLE.

10. MANHOLE STEPS ARE TO BE INSTALLED AT THE PLANT BY THE MANUFACTURER OF THE STRUCTURE. THE STEPS ARE TO BE 16 INCHES ON CENTER, MADE OF POLYPROPYLENE AND A.S.T.M. C-478 APPROVED. STEPS ARE TO BE LOCATED AT 90 DEGREES TO THE CENTERLINE OF THE MAIN SEWER LINE, FACING AWAY FROM THE ROAD WHERE POSSIBLE. THE BOTTOM STEP SHOULD BE LOCATED A MAXIMUM OF 24 INCHES ABOVE THE FLOOR.

11. ALL STRUCTURES MUST BE 5-INCH THICK PRE-CAST CONCRETE. A.S.T.M. C-478 APPROVED, WITH 1/2-INCH CEMENT PLASTER ON JOINTS INSIDE AND OUT. UNDER CANTON TOWNSHIP ENGINEER APPROVAL, STRUCTURES MAY BE 5-INCH THICK CONCRETE BLOCK STRUCTURE CONSTRUCTED IN THE FIELD WITH 1/2-INCH CEMENT PLASTER COAT INSIDE AND OUT.

12. MANHOLE SPACING SHALL NOT BE MORE THAN 400 FEET.

13. MANHOLE SECTION JOINTS SHALL HAVE O-RING SEALS OR PREMIUM RUBBER GASKETS.

14. PIPE TO MANHOLE CONNECTIONS SHALL BE FLEXIBLE AND WATERTIGHT.

15. MANHOLES ARE REQUIRED AT ALL DEAD ENDS, PIPE INTERSECTIONS, AND CHANGES IN PIPE ALIGNMENT, SLOPE, AND SIZE.

PIPES & LEADS
1. THE SANITARY SEWER PIPE FOR INDUSTRIAL USE SHALL BE ASTM C-76 CL-IV R.C.P. OR C-700 E.S. V.C.P.

2. THE SANITARY SEWER PIPE FOR RESIDENTIAL/COMMERCIAL USE SHALL USE PVC TRUSS OR ABS TRUSS MEETING ASTM D-2680.

3. THE 6-INCH SANITARY LEAD WILL BE C-700 E.S. V.C.P. FOR INDUSTRIAL USE. FOR RESIDENTIAL/COMMERCIAL USE SDR 23.5 PLASTIC PIPE FOR THE SERVICE LEAD.

4. CLEANOUTS ARE REQUIRED AT ALL SANITARY LEAD BENDS, CHANGES IN DIRECTION, AND AT 100-FOOT INCREMENTS.

5. PLACE A 6-INCH SERVICE LEAD FOR EACH LOT OR PARCEL AS SHOWN ON PLAN. FOR PARCELS IN EXCESS OF 100 FEET A WYE MUST BE PLACED EVERY 100 FEET UNLESS OTHERWISE NOTED.

6. LEADS ARE NOT PERMITTED TO CONNECT INTO A MANHOLE; THEY MUST BE CONNECTED ON THE MAIN LINE WITH A WYE OR WITH AN APPROVED SADDLE TAP.

7. PRIOR TO THE BACKFILLING OF A SERVICE LEAD, A 4-FOOT LENGTH OF ½-INCH DIAMETER STEEL BAR SHALL BE PLACED FROM A POINT IMMEDIATELY IN FRONT OF THE SERVICE CONNECTION TO 2 FEET BELOW THE FINISH GROUND SURFACE. DO NOT REST THE MARKER ON ANY PORTION OF THE SERVICE CONNECTION OR STOPPER.

8. RISERS ON SANITARY SEWERS SHALL BE INSTALLED TO A DEPTH OF 9 FEET BELOW PROPERTY LINE ELEVATION.

9. BULKHEADS SHALL BE PLACED WHERE THE EXISTING AND PROPOSED SEWERS CONNECT. THE BULKHEADS ARE NOT TO BE REMOVED UNTIL THE SEWERS HAVE BEEN TESTED AND ACCEPTED FOR USE BY THE CANTON TOWNSHIP ENGINEER.

10. ALL STUBS SHALL HAVE A WATER TIGHT BULKHEAD.

11. PIPE ALIGNMENT MUST BE SET WITH A LASER.

TESTING
1. ALL SEWERS SHALL BE TESTED IN ACCORDANCE WITH THE PROCEDURES OUTLINED BELOW NOT LESS THAN 30 DAYS AFTER THE TRENCH BACKFILL AND COMPACTION HAS BEEN COMPLETED.

2. ALL EXISTING SANITARY LEADS THAT ARE REUSED MUST BE AIR TESTED OR VIDEO TAPED.

3. ALL SEWERS SHALL BE TESTED AS OUTLINED BELOW WITH RESULTS APPROVED BY THE CANTON TOWNSHIP ENGINEER PRIOR TO ACCEPTANCE. THE CONTRACTOR SHALL PROVIDE THE CANTON TOWNSHIP ENGINEER WITH VERIFICATION OF THE TEST (IN THE CASE OF TELEVISING, A COPY MUST BE PROVIDED). THE TESTING MUST BE WITNESSED BY A CANTON TOWNSHIP REPRESENTATIVE.

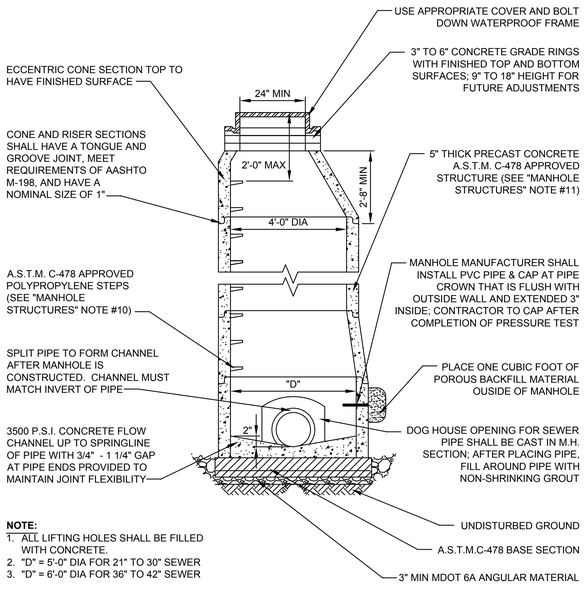
4. TESTING PROCEDURES:
TELEVISING OF PIPES
A. VIDEO INSPECTION SHALL BE CONSIDERED COMPLETE WHEN ALL NECESSARY CONSTRUCTION REPAIRS HAVE BEEN MADE AND RE-TELEVISED TO VERIFY THAT THE REPAIR IS ACCEPTABLE.

AIR
A. THE PROCEDURE FOR AIR TESTING OF VCP PIPE SHALL BE IN ACCORDANCE WITH THE C826-90 STANDARD/
B. THE PROCEDURE FOR PVC / ABS TRUSS PIPE SHALL BE IN ACCORDANCE WITH THE ASTM F-1417 STANDARD.

MANDREL
A. SANITARY SEWERS CONSTRUCTED OF PVC OR ABS TRUSS PIPE SHALL BE DEFLECTION TESTED. THE TEST SHALL BE COMPLETED BY PULLING AN APPROVED SOLID POINTED MANDREL THROUGH THE COMPLETED PIPELINE. THE DIAMETER OF THE MANDREL SHALL BE 95 PERCENT OF THE INSIDE DIAMETER OF THE PIPE. THE MANDREL SHALL BE A RIGID, NONADJUSTABLE, ODD-NUMBERED-LEG (9 LEGS MINIMUM) MANDREL HAVING AN EFFECTIVE LENGTH OF NOT LESS THAN ITS NOMINAL DIAMETER.

B. TESTING SHALL BE CONDUCTED ON A MANHOLE TO MANHOLE BASIS AND SHALL BE DONE AFTER THE LINE HAS BEEN COMPLETELY CLEANED AND FLUSHED. ANY PORTION OF THE SEWER WHICH FAILS TO PASS THE TEST SHALL BE EXCAVATED, REPAIRED OF REALIGNED, AND RETESTED WITH BOTH TV, AIR, AND DEFLECTION TESTS.

4. IF A SEWER FAILS TO PASS ANY OF THE PREVIOUSLY DESCRIBED TESTS, THE CONTRACTOR SHALL DETERMINE THE LOCATION OF THE LEAK, REPAIR AND RETEST THE SEWER. THE TEST SHALL BE REPEATED UNTIL SATISFACTORY RESULTS ARE OBTAINED.



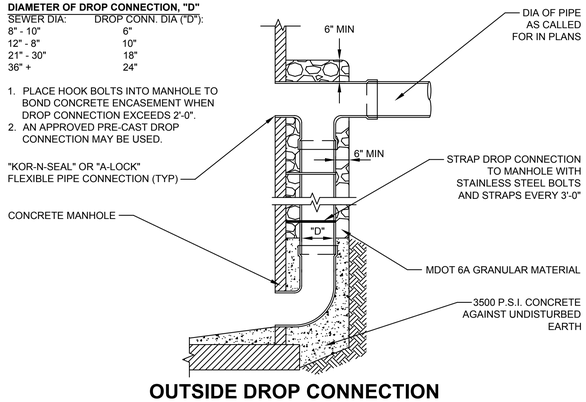
NOTE:
1. ALL LIFTING HOLES SHALL BE FILLED WITH CONCRETE.
2. "D" = 5'-0" DIA FOR 21" TO 30" SEWER
3. "D" = 6'-0" DIA FOR 36" TO 42" SEWER

MANHOLE FOR SEWERS 21" THROUGH 42"

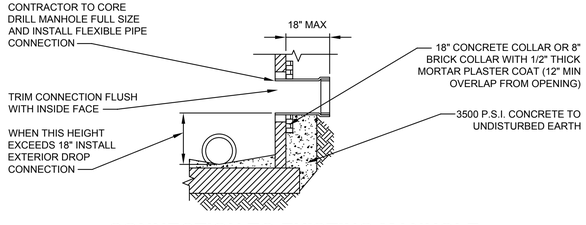
DIAMETER OF DROP CONNECTION, "D"

SEWER DIA:	DROP CONN. DIA ("D"):
8" - 10"	6"
12" - 8"	10"
21" - 30"	18"
36" +	24"

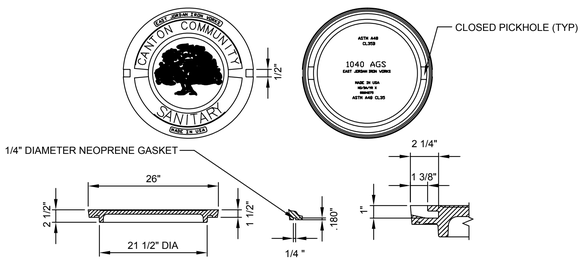
1. PLACE HOOK BOLTS INTO MANHOLE TO BOND CONCRETE ENCASEMENT WHEN DROP CONNECTION EXCEEDS 2'-0".
2. AN APPROVED PRE-CAST DROP CONNECTION MAY BE USED.



OUTSIDE DROP CONNECTION



CONNECTION TO EXISTING MANHOLE



STANDARD FRAME AND COVER

E.J.I.W. #1040-1 ZPT FRAME WITH 1040 AGS
(NARROW SKIRT) SOLID LID WITH CANTON LOGO

SANITARY SEWER NOTES:

GENERAL
1. ALL SEWER SYSTEM CONSTRUCTION SHALL CONFORM TO THE CURRENT STANDARDS AND GENERAL SPECIFICATION OF CANTON TOWNSHIP PUBLIC WORKS. IN ADDITION, ALL WORK WITHIN THE WAYNE COUNTY ROAD RIGHT-OF-WAY SHALL CONFORM TO WAYNE COUNTY GENERAL NOTES.

2. CONSTRUCTION SHALL NOT COMMENCE WITHOUT A REPRESENTATIVE OF CANTON TOWNSHIP ENGINEERING SERVICES PRESENT.

3. NO SEWER MAINS SHALL BE CONSTRUCTED LESS THAN 10-INCH IN DIAMETER WITHOUT SPECIFIC APPROVAL OF THE CANTON TOWNSHIP ENGINEER.

4. NO CONNECTION SHALL BE MADE TO SANITARY SEWERS RECEIVING STORM WATER, SURFACE WATER, OR GROUND WATER.

5. NO FOOTING DRAINS SHALL BE CONNECTED TO THE SANITARY SEWER.

6. CONSTRUCTION IS REQUIRED TO BE IN A DRY TRENCH - DEWATERING IF NECESSARY MUST BE PROVIDED.

MANHOLE STRUCTURES
1. DETAILS ARE FOR STRUCTURES WITH NO MORE THAN TWO PIPES ENTERING 180 DEGREES APART. LARGER DIAMETER STRUCTURES MAY BE REQUIRED FOR DIFFERENT CONFIGURATIONS.

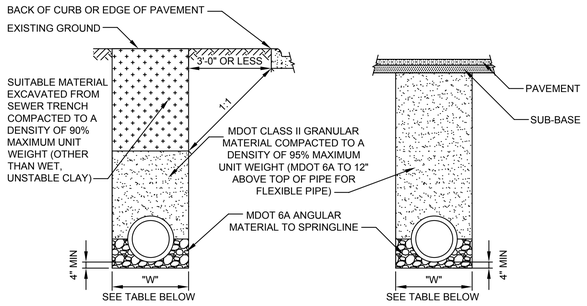
2. A MANHOLE STRUCTURE REQUIRES A MINIMUM OF 8 INCHES OF CONCRETE WALL BETWEEN PIPE OPENINGS. LARGER DIAMETER STRUCTURES MAY BE REQUIRED WHERE PIPES ENTERING THE STRUCTURE ARE LESS THAN 90 DEGREES APART IN ANY DIRECTION.

CHARTER TOWNSHIP OF CANTON
1150 CANTON CENTER S.
CANTON, MI 48188-1699
PH: 734-394-5150 / FAX: 734-394-5183

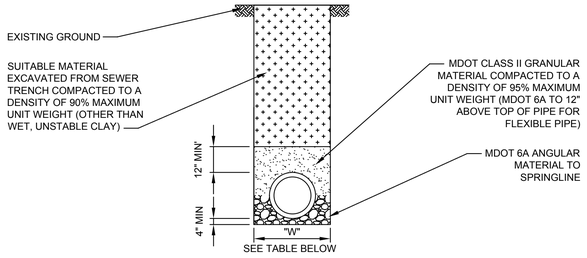
DATE:	REVISIONS:	BY:
5/17/2007	SUBMITTED FOR DEQ REVIEW	CJL
5/31/2007	PUBLIC RELEASE	CJL

SANITARY SEWER STANDARD DETAILS

DATE: 9/5/2007
SCALE: NONE
SHEET: C7.1



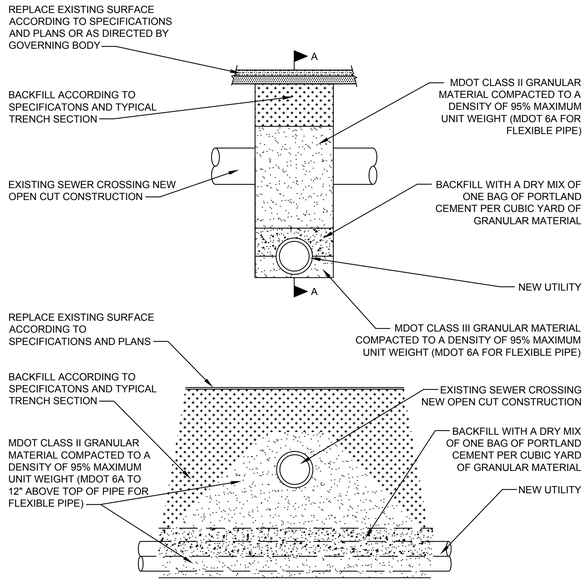
EDGE OF TRENCH WITHIN 3 FEET OF ANY PAVED SURFACE



TRENCH NOT WITHIN INFLUENCE OF PAVED AREA

STORM AND SANITARY SEWER TRENCH CROSS-SECTIONS

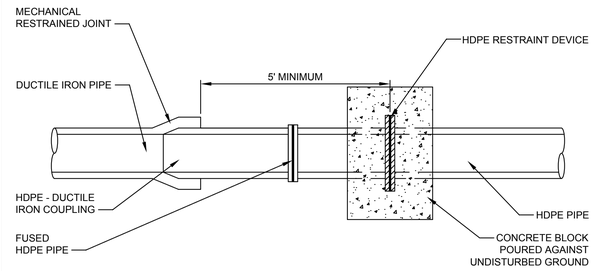
SEE "UTILITY CONSTRUCTION" NOTE #6



SECTION A - A

EXISTING UTILITY CROSSING

SEE "UTILITY CONSTRUCTION" NOTE #6



HDPE - DUCTILE IRON PIPE CONNECTION

MISCELLANEOUS DETAIL NOTES:

PRECONSTRUCTION & NOTIFICATION

1. THE CONTRACTOR MUST ATTEND A PRECONSTRUCTION MEETING, AS ARRANGED BY CANTON TOWNSHIP BEFORE ANY WORK SHALL COMMENCE.

2. THE CONTRACTOR MUST HAVE IN HIS POSSESSION A COPY OF ALL PERMITS AND APPROVALS NECESSARY TO CONSTRUCT PROPOSED IMPROVEMENTS.

3.THE CONTRACTOR MUST NOTIFY ALL UTILITY COMPANIES AND THE CANTON TOWNSHIP ENGINEER A MINIMUM OF 48 HOURS PRIOR TO UNCOVERING ANY EXISTING UTILITIES.

4. THE CONTRACTOR MUST NOTIFY □MISS DIG□ (800-482-7171) A MINIMUM OF THREE (3) WORKING DAYS (NOT INCLUDING HOLIDAYS OR WEEKENDS) BEFORE STARTING CONSTRUCTION.

5. ANY WORK WITHIN THE WAYNE COUNTY RIGHT-OF-WAY REQUIRES THAT THE CONTRACTOR NOTIFY THE CANTON TOWNSHIP ENGINEER AND WAYNE COUNTY ROAD DEPARTMENT OF PUBLIC SERVICES (WCDPS) 72-HOURS PRIOR TO THE START OF ANY CONSTRUCTION.

6. THE CONTRACTOR SHALL BE AWARE OF THE NEAREST EMERGENCY MEDICAL FACILITY.

ROADS & TRAFFIC

1. THE CONTRACTOR MUST MAINTAIN ALL TRAFFIC AT ALL TIMES AS REQUIRED BY THE CURRENT MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MMUTC), WAYNE COUNTY, AND/OR MICHIGAN DEPARTMENT OF TRANSPORTATION (MDOT).

2. THE CONTRACTOR SHALL AT ALL TIMES PROVIDE EMERGENCY ACCESS TO PROPERTY FOR THE POLICE, FIRE DEPARTMENT, AMBULANCES OR OTHER EMERGENCY VEHICLES TO PROTECT LIFE, HEALTH AND PROPERTY.

3. THE CONTRACTOR MUST MAINTAIN PUBLIC ROADS AFFECTED BY THE CONSTRUCTION OPERATIONS IN A PASSABLE CONDITION AT ALL TIMES.

4. IF THE PUBLIC SAFETY IS IN DANGER OR THE NECESSITY EXISTS FOR MAINTAINING TRAFFIC, BACKFILLING MUST BE COMPLETED IMMEDIATELY FOLLOWING CONSTRUCTION. IN THE EVENT THAT THE NECESSARY BACKFILL MATERIAL AND EQUIPMENT ARE NOT AVAILABLE WHEN DIRECTION IS GIVEN FOR IMMEDIATE BACKFILL, THE TRENCH SHALL BE BACKFILLED WITH NATIVE MATERIAL TO PROVIDE FOR THE NECESSARY MAINTENANCE OF TRAFFIC AND SAFETY.

5. NO ROADS SHALL BE CLOSED TO THROUGH TRAFFIC UNLESS AUTHORIZED BY THE AGENCY WITH JURISDICTION OVER THAT ROAD. PRIOR TO CLOSING ANY ROAD THE CONTRACTOR SHALL PROVIDE THE CANTON TOWNSHIP ENGINEER WITH A COPY OF A DETOUR PLAN APPROVED BY THE AGENCY HAVING JURISDICTION OVER THOSE ROADS.

6. IN THE EVENT ROADS ARE TO BE CLOSED, THE CONTRACTOR SHALL NOTIFY THE LOCAL FIRE DEPARTMENT, POLICE DEPARTMENT AND LOCAL ROAD AUTHORITY, AMBULANCE AND EMERGENCY SERVICES, DEPARTMENT OF PUBLIC WORKS, PUBLIC SCHOOL SYSTEM, LOCAL TRASH PICK-UP AUTHORITY, AND PUBLIC AND PRIVATE UTILITIES AS TO WHAT STREETS WILL BE BLOCKED OR CLOSED AND WHEN THE STREETS WILL BE REOPENED TO TRAFFIC.

7. PAVED STREETS AND DRIVEWAYS MUST BE MAINTAINED IN A REASONABLE STATE OF CLEANLINESS AND THE CONTRACTOR SHALL REMOVE ACCUMULATIONS OF DEBRIS CAUSED BY CONSTRUCTION OPERATIONS.

8. THE CONTRACTOR SHALL HAVE AN OPERATING SWEEPER BROOM AND CLEAN THE PAVEMENT AT THE CLOSE OF EACH DAYS OPERATION AND AS OFTEN AS NECESSARY. FAILURE TO COMPLY SHALL BE CAUSE TO STOP CONSTRUCTION. CONTRACTOR SHALL COMPLY WITH THE STATE AIR POLLUTION CONTROL REGULATIONS AND WAYNE COUNTY SOIL EROSION AND SEDIMENTATION CONTROL (SESC).

9. ALL GRAVEL ROADS, STREETS, OR DRIVEWAYS USED SHALL BE MAINTAINED BY GRADING, PLACING DUST PALLIATIVES AND/OR MAINTAINING GRAVEL IN SUFFICIENT QUANTITIES TO ELIMINATE DUST AND MAINTAIN TRAFFIC AS DIRECTED BY MDOT, WAYNE COUNTY OR CANTON TOWNSHIP.

UTILITY CONSTRUCTION

1. CONTRACTOR MUST PROVIDE ALL NECESSARY SHEETING, SHORING, DEWATERING, BRACING, TRENCH BOXES, ETC. TO PERFORM WORK SAFELY AND PROTECT EXISTING UTILITIES AND IMPROVEMENTS IN ACCORDANCE TO MICHIGAN OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (MIOSHA).

2. THE FLOW IN THE EXISTING SEWERS MUST BE MAINTAINED AT ALL TIMES.

3. CULVERTS, DITCHES, DRAIN TILES, TILE FIELD, DRAINAGE STRUCTURES, ETC. DISTURBED BY THE CONTRACTOR□S OPERATIONS SHALL BE IMMEDIATELY RESTORED.

4. AFTER ALL PIPES AND STRUCTURES HAVE BEEN LAID, CONSTRUCTED, AND BACKFILLED, THE SYSTEM MUST BE TESTED AND THE FIRST FINAL UTILITIES INSPECTION PERFORMED.

5. WHEN USING FLEXIBLE PIPE, FILL MUST BE MDOT 6A TO 12 INCHES ABOVE THE UTILITY, FOLLOWED BY ACCEPTABLE FILL.

6. TRENCH CROSS-SECTIONS SHOWN ON MD-1 APPLY TO THOSE UTILITIES OUTSIDE MDOT AND WAYNE COUNTY RIGHTS-OF WAY. THOSE UTILITIES THAT FALL WITHIN MDOT AND WAYNE COUNTY RIGHTS-OF WAY MUST MEET THEIR BEDDING AND BACKFILL REQUIREMENTS.

7. HDPE PIPE SHALL MEET AWWA C906 WITH AN SDR OF 11. THE PIPE WILL BE BLUE SHELLED ON THE EXTERIOR AND BLACK ON THE INSIDE.

SITE INFORMATION

1. ALL PROPERTY IRONS AND MONUMENTS, IF DISTURBED OR DESTROYED BY THE CONTRACTOR□S OPERATION, SHALL BE REPLACED BY A LICENSED LAND SURVEYOR AT THE CONTRACTOR□S EXPENSE.

2. NO EXCESS SOILS OR CONSTRUCTION MATERIALS SHALL BE PLACED ON PRIVATE PROPERTY WITHOUT AN APPROVED PERMIT FROM CANTON TOWNSHIP, REGARDLESS IF THE PROPERTY OWNER GIVES PERMISSION.

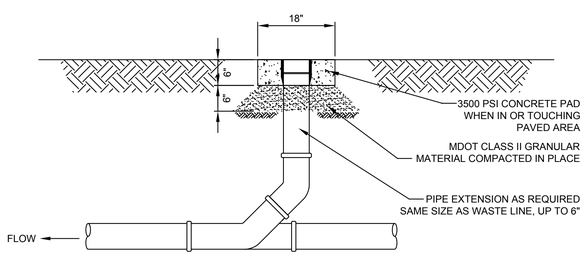
3. THE CONTRACTOR OR DEVELOPER IS RESPONSIBLE FOR RESOLVING ANY DRAINAGE PROBLEMS ON ADJACENT PROPERTIES THAT ARE A RESULT OF CONSTRUCTION ACTIVITY WITHIN 7 CALENDAR DAYS OF THE COMPLAINT.

I.D. PIPE SIZE (IN)	<18	21	24	30	36
"W" TRENCH WIDTH (FT)	3.0	3.5	4.0	5.0	6.0

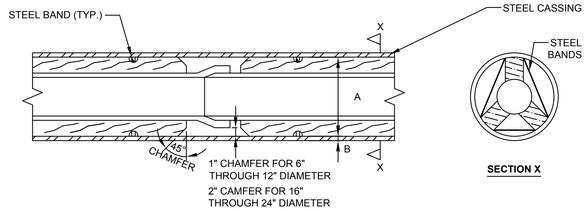
I.D. PIPE SIZE (IN)	42	48	54	60	-	-
"W" TRENCH WIDTH (FT)	7.0	8.0	9.5	10.0	-	-

- ESTIMATED PAVEMENT REMOVAL WIDTH IS TO BE TRENCH WIDTH "W" PLUS 12" EACH SIDE OF THE TRENCH

MINIMUM UTILITY TRENCH WIDTHS



CLEAN-OUT



SECTION X

DIA OF SANITARY SEWER (IN)	DIA OF WATER MAIN (IN)	MIN "A" (IN)	ROAD CROSSING MIN "B" (IN)	RAILROAD CROSSING MIN "B" (IN)
	8	16	0.375	0.375
	12	20	0.375	0.438
10	16	24	0.375	0.500
12 - 15	20	30	0.375	0.500
18	24	36	0.375	0.500

NOTES:

1. WHITE OAK SKIDS BANDED TO MAIN SKIDS WILL BE NOTCHED TO PREVENT WIRE FROM RIDING AGAINST CASING PIPE.
2. NO WATER SHALL BE USED IN BORING UNDER RAILROADS.
3. MAINTAIN A MINIMUM OF 5'-6" OF COVER BETWEEN BASE OF RAIL AND TOP OF CASING.
4. THE ENDS OF THE CASING SHALL BE SUITABLY PROTECTED AGAINST THE ENTRANCE OF FOREIGN MATERIAL AND SEALED WITH NON-SHRINKING GROUT.
5. BORING SHALL EXTEND A MINIMUM OF 10 FEET OUTSIDE THE EDGES OF THE PAVEMENT.
6. SKIDS ARE REQUIRED TO EXTEND THE FULL LENGTH OF THE CASING.
7. CASING PIPE SHALL BE WELDED STEEL PIPE A.S.T.M. A-252 GR 2 UNLESS OTHERWISE SPECIFIED.

CASING SECTION

CHARTER TOWNSHIP OF CANTON
1150 CANTON CENTER S.
CANTON, MI 48188-1699
PH: 734-394-5150 / FAX: 734-394-5183

DATE:	REVISIONS:	BY:
5/17/2007	SUBMITTED FOR DEQ REVIEW	CJL
5/31/2007	PUBLIC RELEASE	CJL

MISCELANEOUS STANDARD DETAILS

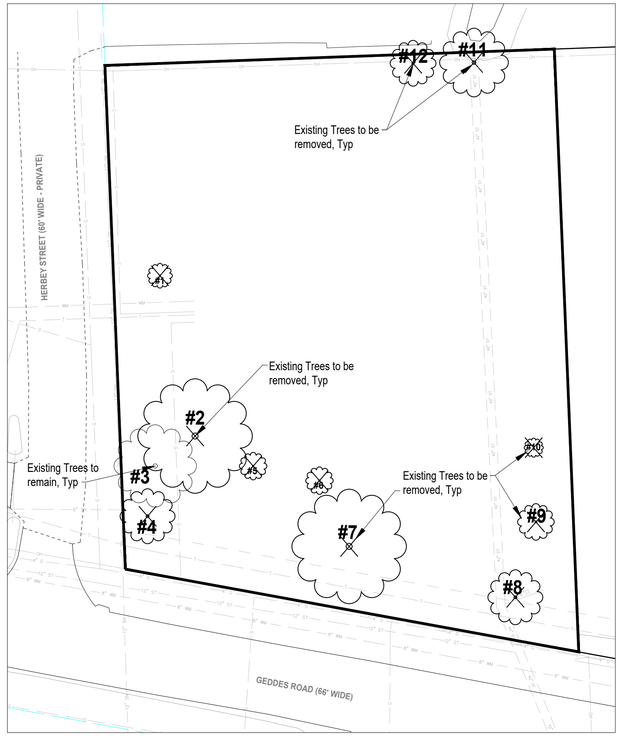
DATE: 9/5/2007

SCALE: NONE

SHEET: C7.2

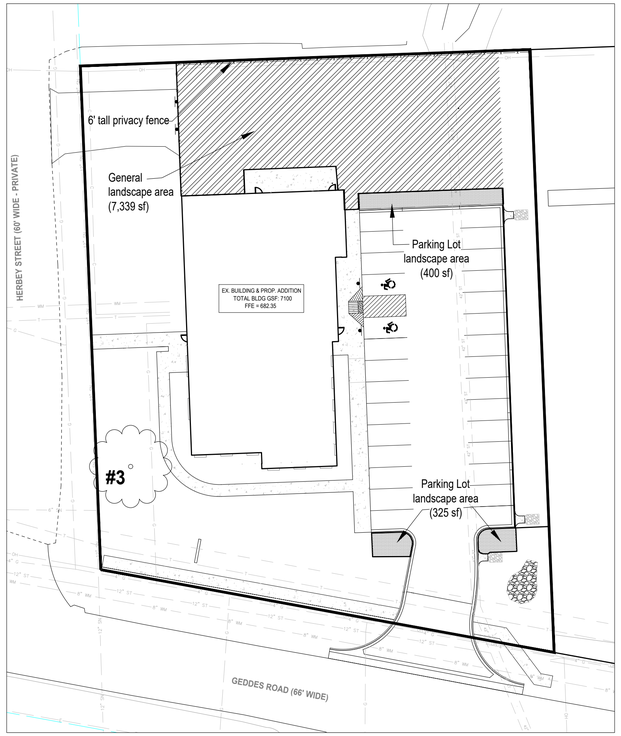
EXISTING TREE REMOVAL / RETAIN LOCATION PLAN:

SCALE : 1" = 30'



GENERAL AREA & PARKING LOT LANDSCAPE AREA LOCATION PLAN:

SCALE : 1" = 30'



LANDSCAPE REQUIREMENT CALCULATIONS:

Tree Removal Replacement Requirements: (Symbol = R)

See Tree Location Plan, Demolition Plan, and Tree Removal Inventory Charts for Regulated and Landmark Tress to be removed

Regulated Landmark Trees: Ordinance 5a.05.A.12 + 5a.08.E.1

Replacement Requirement:

Install three replacement trees for each one regulated Landmark tree that is removed.

Landmark Replacement Trees shall be at least 2" caliper

2 Regulated Landmark Trees to be removed (2 x 3 = 6)
6 Landmark Replacement Tress to be Provided (2" min.)

Protected Trees : Zoning Ordinance 5a.05.A.14 + 5a.08.E.1 + 5a.07.C.b.i

Replacement Requirement:

Install one replacement tree for each one regulated Protected tree that is removed.

Protected Replacement Trees shall be at least 2" caliper

4 Regulated Protected Trees to be removed (4 x 1 = 4)
4 Protected Replacement Tress to be Provided (2" min.)

6 Landmark Replacements + 4 Protected Replacements = 10 Replacement Trees Required

Canton Twp Ordinance allows landscape trees to be counted as replacement trees.

10 Required Replacement Trees
10 Credit for Required Landscape Trees

The criteria for replacement trees has been meet.

Section 5.02.A.1: Landscape within the ROW Requirements:

Required: Sod Provided: Irrigated Sod Lawn in Front of Building at Geddes Rd
Required: Sod Provided: Irrigated Sod Lawn in Front of Building at Herbey Rd

Section 5.02.A.2: General Area Landscape Requirements: (Symbol = GA)

Standard: 1 tree to be planted for every 3,000 sf of unpaved area within the development's "Disturbed Area" not covered by other ordinance area requirements.

7,339 sf Total General Area landscape areas not covered by other requirements
7,339 / 3,000 = 2.4 = 3 General Area Trees Required

EXISTING TREE SUMMARY TABLE:

Tree Tag Number	Species	Size dbh	Condition	Remove / Save	Status		
					Not Protected	Landmark	Protected
#1	Acer rubrum Red Maple	6"	Poor	REMOVE	Non-Protected		
#2	Tilia americana Basswood	24"	Good	REMOVE		Landmark	
#3	Quercus macropcarpa Bur Oak	18"	Good	SAVE			Protected
#4	Acer platinoides Norway Maple	12"	Poor	REMOVE	Non-Protected		
#5	Acer rubrum Red Maple	6"	Good	REMOVE			Protected
#6	Malus sp. Crabapple	6"	Fair	REMOVE			Protected
#7	Gleditsia tricanthos Locust	24"	Fair	REMOVE		Landmark	
#8	Gleditsia tricanthos Locust	12"	Fair	REMOVE			Protected
#9	Acer saccharum Sugar Maple	8"	Good	REMOVE			Protected
#10	Acer platinoides 'crimson' Norway Maple	6"	Poor	REMOVE	Non-Protected		
#11	Ulmus sp Elm	14"	Poor	REMOVE	Non-Protected		
#12	Ulmus sp Elm	10"	Poor	REMOVE	Non-Protected		

LANDSCAPE ORDINANCE REQUIREMENTS SUMMARY :

	General Area	Foundation	Parking Lot	Frontage Screen	Eastern Boundary	Total Required	Total Proposed
Deciduous Tree	3	0	3	9	6	22	22
Evergreen Tree	0	0	0	9	12	221	21
Ornamental Tree	0	6	0	5	4	15	15
Shrub	0	30	0	35	0	65	83

Section 5.02.C.1 & .4: Parking Lot Landscape Requirements: (Symbol P)

Standard: 25 sf of interior landscape per space (if greater than 15 parking spaces)

29 Proposed Parking Spaces (29 spaces x 25sf = 725 sf)
725 sf Interior Parking Lot Landscape Area Required
725 sf Interior Parking Lot Landscape Area Provided

REQUIRED: 1 tree required per 300 sf : 725 / 300 = 2.4 (3 Trees)
PROVIDED: 3 Parking Lot Trees

Section 5.03.A.4: Foundation Landscape Requirements: (Symbol F)

Standard: 1 ornamental tree per 35'
5 shrubs per 35'
Foundation LF = 210 LF (210 / 35 = 6)

Required: 1 ornamental tree per 35' = 6 ornamental trees required
5 shrubs per 35' = 30 foundation shrubs required

Section 5.03.D.3: Protective Screening Requirements: (Symbol PS)

Screening: Non-residential uses in a residential district that abuts directly upon land zoned for residential use shall provided screening.

Provided: Northern Boundary: The Existing 6' tall wooden privacy fence located adjacent to the northern property line will remain and serve as protective screening requirement.

Provided: Eastern Boundary: 170 lin ft.
1 deciduous tree per 30' = 170 / 30 = 5.6 = 6 deciduous trees
1 ornamental tree per 50' = 170 / 50 = 3.4 = 4 ornamental trees
1 evergreen tree or shrub at 15' staggered spacing

Landscape Adjacent to Roads: (Sym: **RD**)

Required: 1 deciduous tree + 1 evergreen tree per every 40' of road frontage
1 ornamental tree per every 80' of road frontage
1 shrub per every 10' of road frontage

Geddes Rd: 158' of road frontage
158 / 40' = 3.9 = 4 deciduous trees + 4 evergreen trees at Geddes
158 / 80' = 1.9 = 2 ornamental trees at Geddes Rd.
158 / 10' = 15.8 = 16 shrubs at Geddes Rd.

Herbey St: 185' of road frontage
185' / 40' = 4.6 = 5 deciduous trees + 5 evergreen trees at Herbey St.
185' / 80' = 2.3 = 3 ornamental trees at Herbey St.
185' / 10' = 18.5 = 19 shrubs at Herbey St.

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LANDSCAPE ARCHITECT
No. 1309
REGISTERED LANDSCAPE ARCHITECT

OWNER

Charter Township of Canton
Western Wayne

PROJECT NAME

Growth Works

44582 Geddes Rd, Canton, MI 48188

PROJECT NO.

23-175

ISSUES / REVISIONS

QA/QC 02/13/2026
Site Plan Approval Rev 1 02/13/2026
Building & Construction 03/05/2026

DRAWN BY

LKZ

CHECKED BY

APPROVED BY

SHEET NAME

TREE SURVEY TABLES AND REQUIREMENT CALCULATIONS

SHEET NO.

L1-01

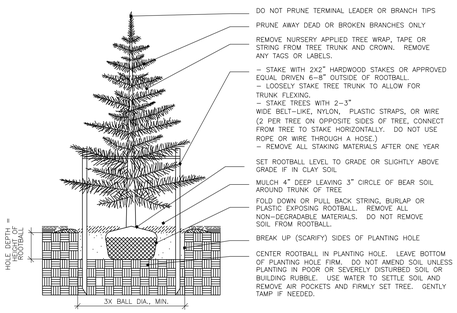
PLANT MATERIAL LIST :

QTY.	DESCRIPTION	SIZE / ROOT
3	Acer freemanii Autumn Blaze Maple	2" / B&B
1	Acer ginnala Amur Maple	2" / B&B
9	Amilanchier x grandiflora 'Autumn Brilliance' Serviceberry "Autumn Brilliance'	8' MS / B&B
2	Betula nigra River Birch	8' MS / B&B
2	Cornus florida Flowering Dogwood	2" / B&B
6	Ginkgo biloba Ginkgo tree	2" / B&B
3	Magnolia liliiflora 'Jane' Jane Magnolia	2" / B&B
6	Picea glauca 'Densata' Black Hills Spruce	8' / B&B
2	Quercus bicolor Swamp White Oak	3"/ B&B
2	Tilia cordata Little Leaf Linden	3"/ B&B
15	Thuja standishii x plicata 'Green Giant' GreenGiant Arborvitae	8' / B&B

QTY.	DESCRIPTION	SIZE / ROOT
4	Ulmus american 'American Liberty' Liberty Elm	2" / B&B
12	Ribes alpinium Alpine Currant	15" / B&B
17	Taxus x media 'Densiformisi' Everlow Yew	24" / Container
5	Taxus x media 'Hicksii' Hicks Yew	24" / Container
7	Hydrangea 'Limelight' Limelight Hydrangea	2" / Container
4	Weigelia florida 'Bokraspiwi' Spilled Wine Weigelia	#5 / Container
11	Juniperus chinensis 'Keteleeri' Upright Keteleeri Juniper	6' / B&B
5	Juniperus sabina 'Broadmoor' Broadmoor Juniper	24" / Container
5	Physocarpus opulifolius Common Ninebark	36" / Container
6	Spiraea japonica 'Walbuma' Magic Carpet Spirea	28" / Container
6	Cornus sericea Red Twig Dogwood	36" / Container

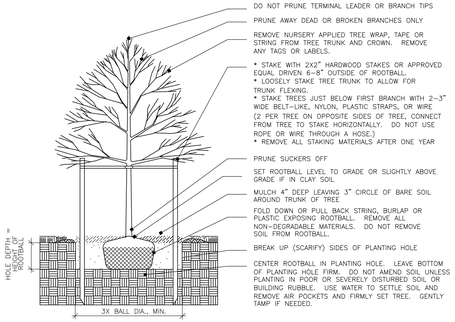
QTY.	DESCRIPTION	
4	Calamagrostis x acutiflora Karl Foerster Feather Reed Grass	2 gal / Container
9	Nepeta x 'Walker's Low' Walker's Low Catmint	1 gal / Container
3	Pennisetum alopecuroides 'Hameln' Dwarf Fountain Grass	2 gal / Container

PLANTING DETAILS:



EVERGREEN TREE PLANTING DETAIL, TYP.

NOT TO SCALE



DECIDUOUS TREE PLANTING DETAIL, TYP.

NOT TO SCALE

PLANTING NOTES:

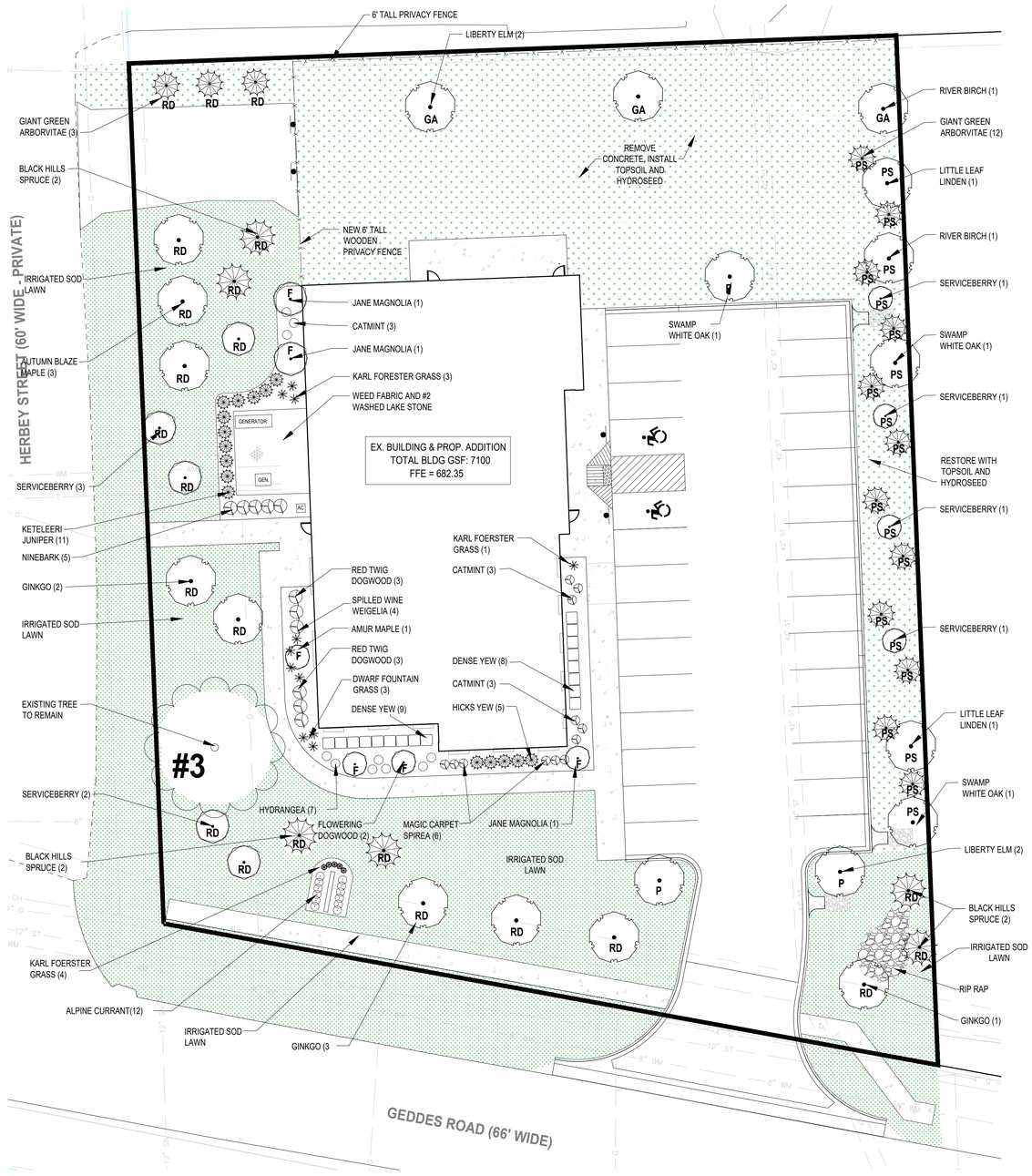
1. Contractor shall be responsible for contacting and coordinating with all pertinent utility companies 72 hours in advance of any digging to make themselves familiar with all underground utilities, pipes and structures. Contractor shall take sole responsibility for any cost incurred due to damage of said utilities or structures.
2. Contractor shall not willfully proceed with construction as designed when it is obvious that unknown obstructions and/or grade differences exist. Such conditions shall immediately be brought to the attention of the Owner's Representative. The contractor shall assume full responsibility for all necessary revisions due to failure to give such notification.
3. Any discrepancies between dimensioned layout and actual field conditions shall be reported to the Owner's Representative. Failure to make such discrepancies known will result in contractor's responsibility and liability for any changes and associated costs.
4. Contractor shall be responsible for any coordination with subcontractors as required to accomplish construction installation operations.
5. Contractor shall provide and maintain positive surface drainage within all lawn and landscape areas..
6. Contractor shall be responsible for any existing materials that are damaged during construction.
7. See Plant & Material List and Planting Details for planting requirements, materials and execution.
8. All trees shall have a clay loam or clay root ball. Trees with sand root balls will not be accepted.
9. All tree varieties and substitutions to be approved by the Owners Representative prior to being delivered to site. Any plant material delivered to site not previously approved may be rejected and are the sole responsibility of the contractor.
10. The location of all plant material shall be scaled from drawings or interpreted from plant list. Final location of all plant material shall be subject to approval from the Owner's Representative
11. Owner shall maintain all landscape and lawn areas on a weekly or bi-weekly basis during the growing season. Owner shall clear snow from parking areas and sidewalks, including public sidewalks, as needed.
12. Contractor shall protect existing trees throughout construction with the installation of temporary snow fence placed no closer than the drip line of trees to remain to prevent damage or compaction, typ.
13. The contractor shall "water in" and fertilize all plants immediately after planting.
14. Landscape Contractor shall install 3" of screened Top Soil on all non-paved areas (lawn and landscape areas) within limits of construction and areas impacted by construction. Contractor shall install Sod at all lawn areas as depicted on drawings.
15. Contractor shall install 4" depth Shredded Hardwood Mulch in all shrub and tree planting beds unless otherwise indicated. Install decorative Cobblestone at area adjacent to foundation as indicated.
16. The contractor shall guarantee all trees, shrubs, ground cover and other plant materials for one year from the date of acceptance, including labor and removal and disposal of dead material. Project owner shall be responsible maintenance program.
17. All plant material shall be nursery grown. All trees and plant material shall meet the current standards of the American Society of Nurseryman.
18. All diseased, damaged, or dead material shown on the site plan shall be replaced by the end of the following growing season. Property owner shall be responsible to maintain plant material in healthy condition and/or replace dead plant material for the life of the project.
19. Contractor shall adhere to all soil erosion prevention methods as directed within civil engineering drawings and within the municipal Ordinance including maintaining silt fencing and ensuring that soil, silt and other debris is prevented from leaving site or entering area drains, sewer inlets, creeks or natural areas.
20. Contractor shall supply and install aluminum edging at all planting bed areas where the landscape bed abuts seed or sod lawn areas, typ.
21. All lawn and landscape areas shall be graded / tilled. A minimum of 2" of shredded topsoil shall be supplied and installed on all lawn areas. A minimum of 6" of shredded topsoil and planting mix shall be supplied and installed within all planting bed areas, typ.
22. The existing 6' tall wooden privacy fence located at the northern property line shall remain and serve as screening toward the adjacent residential home.

IRRIGATION NOTES:

1. Contractor shall install an automated irrigation system throughout Sod Lawn and Landscape Planting Beds portions of site as indicated on Sheet LP-02, on a Design / Build basis.
   - All Sod Lawn Areas shall be covered via an Automated Irrigation System
   - All Planting Bed Areas shall be covered via an Automated Irrigation System
   - All HydroSeed Lawn Areas shall not be covered via an Automated Irrigation System
2. All irrigation system work shall be in compliance with local, state and federal codes and ordinances.
3. Irrigation contractor shall be responsible to obtain all irrigation related permits and inspections.

LANDSCAPE PLANTING PLAN :

SCALE; 1" = 16'



N

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

PARTNERS

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DRAWN BY

LKZ

CHECKED BY

APPROVED BY

SHEET NAME

LANDSCAPE PLAN

SHEET NO.

L1-02

ABBREVIATIONS

A

AFF	ABOVE FINISHED FLOOR
ARF	ABOVE REFERENCE FLOOR
ACCT	ACCENT
AP	ACCESS PANEL
AC	ACOUSTICAL
ACT	ACOUSTICAL TILE (OR ACTIVE)
ADD	ADDENDUM
ADDL	ADDITIONAL
ADJ	ADJACENT
AGG	AGGREGATE
A/C	AIR CONDITIONING
ALT	ALTERNATE OR ALTERNATIVE
AL,ALUM	ALUMINUM
ANCH	ANCHOR, ANCHORAGE
AB	ANCHOR BOLT
ANOD	ANODIZED
ARCH	ARCHITECT(URAL)
ASPH	ASPHALT
AUTO	AUTOMATIC

B

B.F.	BARRIER FREE
BP BP_L	BASE PLATE OR BEARING PLATE
BRG	BEARING
BM	BENCH MARK OR BEAM
BETW	BETWEEN
BIT	BITUMINOUS
BLKG	BLOCKING
BD	BOARD
BS	BOTH SIDES
BOT	BOTTOM
BC	BOTTOM OF CURB
BRK	BRICK
BLDG	BUILDING
BL	BUILDING LINE

C

CAST	CABINET
CR	CARD READER
CPT	CARPET(ED)
CES	CARPET EDGE STRIP
CI	CAST IRON
CIP	CAST-IN-PLACE
CB	CATCH BASIN
CLG	CEILING
CEM	CEMENT
C TO C	CENTER TO CENTER
CM	CENTIMETER(S)
C°	DEGREES CENTIGRADE
CER	CERAMIC
CT	CERAMIC TILE
CHAN	CHANNEL
CHQK PL	CHECKERED PLATE
CL	CLEAR(ANCE)
CLOS	CLOSET
CO	CLEAN OUT
CHK	COAT HOOK
CW	COLD WATER
COL	COLUMN
COMB	COMBINATION
COMP	COMPRESSED,(ION),(IBLE)
CONCE	CONCEALED
CONC	CONCRETE
CMU	CONCRETE MASONRY UNIT (CONCRETE BLOCK)
CONN	CONNECTION
CONST	CONSTRUCTION
CONST JT	CONSTRUCTION JOINT
CONT	CONTINUOUS OR CONTINUE
CONTR	CONTRACTOR(')
CJ	CONTROL JOINT
CORR	CORRUGATED OR CORRIDOR
CTR	CENTER
CTSK	COUNTERSUNK
CF	CUBIC FOOT
CY	CUBIC YARD
CYL	CYLINDER

D

DPR	DAMPER
DP	DAMPROOFING
DL	DEAD LOAD
DET	DETAIL
DIAG	DIAGONAL
$\varnothing$	DIAMETER
DWG	DRAWING
DF	DRINKING FOUNTAIN

E

EA	EACH
EF	EACH FACE
EW	EACH WAY
E	EAST
ELEC	ELECTRIC(AL)
EWC	ELECTRIC WATER COOLER
EL	ELEVATION
ELEV	ELEVATOR
EMER	EMERGENCY
ENC	ENCLOS(E), (URE)
EP	EPOXY
EQ	EQUAL
EQUIP	EQUIPMENT
ESC.	ESCALATOR
EPDM	ETHYLENE PROPYLENE DIENE MONOMERS
EXH	EXHAUST
EB	EXPANSION BOLT
EJ	EXPANSION JOINT
EXP CONST	EXPOSED CONSTRUCTION
EXT	EXTERIOR
ETR	EXISTING TO REMAIN

F

FWP	FABRIC WRAPPED PANEL
FB	FACE BRICK
FOC	FACE OF CONCRETE
FF	FACTORY FINISH
FS	FAR SIDE
F°	DEGREES FAHRENHEIT
FT	FEET/FOOT
FIN	FINISH(ED)
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FVC	FIRE VALVE CABINET
FLD	FIELD
FHS	FIRE HOSE STATION
FPR	FIRE PROOFING
FL	FLOOR(ING)
FD	FLOOR DRAIN
FLUOR	FLUORESCENT
FTG	FOOTING
FDN	FOUNDATION
FA	FRESH AIR
FSRS	FULLY-ADHERED SHEET ROOFING SYSTEM
FURR	FURR(ED), (ING)

G

GA	GAGE, GAUGE
GAL	GALLON
GALV	GALVANIZED
GL	GLASS, GLAZING
GR	GRADE, GRADING
g	GRAM
GRD	GROUND
GYP	GYPSUM
GYP L	GYPSUM LATH
GP	GYPSUM PLASTER
GWB	GYPSUM WALL BOARD

H

HDCP	HANDICAP(PED)
HDBD	HARDBOARD
HDWE	HARDWARE
HWD	HARDWOOD
HTG	HEATING
H&V	HEATING & VENTILATING
HVAC	HEATING/VENTILATION/ AIR CONDITIONING
HT	HEIGHT
H	HIGH
HP	HIGH POINT
HS	HIGH STRENGTH
HC	HOLLOW CORE
HM	HOLLOW METAL
HORIZ	HORIZONTAL
HP	HORSE POWER
HB	HOSE BIBB
HW	HOT WATER
HWH	HOT WATER HEATER
HR	HOUR

I

IN(")	INCH(ES)
INCL	INCLUDE(D), (ING)
INFO	INFORMATION
ID	INSIDE DIMENSION
INSUL	INSULATE(D), (ION)
ICA	INTEGRAL COLOR ANODIZED
INT	INTERIOR/INTERNAL
INTERM	INTERMEDIATE
INV	INVERT
IRR	IRRIGATION

J

JC	JANITOR'S CLOSET
JT	JOINT
JST	JOIST
JB	JUNCTION BOX

K

kg	KILOGRAMS
KV	KILOVOLT
KVA	KILOVOLT/AMPERE
KW	KILOWATT(S)
KWH	KILOWATT-HOUR
kg/m ^{2}	KILOGRAM PER METER
kg/cm	KILOGRAM PER SQUARE CENTIMETER
K	KIPS
KSI	KIPS PER SQUARE INCH
KIT	KITCHEN
KO	KNOCKOUT

L

LAB	LABORATORY
LAM	LAMINATE(D)
LAV	LAVATORY
LCC	LEAD COATED COPPER
LH	LEFT HAND
LHR	LEFT HAND REVERSE
L	LENGTH
LT	LIGHT
LTG	LIGHTING
LP	LIGHTING PANEL
LIN	LINEAR, LINEAL
LSWD	LINEAR SUSPENDED WOOD CEILING
LL	LIVE LOAD
LG	LONG
LLBB	LONG LEGS BACK TO BACK
LLH	LONG LEG HORIZONTAL
LLO	LONG LEG OUTSTANDING
LLV	LONG LEG VERTICAL
LOC	LOCATE(D)CATION
L.P.	LOW POINT
LV	LOW VOLTAGE

M

MAG	MAGNETIC
MH	MANHOLE
MFR	MANUFACTURE(R)
MAR	MARBLE
MAR T.	MARBLE THRESHOLD
MKB	MARKER BOARD
MAS	MASONRY
MO	MASONRY OPENING
MAT	MATERIAL(S)
MAX	MAXIMUM
MECH	MECHANICAL
MC	MEDICINE CABINET
MED	MEDIUM
MEM	MEMBER
MEMB	MEMBRANE
MET	METAL
MDS	METAL DIVIDER STRIP
ML	METAL LATH
MET T.	METAL THRESHOLD
MEZZ	MEZZANINE
mm	MILLIMETER(S)
MIN	MINIMUM
MIR	MIRROR
MISC	MISCELLANEOUS
MISC	MISCELLANEOUS IRON
MON.	MONITOR(ED)
MCC	MOTOR CONTROL CENTER
MTD	MOUNT(ED), (ING)
MULL	MULLION

N

NAT	NATURAL
NCA	NATURAL COLOR ANODIZED
NEG	NEGATIVE
NRC	NOISE REDUCTION COEFFICIENT
NONCOMB	NONCOMBUSTIBLE
NOM	NOMINAL
N	NORTH
NA	NOT APPLICABLE
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
NO (#)	NUMBER

O

OFF	OFFICE
O/C	ON CENTER(S)
OPG	OPENING
OPP	OPPOSITE
OPP HD	OPPOSITE HAND
ORIG	ORIGINAL
Oz	OUNCE
OS	OUTSIDE
OA	OUTSIDE AIR
OD	OUTSIDE DIAMETER
OH	OVERHEAD

P

PH	PHYSICALLY HANDICAPPED
PT	PAINT(ED) (OR POINT)
PR	PAIR
PNL	PANEL
PTD	PAPER TOWEL DISPENSER
PTD/R	PAPER TOWEL DISPENSER & RECEPTACLE COMBINATION
PKG	PARKING
PBD	PARTICLE BOARD
PARTN	PARTITION
PE	PASSENGER ELEVATOR
PERM	PERMANENT
PLAS	PLASTER
PL	PLASTIC LAMINATE
$\varnothing$	PLATE
PLBG	PLUMBING
PLWD	PLYWOOD
POL	POLISHED
PVC	POLYVINYL CHLORIDE
lb/#/	POUND(S)
PCF	POUNDS PER CUBIC FOOT
PPF	POUNDS PER FOOT
PLF	POUNDS PER LINEAL FOOT
PSF	POUNDS PER SQUARE FOOT
PC	PRECAST CONCRETE
PRE-FAB	PREFABRICATE(D)

Q

QT	QUARRY TILE
QB	QUARRY TILE BASE
QTR	QUARTER

R

RAD	RADIUS, RADIATOR, RADIATION
RC	RAINWATER CONDUCTOR
RECVG	RECEIVING
REC	RECESS(ED)
REF	REFERENCE
REFL	REFLECT(ED), (IVE), (OR)
REFR	REFRIGERATOR
REG	REGISTER
REINF	REINFORCE(D), (ING)
REQD	REQUIRED
RESIL	RESILIENT
RT	RESILIENT TILE
RA	RETURN AIR
REV	REVISION(S), REVISED
RH	RIGHT HAND
RHR	RIGHT HAND REVERSE
ROW	RIGHT OF WAY
R	RISER
Rd	ROAD

R (CONT.)

RD	ROOF DRAIN
RS	ROOF SUMP
RFG	ROOFING
RM	ROOM
RO	ROUGH OPENING
RUB	RUBBER
RB	RUBBER BASE (OR RESILIENT BASE)

S

SAN	SANITARY
SND	SANITARY NAPKIN DISPENSER
SNWR	SANITARY NAPKIN WASTE RECEPTACLE
SCH	SCHEDULE
SJ	SCORED JOINT
S.CONC	SEALED CONCRETE
SEAL	SEALER
SECT	SECTION
SS	SOLID SURFACE
SHT	SHEET
SLD	SHORT LEG OUTSTANDING
SIM	SIMILAR
SK	SINK
SB	SOIL BORING
STC	SOUND TRANSMISSION CLASS
S	SOUTH
SPC	SPACER, SPACING
SPK	SPEAKER
SPEC(S)	SPECIFICATION(S)
SPEC'D	SPECIFIED
SQ	SQUARE
cm^2	SQUARE CENTIMETER
SF	SQUARE FOOT (OR STOREFRONT) (OR SPORTS FLOORING)
STAG	STAGGERED
SST	STAINLESS STEEL
STD	STANDARD
STA	STATION
STL	STEEL
STN	STONE
STOR	STORAGE
SD	STORM DRAIN
ST	STREET
STRUCT	STRUCTURAL
SA	SUPPLY AIR
SUPP	SUPPORTS
SUSP	SUSPENDED
SW	SWITCH
SWBD	SWITCHBOARD
SWGR	SWITCHGEAR
SYM	SYMMETRY(ICAL)

T

TKB	TACKBOARD
TP	TANGENT POINT
TEL	TELEPHONE
TV	TELEVISION
TEMP	TEMPERATURE, TEMPERED
TERR	TERRAZZO
TT	TERRAZZO TILE
THERM	THERMOSTAT
THK	THICK(NESS)
THRES	THRESHOLD
THRU	THROUGH/THOUGHOUT
TOIL	TOILET
TPH	TOILET PAPER HOLDER
TOL	TOLERANCE
T&G	TONGUE AND GROOVE
T&B	TOP & BOTTOM
TE	TOP ELEVATION
TOC	TOP OF CONCRETE
TC	TOP OF CURB
TOS	TOP OF STEEL
TWC	TOWEL & WASTE CABINET
TRAN	TRANSFORMER
T	TREAD
TYP	TYPICAL

U

UH	UNIT HEATER
UON	UNLESS OTHERWISE NOTED
UR	URINAL

V

VA	VALVE
VB	VAPOR BARRIER
VR	VAPOR RETARDER
VAR	VARNISH
VERT	VERTICAL
VEST	VESTIBULE
VIN	VINYL
VCT	VINYL COMPOSITION TILE
VT	VINYL TILE
VWC	VINYL WALL COVERING
VIT	VITREOUS
VRS	VINYL RESILIENT STRIP

W

WAIN	WAINSCOT
WHYD	WALL HYDRANT
WH	WATER HEATER
WC	WATER CLOSET
WM	WATER MAIN
WP	WATERPROOFING
WR	WATER RESISTANT
WS	WATERSTOP
WT	WEIGHT
WWF	WELDED WIRE FABRIC
WWM	WELDED WIRE MESH
W	WIDTH, WIDE, WEST
W/	WITH
W/O	WITHOUT
WD	WOOD

Y

YD	YARD

GRAPHIC SYMBOLS



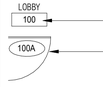
DETAIL NUMBER
DETAIL TITLE
DRAWING SCALE
SHEET NUMBER FROM WHICH DRAWING IS REFERENCED



WALL TYPE SYMBOL
REFER TO SHEET AX-XX FOR ADD'L INFO.



DETAIL NUMBER
DARKENED ARROW INDICATES ELEVATED WALL
SHEET NUMBER WHERE ELEVATION IS LOCATED
NOTE: ELEVATION SYMBOL USED FOR INTERIOR & EXTERIOR ELEVATIONS.



ROOM NUMBER
THE ENTRY DOOR NUMBER SHALL BE THE SAME AS THE ROOM NUMBER - IF MORE THAN ONE (1) DOOR IS INDICATED ON THE PLAN FOR ONE ROOM, EACH DOOR IN THAT AREA WILL BE IDENTIFIED



NOTE: SYMBOL INDICATES A SPECIFIC HEIGHT IN AN ELEVATION OR SECTION VIEW
HEIGHT OF FINISHED CEILING ABOVE FINISHED FLOOR IN AN ELEVATION OR SECTION VIEW
HEIGHT OF FINISHED CEILING ABOVE FINISHED FLOOR IN A PLAN VIEW



GENERAL NOTE
KEY NOTE SYMBOL INDICATES WORK AS DESCRIBED IN KEYNOTE LIST ON SAME DRAWING SHEET AS KEYNOTE OCCURS



DETAIL NUMBER
SHEET NUMBER WHERE SECTION IS LOCATED
NOTE: SECTION SYMBOL USED FOR WALL & BUILDING SECTIONS.

TEXT SYMBOLS

≈	APPROXIMATELY	&	AND
℄	CENTERLINE	°	DEGREES (ANGLE)
Ø	DIAMETER	@	AT

LINE TYPE DESIGNATION

———	EXISTING ITEM TO REMAIN
– – –	EXISTING ITEM TO BE REMOVED
———	NEW ITEM AS NOTED

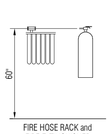
MATERIAL POCHE LEGEND

SHIM MATERIAL (WOOD, METAL, ETC.) (NOTE MATERIAL)	CONCRETE (SECTION)
PLYWOOD/PARTICLE BOARD (VENEER FINISH) (NOTE MATERIAL)	STUD WALL (PLAN)
SOLID SURFACE	INSULATION ACOUSTIC/THERMAL (NOTE TYPE) RIGID/SEMI-RIGID
INSULATION ACOUSTIC/THERMAL (NOTE TYPE) BATT OR BLANKET	BRICK
JOINT FILLER	GYPSUM WALL BOARD
GRAVEL/STONE (GRANULAR MATERIAL)	C.M.U. (CONCRETE BLOCK)
	C.M.U. - SOLID OR GROUT SOLID CELLS
SAND/GRAVEL (SUB-BASE MATERIAL)	STEEL/COPPER, METAL, ALUMINUM, ETC. (NOTE MATERIAL)
	WOOD/SOLID SPECIES (FINISH MATERIAL) (NOTE MATERIAL)
	WOOD (CONTINUOUS BLOCKING)

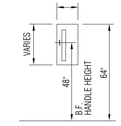
MOUNTING HEIGHT SCHEDULE

NOTE:
- NOT ALL HEIGHTS SHOWN ARE TYPICAL FOR ALL ITEMS WHERE THEY OCCUR
- UNLESS SPECIFICALLY NOTED OTHERWISE ON DRAWINGS, (B.F. DENOTES BARRIER FREE REQUIREMENTS)
- NOT ALL ITEMS SHOWN ON THIS DRAWING MAY OCCUR ON THIS PROJECT

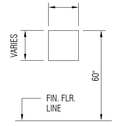
WALL MOUNTED ACCESSORIES

W1


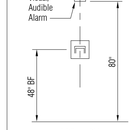
FIRE HOSE RACK and FIRE EXTINGUISHER WALL BRACKET

W2


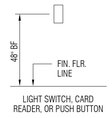
FIRE EXTINGUISHER CABINET

W3


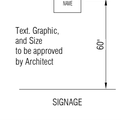
FIRE VALVE CABINET

W4


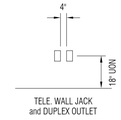
FIRE ALARM PULL BOX

W5


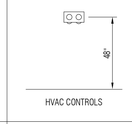
LIGHT SWITCH, CARD READER, OR PUSH BUTTON

W6


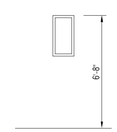
SIGNAGE

W7


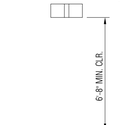
TELE. WALL JACK and DUPLEX OUTLET

W8


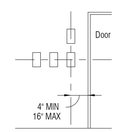
HVAC CONTROLS

W9


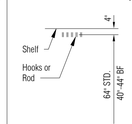
ELECTRIC PANEL

W10


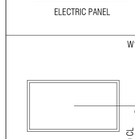
EXIT LIGHT and CLOCK

W11


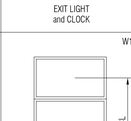
TYPICAL WALL ITEM ALIGNMENT

W12


CLOTHES HOOK OR ROD

W13


80" TV MONITOR

W14


(2) 48" STATUS MONITORS

W15

W16

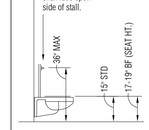
W17

W18

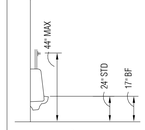
W19

W20

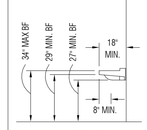
PLUMBING FIXTURES AND TOILET ACCESSORIES

P1


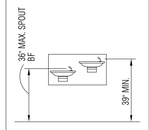
WATER CLOSET

P2


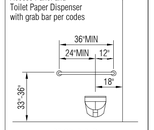
URINAL

P3


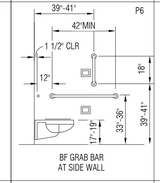
WALL MOUNTED LAVATORY

P4


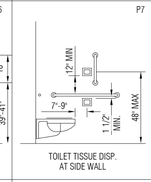
HI-LOW / DRINKING FOUNTAIN

P5


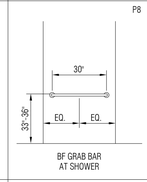
BF GRAB BAR AT REAR WALL

P6


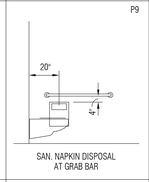
BF GRAB BAR AT SIDE WALL

P7


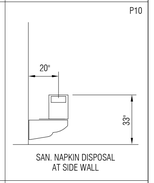
TOILET TISSUE DISP. AT SIDE WALL

P8


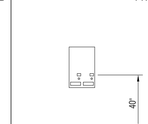
BF GRAB BAR AT SHOWER

P9


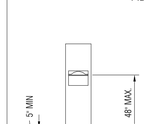
SAN. NAPKIN DISPOSAL AT GRAB BAR

P10


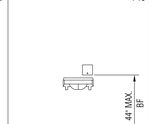
SAN. NAPKIN DISPOSAL AT SIDE WALL

P11


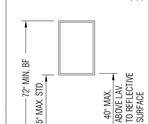
SANITARY NAPKIN DISPENSER

P12


PAPER TOWEL DISP. and WASTE RECPT.

P13


WALL MOUNTED SOAP DISPENSER

P14


SURFACE MOUNTED MIRROR

P15

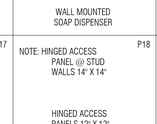

TOWEL BAR and/or SHELF

P16

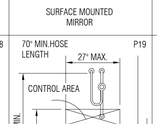

SOAP DISH AT SHOWER

P17


TOILET STALL ACCESS PANEL

P18


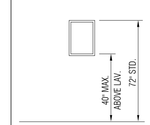
UNDER LAVATORY ACCESS PANEL

P19


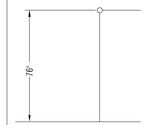
ALTERNATE ROLL-IN TYPE SHOWER END WALL

P20

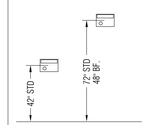

SEAT / SHOWER SEAT

P21


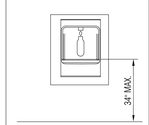
MEDICINE CABINET

P22


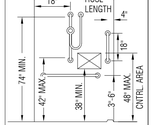
SHOWER CURTAIN ROD

P23


HAND and HAIR DRYER

P24


WATER COOLER

P25


TRANSFER TYPE SHOWER CONTROL WALL

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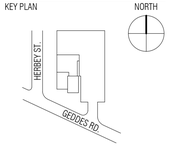
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CONSULTANT

KEY PLAN



OWNER

Charter Township of Canton - Western Wayne

PROJECT NAME

Growth Works

44582 Geddes Rd, Canton, MI 48188

PROJECT NO.

23-175

ISSUES / REVISIONS

DRAWN BY

Author

CHECKED BY

APPROVED BY

SHEET NAME

General Project Information

SHEET NO.

A0-01

CODE INFORMATION - BUREAU OF CONSTRUCTION CODES

GENERAL PROJECT INFORMATION:

OWNER: CHARTER TOWNSHIP OF CANTON

PROJECT: WESTERN WAYNE ADDITION - GROWTH WORKS

ADDRESS: 44582 GEDDES RD, CANTON, MI 48188

GOVERNING CODES:

2021 MICHIGAN BUILDING CODE (MBC)
2021 MICHIGAN MECHANICAL CODE (MMC)
2021 MICHIGAN PLUMBING CODE (MPC)
2021 MICHIGAN ENERGY CODE (MEC)
2023 NATIONAL ELECTRICAL CODE w/ AMENDMENTS (NEC)
2018 INTERNATIONAL FIRE CODE
2017 ICC / ANSI A 117.1

2021 MICHIGAN BUILDING CODE:

CHAPTER 3: USE AND OCCUPANCY CLASSIFICATION
OCCUPANCY GROUP "B" BUSINESS

CHAPTER 5: GENERAL BUILDING HEIGHTS AND AREAS

ALLOWABLE BUILDING HEIGHT AND AREA
[TABLE 504.3] ALLOWABLE BUILDING HEIGHT: 40' (ACTUAL: 25'-8")
[TABLE 504.4] ALLOWABLE STORIES: 2 (ACTUAL: 1)

[506.2] ALLOWABLE AREA (OCCUPANCY GROUP B, VB, NS): 9,000 SF (ACTUAL - 7,041 SF)
[TABLE 506.3.3] 100% FRONTAGE 30 FEET OR GREATER - 0.75 INCREASE
ALLOWABLE AREA WITH FRONTAGE INCREASE = **10,500 SF**

[508.3.] NONSEPARATED OCCUPANCIES. BUILDINGS OR PORTIONS OF BUILDING THAT COMPLY WITH THE PROVISIONS OF THIS SECTION SHALL BE CONSIDERED AS NONSEPARATED OCCUPANCIES.

[508.3.1] OCCUPANCY CLASSIFICATION. NONSEPARATED OCCUPANCIES SHALL BE INDIVIDUALLY CLASSIFIED IN ACCORDANCE WITH SECTION 302.1. THE REQUIREMENT OF THIS CODE SHALL APPLY TO EACH PORTION OF THE BUILDING BASED ON THE OCCUPANCY CLASSIFICATION OF THAT SPACE. IN ADDITION, THE MOST RESTRICTIVE PREVISIONS OF CHAPTER 9 THAT APPLY TO THE NONSEPARATED OCCUPANCIES SHALL APPLY TO THE TOTAL NONSEPARATED OCCUPANCY AREA.

[503.3.3] SEPARATION. NO SEPARATION IS REQUIRED BETWEEN NONSEPARATED OCCUPANCIES.

CHAPTER 6: TYPES OF CONSTRUCTION

[601] TYPE VB (NON SPRINKLED)

[TABLE 601] FIRE RESISTANCE RATING REQUIREMENTS

PRIMARY STRUCTURAL FRAME	0 HR
BEARING WALLS	
INTERIOR	0 HR
EXTERIOR	0 HR
NONBEARING WALLS & PARTITIONS	
INTERIOR	0 HR
EXTERIOR	0 HR
FLOOR CONSTRUCTION	0 HR
ROOF CONSTRUCTION	0 HR

CHAPTER 7: FIRE AND SMOKE PROTECTION FEATURES

*NONE REQUIRED

CHAPTER 8: INTERIOR FINISHES

[TABLE 803.13] INTERIOR WALL/CEILING FINISHES

CORRIDORS AND ENCLOSURE FOR EXIT ACCESS STAIRWAYS AND RAMPS - ASTM E84 CLASS B
ROOMS AND ENCLOSED SPACES - ASTM E84 CLASS C

CHAPTER 9: FIRE PROTECTION SYSTEMS

*BUILDING NOT EQUIPPED THROUGHOUT WITH AN AUTOMATIC SPRINKLER SYSTEM

[903.2] WHERE REQUIRED. APPROVED AUTOMATIC SPRINKLER SYSTEM IN NEW BUILDING ANS STRUCTURES SHALL BE PROVIDED IN THE LOCATIONS DESCRIBED IN SECTIONS 903.2.1 THROUGH 903.2.12

[903.2.1.3] AN AUTOMATIC SPRINKLER SYSTEM SHALL BE PROVIDED FOR FIRE AREAS CONTAINING GROUP A-3 AND INTERVENING FLOORS OF THE BUILDING WHERE ONE OF THE FOLLOWING CONDITIONS EXIST:
1. THE FIRE AREA EXCEEDS 12,000 SQ FT
2. THE FIRE AREA HAS AN OCCUPANT LOAD OF 300 OR MORE
3. THE FIRE AREA IS LOCATED ON A FLOOR OTHER THAN A LEVEL OF EXIST DISCHARGE SERVICING SUCH OCCUPANCIES.

CHAPTER 10: MEANS OF EGRESS

[TABLE 1004.5] MAXIMUM FLOOR AREA ALLOWANCE PER OCCUPANT:

STORAGE, MECHANICAL ROOMS:	300 GROSS
CONCENTRATED (NOT FIXED CHAIRS):	7 NET
UNCENTRATED (TABLES AND CHAIRS):	15 NET
BUISNESS AREAS:	150 GROSS

TOTAL: **165 OCCUPANTS**

[TABLE 1006.2.1] SPACES WITH ONE EXIT OR EXIT ACCESS DOORWAY
MAX. COMMON PATH OF EGRESS TRAVEL DISTANCE (UNSPRINKLERED):
75'-0" (MOST RESTRICTIVE)

[TABLE 1006.3.3] MINIMUM NUMBER OF EXITS OR ACCESS TO EXITS/STORY:
1-500 OCCUPANTS = 2 EXITS REQUIRED, 4 PROVIDED

[1016.2.2] EGRESS THROUGH INTERVENING SPACES SHALL BE ALLOWED WHERE THE ADJOINING ROOMS OR AREAS ARE ACCESSORY TO ONE ANOTHER, AND PROVIDE A DISCERNABLE PATH OF EGRESS TRAVEL TO AN EXIT.

[TABLE 1017.2] EXIT ACCESS TRAVEL DISTANCE (UNSPRINKLERED):
200'-0" MAXIMUM

[1019.2] EXIT ACCESS STAIRWAYS AND RAMPS THAT SERVE FLOOR LEVELS WITHIN A SINGLE STORY ARE NOT REQUIRED TO BE ENCLOSED.

[TABLE 1020.2] CORRIDOR FIRE RESISTANCE RATING:
GREATER THAN 30 OCCUPANTS SERVED BY CORRIDOR
1 HOUR (UNSPRINKLERED)

[TABLE 1020.3] MINIMUM CORRIDOR WIDTHS:
44" MINIMUM

[1020.5] DEAD END CORRIDORS (UNSPRINKLERED) = 20'-0" MAXIMUM

CHAPTER 11: ACCESSIBILITY

[1104.1] SITE ARRIVAL POINTS:
MINIMUM (1) ACCESSIBLE ROUTE WITHIN SITE TO AN ACCESSIBLE ENTRANCE - (1) PROVIDED

[1105.1] PUBLIC ENTRANCES:
MINIMUM OF 60% OF ALL PUBLIC ENTRANCES TO BE ACCESSIBLE - 100% ACCESSIBLE

[TABLE 1106.1] ACCESSIBLE PARKING SPACES:
(2) REQUIRED - (2) PROVIDED

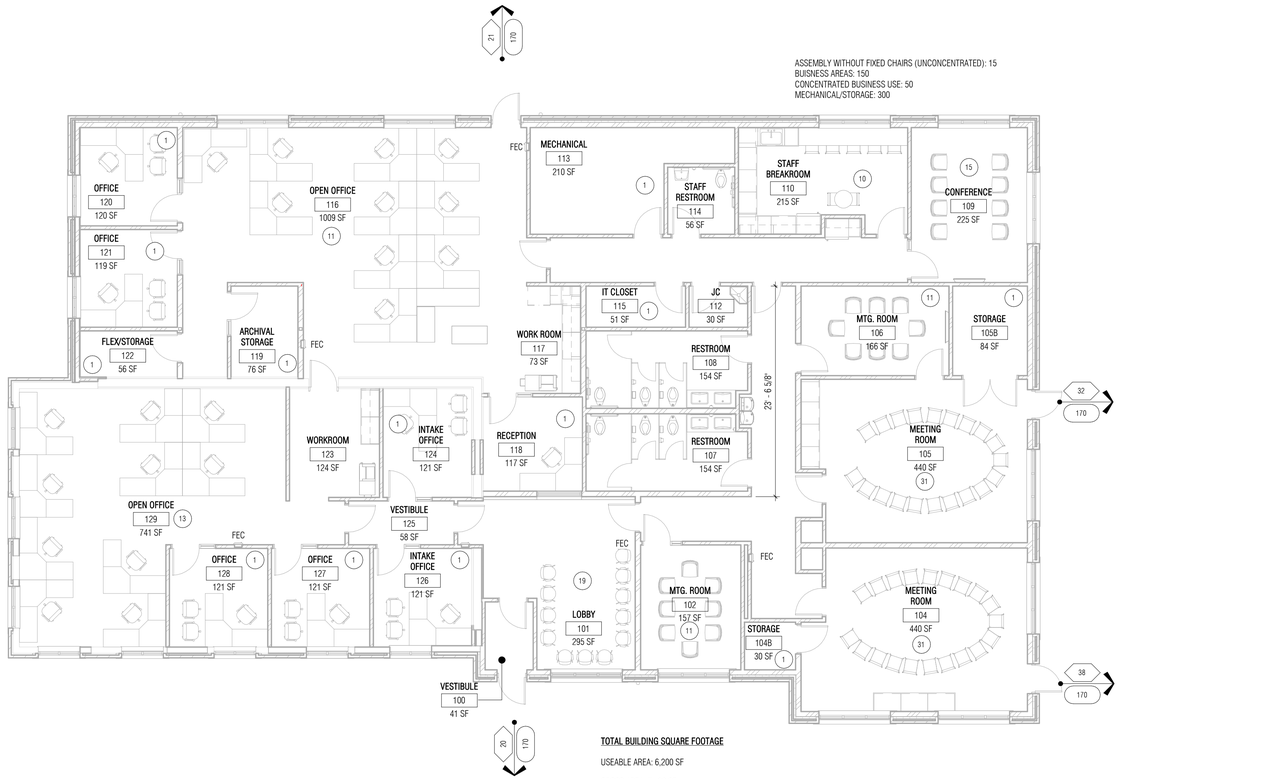
PLUMBING FIXTURE CALCULATION (PER 2021 MICHIGAN PLUMBING CODE - TABLE 403.1)

TOTAL BUILDING OCCUPANT LOAD = 165 PERSONS

PER SECTION 403.1.1: DIVIDE TOTAL OCCUPANT LOAD IN HALF
165 / 2 = 83 MALE
83 FEMALE

REFER TO CALCULATIONS BELOW FOR NUMBER OF REQUIRED PLUMBING FIXTURES

CLASSIFICATION / OCCUPANCY		WATER CLOSETS		LAVATORIES	DRINKING FOUNTAINS	SERVICE SINKS
		MALE	FEMALE			
B (BUISNESS)	REQUIRED RATIO	1:25 FOR THE FIRST 50 AND 1:50 FOR ABOVE 50		1:40 FOR THE FIRST 80 AND 1:80 FOR THE REMAINDER ABOVE 80	1 PER 100	1 SINK
	# REQUIRED	3	3	4	2	1
	# PROVIDED	3	4	5 (2 MALE, 2 FEMALE, 1 UNISEX)	2	1



ASSEMBLY WITHOUT FIXED CHAIRS (UNCONCENTRATED): 15
BUISNESS AREAS: 150
CONCENTRATED BUSINESS USE: 50
MECHANICAL/STORAGE: 300

TOTAL BUILDING SQUARE FOOTAGE

USEABLE AREA: 6,200 SF

GROSS AREA: 7,100 SF

GENERAL LIFE SAFETY NOTES

1. THESE CODE ANALYSIS DRAWINGS, NOTES AND WALL IDENTIFICATIONS FOR FIRE RATINGS AND / OR SMOKE BARRIERS ARE INDICATED FOR LIFE SAFETY AND BUILDING CODE COMPLIANCE ONLY. ALL OTHER CONSTRUCTION REQUIREMENTS ARE INDICATED ON THE CONSTRUCTION DOCUMENTS.
2. EGRESS PATH DISTANCES NOTED ARE CUMULATIVE FROM POINTS OF BEGINNING TO EXITS. THEY REPRESENT ASSUMED EGRESS PATHS AS DEFINED IN THE MICHIGAN BUILDING CODE
3. AT ALL FIRE RATED WALL CONSTRUCTION, PROVIDE SIGNAGE ABOVE THE ADJACENT ACCESSIBLE CEILING THAT STATES: "FIRE AND/OR SMOKE BARRIER - PROTECT ALL OPENINGS." THE LETTERS ARE TO BE 3" HIGH MIN. AND ARE TO BE STENCILED IN PAINT DIRECTLY ONTO THE WALL. LOCATE THE SIGNS 30'-0" O.C. MAX. AND NO MORE THAN 15'-0" FROM THE END OF EACH WALL

LIFE SAFETY PLAN LEGEND

- EXIT ACCESS TRAVEL DISTANCE LINE
- 20 / 160 — OCCUPANT LOAD EXISTING THROUGH EGRESS COMPONENT / OCCUPANT CAPACITY OF EGRESS COMPONENT
- 4975 — AREA OF ROOM OR AREA (SQUARE FEET)
- 50 — OCCUPANT LOAD OF ROOM OR AREA
- FEC — LOCATION OF FIRE EXTINGUISHER / CABINET

N

1 Life Safety Plan
1/8" = 1'-0"

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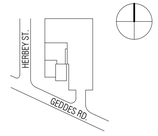
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CONSULTANT

KEY PLAN NORTH



OWNER

Charter Township of Canton - Western Wayne

PROJECT NAME

Growth Works

44582 Geddes Rd, Canton, MI 48188

PROJECT NO.

23-175

ISSUES / REVISIONS

DRAWN BY

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CHECKED BY

APPROVED BY

SHEET NAME

Life Safety Plan & Code Information

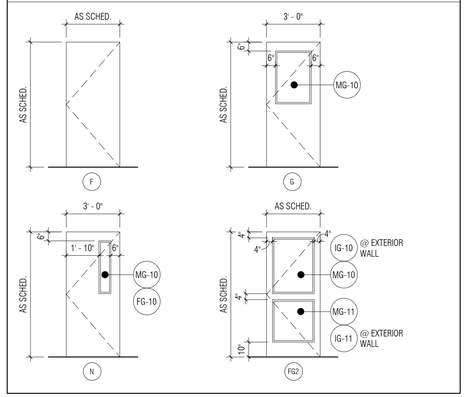
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GLAZING TYPE LEGEND:

MG-10	STANDARD MONOLITHIC CLEAR GLASS
MG-11	TEMPERED MONOLITHIC CLEAR GLASS
IG-10	CLEAR, LOW-E INSULATING GLASS
IG-11	TEMPERED, CLEAR, LOW-E INSULATING GLASS
FG-10	90-MINUTE FIRE RATED MONOLITHIC CLEAR GLASS

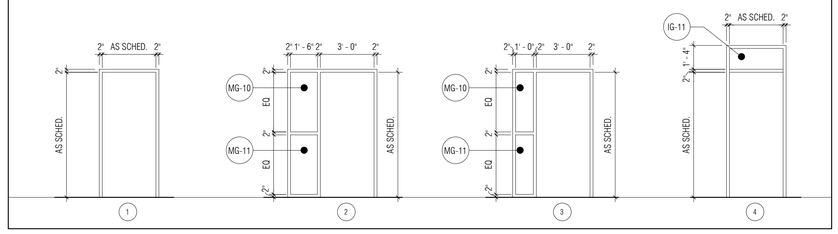
DOOR TYPES:



Door / Opening Schedule

DOOR NO.	OPENING SIZE (W x H)	DOOR			FRAME			DETAILS			Fire Rating	HARDWARE SET #	KEYNOTE
		TYPE	MATERIAL	FINISH	TYPE	MATERIAL	FINISH	HEAD	JAMB	SILL			
100A	3' - 0" x 7' - 2"	FG2	ALUM	ALUM-1	SF-3	ALUM	ALUM-1	7/A6-03	3/A3-10	T2	- -	1	1
100B	3' - 0" x 7' - 2"	F	WD	WD-1	4	HM	PNT-4	D1	D2	T2	- -	2	
101A	3' - 0" x 7' - 0"	F	WD	WD-1	1	HM	PNT-4	D1	D2	- -	- -	3	1
101B	3' - 0" x 7' - 0"	F	WD	WD-1	1	HM	PNT-4	D1	D2	- -	- -	3	1
102	3' - 0" x 7' - 0"	F	WD	WD-1	3	HM	PNT-4	D1	D2	T4	- -	4	
103A	3' - 0" x 7' - 0"	N	WD	WD-1	1	HM	PNT-4	D1	D2	- -	- -	5	
103B	3' - 0" x 7' - 0"	N	WD	WD-1	1	HM	PNT-4	D1	D2	- -	- -	5	
103C	3' - 0" x 7' - 0"	G	WD	WD-1	1	HM	PNT-4	D1	D2	- -	- -	3	1
104A	3' - 0" x 7' - 2"	FG2	ALUM	ALUM-1	4	ALUM	ALUM-1	7/A6-03	3/A3-10	T2	- -	1	1
104B	3' - 0" x 7' - 0"	F	WD	WD-1	1	HM	PNT-4	D1	D2	- -	- -	6	
105A	3' - 0" x 7' - 2"	FG2	ALUM	ALUM-1	4	ALUM	ALUM-1	7/A6-03	3/A3-10	T2	- -	1	1
105B	6' - 0" x 7' - 0"	F	WD	WD-1	1	HM	PNT-4	D1	D2	- -	- -	6	
106A	3' - 0" x 7' - 0"	N	WD	WD-1	1	HM	PNT-4	D1	D2	T4	- -	4	
106B	3' - 0" x 7' - 0"	N	WD	WD-1	1	HM	PNT-4	D1	D2	- -	- -	4	
107	3' - 0" x 7' - 0"	F	WD	WD-1	1	HM	PNT-4	D1	D2	T1	- -	7	
108	3' - 0" x 7' - 0"	F	WD	WD-1	1	HM	PNT-4	D1	D2	T1	- -	7	
109	3' - 0" x 7' - 0"	F	WD	WD-1	3	HM	PNT-4	D1	D2	T4	- -	5	
110	3' - 0" x 7' - 0"	G	WD	WD-1	1	HM	PNT-4	D1	D2	- -	- -	7	
111	3' - 0" x 7' - 0"	G	WD	WD-1	1	HM	PNT-4	D1	D2	T4	- -	3	
112	3' - 0" x 7' - 0"	F	WD	WD-1	1	HM	PNT-4	D1	D2	- -	- -	9	
113	3' - 0" x 7' - 0"	F	WD	WD-1	1	HM	PNT-4	D1	D2	T2	- -	8	
114	3' - 0" x 7' - 0"	F	WD	WD-1	1	HM	PNT-4	D1	D2	T2	- -	8	
115	3' - 0" x 7' - 0"	N	WD	WD-1	1	HM	PNT-4	D1	D2	- -	- -	10	1
116A	3' - 0" x 7' - 2"	FG2	ALUM	ALUM-1	SF-3	ALUM	ALUM-1	7/A6-03	3/A3-10	T2	- -	1	1
116B	3' - 0" x 7' - 0"	G	WD	WD-1	1	HM	PNT-4	D1	D2	- -	- -	5	
118	3' - 0" x 7' - 0"	F	WD	WD-1	2	HM	PNT-4	D1	D2	- -	- -	5	
119	3' - 0" x 7' - 0"	F	WD	WD-1	1	HM	PNT-4	D1	D2	- -	- -	4	
120	3' - 0" x 7' - 0"	F	WD	WD-1	2	HM	PNT-4	D1	D2	- -	- -	4	
121	3' - 0" x 7' - 0"	F	WD	WD-1	2	HM	PNT-4	D1	D2	- -	- -	4	
122	3' - 0" x 7' - 0"	F	WD	WD-1	1	HM	PNT-4	D1	D2	- -	- -	4	
124	3' - 0" x 7' - 0"	F	WD	WD-1	2	HM	PNT-4	D1	D2	- -	- -	4	
125	3' - 0" x 7' - 0"	F	WD	WD-1	1	HM	PNT-4	D1	D2	- -	- -	3	
126	3' - 0" x 7' - 0"	F	WD	WD-1	2	HM	PNT-4	D1	D2	- -	- -	4	
127	3' - 0" x 7' - 0"	F	WD	WD-1	2	HM	PNT-4	D1	D2	- -	- -	4	
128	3' - 0" x 7' - 0"	F	WD	WD-1	2	HM	PNT-4	D1	D2	- -	- -	4	

DOOR / OPENING FRAME TYPES:



DOOR / OPENING GENERAL NOTES:

A. FIELD VERIFY ALL OPENING SIZES PRIOR TO DOOR & FRAME FABRICATION
B. REFER TO SPECIFICATION SECTION 088000 GLAZING FOR ALL GLASS TYPES
C. DOOR TYPE NAMING CONVENTIONS ARE BASED ON SDI 108-18 STANDARDS

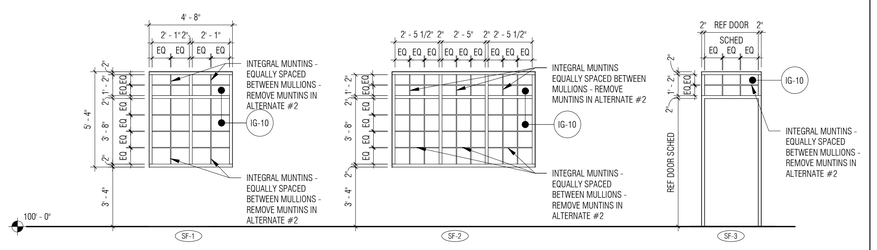
DOOR / OPENING KEY NOTES:

1. DOOR TO HAVE ELECTRIFIED HARDWARE - PREP FRAME & COORDINATE WITH ELECTRICAL & TECH

DOOR / OPENING LEGEND:

ALUM	ALUMINUM DOOR OR FRAME
GL	GLASS
HM	HOLLOW METAL DOOR OR FRAME
PNT	PAINTED FINISH
PREFIN.	PREFINISHED METAL DOOR FRAME
STN	STAINED FINISH
WD	WOOD DOOR OR FRAME
FRP	FIBERGLASS DOOR & FRAME

WINDOW / STOREFRONT TYPES:



Room Finish Schedule

ROOM NO.	ROOM NAME	FLOOR	BASE	WALLS				CEILING	ROOM FINISH KEY NOTES
				NORTH	EAST	SOUTH	WEST		
100	VESTIBULE	CPT-4	RB-1	PNT-1	PNT-1	PNT-4	PNT-1	ACT-2	
101	LOBBY	MCT-1	RB-1	PNT-3/PL-3	PNT-1	PNT-1/PL-3	PNT-3/PL-3	PNT-2, ACT-3	2,3
102	MTG. ROOM	CPT-1	RB-1	PNT-1	PNT-3	PNT-1	PNT-1	ACT-1	
103	CORRIDOR	MCT-1	RB-1	PNT-1	PNT-1	PNT-1	PNT-1	ACT-1	
104	MEETING ROOM	MCT-1	RB-1	PNT-1	PNT-1	PNT-1	PNT-3	PNT-2, ACT-3	
104B	STORAGE	MCT-1	RB-1	PNT-1	PNT-1	PNT-1	PNT-1	ACT-1	
105	MEETING ROOM	MCT-1	RB-1	PNT-1	PNT-1	PNT-1	PNT-3	PNT-2, ACT-3	
105B	STORAGE	MCT-1	RB-1	PNT-1	PNT-1	PNT-1	PNT-1	ACT-1	
106	MTG. ROOM	CPT-1	RB-1	PNT-3	PNT-1	PNT-1	PNT-1	ACT-1	
107	RESTROOM	PT-1	PT-3	PNT-1/PT-2	PNT-1/PT-2	PNT-1/PT-2	PNT-1/PT-2	ACT-2	1,4,5
108	RESTROOM	PT-1	PT-3	PNT-1/PT-2	PNT-1/PT-2	PNT-1/PT-2	PNT-1/PT-2	ACT-2	1,4,5
109	CONFERENCE	CPT-3	RB-1	PNT-1	PNT-3	PNT-1	PNT-1	ACT-1	
110	STAFF BREAKROOM	MCT-1	RB-1	PNT-1	PNT-1/PNT-3	PNT-3	PNT-1/PNT-3	ACT-2	2
111	CORRIDOR	MCT-1	RB-1	PNT-1	PNT-1	PNT-1	PNT-1	ACT-1	
112	JC	PT-1	PT-3	PNT-1/PT-2	PNT-1/PT-2	PNT-1/PT-2	PNT-1/PT-2	PNT-1	
113	MECHANICAL	SC-1	RB-1	PNT-1	PNT-1	PNT-1	PNT-1	-	
114	STAFF RESTROOM	SC-1	RB-1	PNT-1	PNT-1	PNT-1	PNT-1	-	1,4,5
115	IT CLOSET	SC-1	RB-1	PNT-1	PNT-1	PNT-1	PNT-1	-	
116	OPEN OFFICE	CPT-3/CPT-4	RB-1	PNT-1	PNT-1	PNT-1	PNT-1	ACT-1	
117	WORK ROOM	CPT-3	RB-1	PNT-3	PNT-3	-	PNT-3	ACT-1	
118	RECEPTION	CPT-1	RB-1	PNT-1	PNT-1	PNT-1	PNT-5	ACT-2	
119	ARCHIVAL STORAGE	CPT-3	RB-1	PNT-1	PNT-1	PNT-1	PNT-1	ACT-1	
120	OFFICE	CPT-1	RB-1	PNT-1	PNT-1	PNT-5	PNT-1	ACT-2	
121	OFFICE	CPT-1	RB-1	PNT-1	PNT-1	PNT-5	PNT-1	ACT-2	
122	FLEX/STORAGE	CPT-1	RB-1	PNT-1	PNT-1	PNT-5	PNT-1	ACT-2	
123	WORKROOM	CPT-3	RB-1	PNT-3	PNT-1	PNT-1	PNT-1	ACT-2	
124	INTAKE OFFICE	CPT-1	RB-1	PNT-1	PNT-1	PNT-1	PNT-5	ACT-2	
125	VESTIBULE	CPT-4	RB-1	PNT-1	PNT-1	PNT-1	PNT-1	ACT-1	
126	INTAKE OFFICE	CPT-1	RB-1	PNT-1	PNT-5	PNT-1	PNT-1	ACT-2	
127	OFFICE	CPT-1	RB-1	PNT-1	PNT-5	PNT-1	PNT-1	ACT-2	
128	OFFICE	CPT-1	RB-1	PNT-1	PNT-5	PNT-1	PNT-1	ACT-2	
129	OPEN OFFICE	CPT-3	RB-1	PNT-1	PNT-1	PNT-1	PNT-1	ACT-1	

ROOM FINISH GENERAL NOTES

A. REFER TO REFLECTED CEILING PLANS, INTERIOR ELEVATIONS, AND FINISH FLOOR PLANS FOR LOCATIONS OF MATERIAL / PAINT TRANSITIONS.
B. REFER TO MATERAL FINISH & COLOR SCHEDULE, SPECIFICATION SECTION 000200.
C. PROVIDE REDUCER STRIP AT FLOOR MATERIAL TRANSITIONS AS NEEDED, REFER TO THRESHOLD DETAILS AND DOOR SCHEDULE.
D. RUBBER BASE TO BE CONTINUOUS AROUND ALL MILLWORK.
E. WINDOW SILLS TO BE SOLID SURFACE (SS-1), TYP.
F. ALL WINDOW HEAD AND JAMBS TO BE PAINTED TO MATCH WALL COLOR, TYPICAL.
G. SOFFITS / BULKHEADS TO BE PAINTED ON ALL SIDES, TYP. REFER TO ROOM FINISH SCHEDULE, INTERIOR ELEVATIONS, AND REFLECTED CEILING PLAN FOR COLOR.

ROOM FINISH KEY NOTES

1. REFER TO INTERIOR ELEVATIONS FOR WALL TILE LAYOUT AND DESIGN.
2. REFER TO INTERIOR ELEVATIONS FOR PAINT/MATERIAL LOCATIONS.
3. REFER TO REFLECTED CEILING PLAN FOR CEILING PAINT LOCATIONS.
4. SCHLUTER RONDEC BULLNOSE TRIM AT EXPOSED TILE EDGE.
5. SCHLUTER DILEX-HK AT FLOOR TO WALL TILE TRANSITION.

ROOM FINISH LEGEND

ACT	ACOUSTIC TILE AND GRID CEILING SYSTEM
CONC	CONCRETE
CPT	CARPET
CT	CERAMIC TILE
EFM	ENTERANCE FLOOR MAT
EP	EPOXY FLOORING
EP PNT	EPOXY PAINT
LVT	LUXURY VINYL TILE FLOORING
PC	EXPOSED PRECAST CONCRETE PLANK CEILING
PNT	PAINT
RB	RESILIENT WALL BASE
SS	SOLID SURFACING
VCT	VINYL COMPOSITION TILE
MP	FORMED METAL CEILING PANEL

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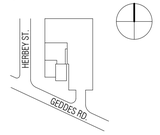
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CONSULTANT

KEY PLAN



OWNER

Charter Township of Canton - Western Wayne

PROJECT NAME

Growth Works

44582 Geddes Rd, Canton, MI 48188

PROJECT NO.

23-175

ISSUES / REVISIONS

DRAWN BY

Author

CHECKED BY

APPROVED BY

SHEET NAME

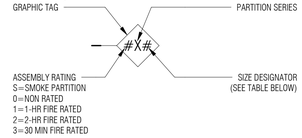
Schedules, Door Types/Frames, Storefronts

SHEET NO.

A0-03

GENERAL NOTES:

1. "WALL" AND "PARTITION" ARE USED TO DENOTE EITHER WALLS OR PARTITIONS AND ARE USED INTERCHANGEABLY
2. REFER TO STRUCTURAL FOR ALL REQUIRED REINFORCING AND FOR WALL CONNECTIONS TO FLOORS AND ROOFS
3. AT FIRE RATED WALLS FILL ALL VOIDS, PENETRATIONS ETC. AND SEAL - REFER TO DRAWING A0-02 LIFE SAFETY PLANS & CODE INFORMATION FOR ALL PARTITION FIRE RATINGS
4. WHERE A WALL RUNS PARALLEL TO THE DIRECTION OF A ROOF TRUSS AND DOES NOT ALIGN UNDERNEATH A TRUSS - PROVIDE MET. STUD BRIDGING BETWEEN THE ROOF TRUSSES @ 48" O.C. MAX. TO ATTACH TO
5. REFER TO ROOM FINISH SCHEDULE FOR WALL FINISHES AND WAL BASE
6. PARTITION TYPE GRAPHIC TAG

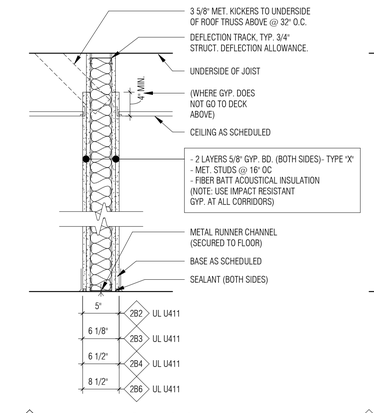


MATERIAL	DESIGNATION SIZE	ACTUAL SIZE	SPACING
MASONRY	4 6 8 12	3 5/8" 5 5/8" 7 5/8" 11 5/8"	N/A
STEEL STUDS	1 2 3 4 6	1 5/8" 2 1/2" 3 5/8" 4" 6"	16" OC
FURRING	0 1 2 3	7/8" 1 5/8" 2 1/2" 3 5/8"	16" OC
SHAFTWALL C-H STUDS	2 4 6	2 1/2" 4" 6"	24" OC

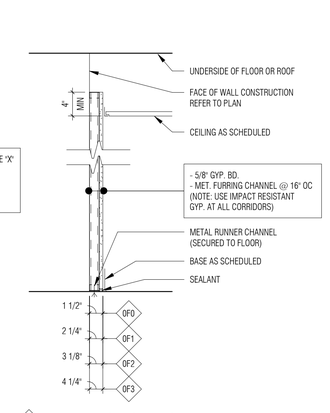
7. SUBSTITUTE TILE BACKING BOARD AT LOCATIONS TO RECEIVE A TILE WALL FINISH
8. ALL NON-LOAD BEARING METAL WALL FRAMING SHALL BE BASED ON TOTAL STUD HEIGHT
9. AT INTERSECTIONS OF DIS-SIMILAR PARTITION TYPES, THE HIGHEST RATED PARTITION IS TO RUN THROUGH THE INTERSECTION TO MAINTAIN ENCLOSURE
10. FIRE-RATED PARTITIONS SHALL BE CONSTRUCTED ACCORDING TO THE FIRE TEST INDICATED. NO SUBSTITUTIONS OF MATERIALS OR DEVIATIONS FROM CONSTRUCTION ARE ALLOWED. ADDITIONAL LAYERS MAY BE REQUIRED FOR ACOUSTICAL OR OTHER REASONS AND MUST BE EXECUTED AS SHOWN
11. STC RATINGS ARE MINIMUM ACOUSTICAL PERFORMANCE REQUIREMENT. SPECIFIC ACOUSTICAL TESTS ARE GIVEN FOR REFERENCE ONLY. SOUND ATTENUATION BLANKET THICKNESS SHALL BE AS FOLLOWS:

    A. 1 1/2" FOR PARTITIONS WITH 1 5/8" AND 2 1/2" STUDS (INCLUDING SHAFTWALLS)
    B. 3" FOR PARTITIONS WITH 3 5/8", 4" OR 6" STUDS UON
    C. 3" FOR SHAFTWALLS WITH 4" OR 6" STUDS UON
    D. AS REQUIRED FOR FIRE RATING

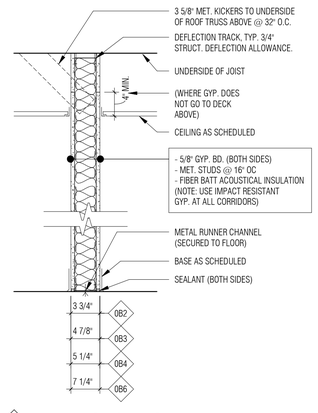
12. AT ALL FIRE RATED WALL CONSTRUCTION, PROVIDE SIGNAGE ABOVE THE ADJACENT ACCESSIBLE CEILING THAT STATES: "FIRE AND/OR SMOKE BARRIER - PROTECT ALL OPENINGS." THE LETTERS ARE TO BE 3" HIGH MIN. AND ARE TO BE STENCILED IN PAINT DIRECTLY ONTO THE WALL. LOCATE THE SIGNS 30'-0" O.C. MAXIMUM. AND NO MORE THAN 15'-0" FROM THE END OF EACH WALL. [703.7]



C PARTITION SERIES 'C'
1" = 1'-0"



F PARTITION SERIES 'F'
1" = 1'-0"



B PARTITION SERIES 'B'
1" = 1'-0"

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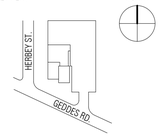
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KEY PLAN NORTH



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PROJECT NO.

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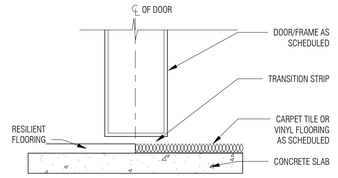
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SHEET NAME

Wall Types

SHEET NO.

A0-04



Resilient Flooring to Carpet Transition
3" = 1'-0"

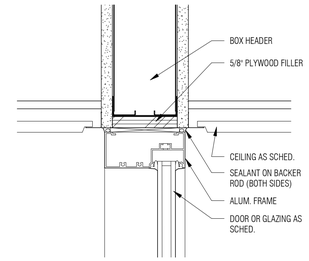
T4

NOT USED

D12

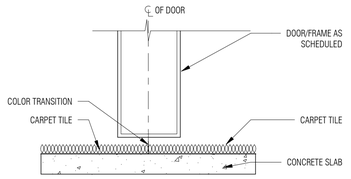
NOT USED

D8



Aluminum Head @ Stud Wall
3" = 1'-0"

D4



Typical Carpet to Carpet Transition
3" = 1'-0"

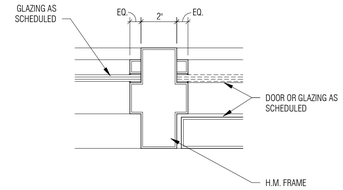
T3

NOT USED

D11

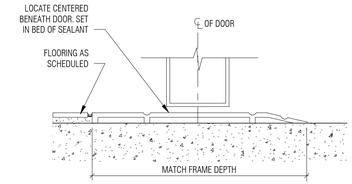
NOT USED

D7



Typical Mullion Detail
3" = 1'-0"

D3



Half Saddle Threshold
3" = 1'-0"

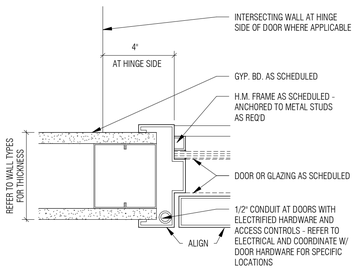
T2

NOT USED

D10

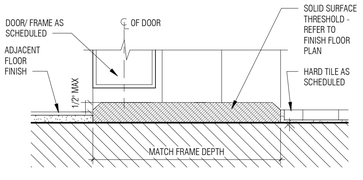
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D6



H.M Door Jamb @ Stud Wall
3" = 1'-0"

D2

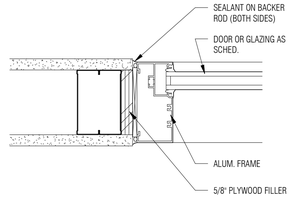


Typical Restroom Tile Transition
3" = 1'-0"

T1

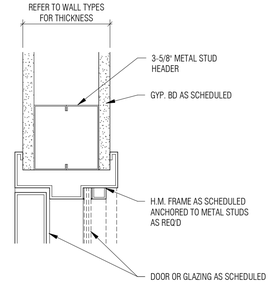
NOT USED

D9



Aluminum Jamb @ Stud Wall
3" = 1'-0"

D5



H.M. Door/Window Head @ Stud Wall
3" = 1'-0"

D1

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KEY PLAN

NORTH



OWNER

Charter Township of Canton - Western Wayne

PROJECT NAME

Growth Works

44582 Geddes Rd, Canton, MI 48188

PROJECT NO.

23-175

ISSUES / REVISIONS

DRAWN BY

Author

CHECKED BY

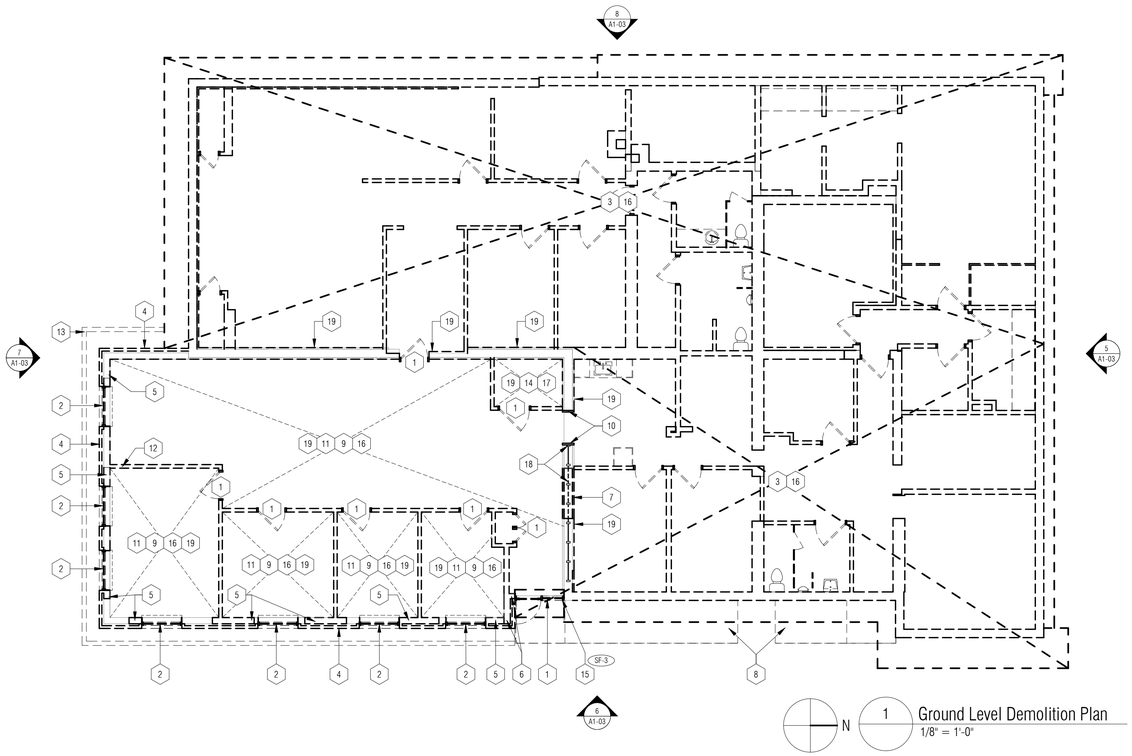
APPROVED BY

SHEET NAME

Typical Opening Details

SHEET NO.

A0-05



N 1 Ground Level Demolition Plan
1/8" = 1'-0"

DEMO FLOOR PLAN GENERAL NOTES

A. ALL DEMOLITION DRAWINGS AND DEMOLITION DETAILS ARE PROVIDED TO SHOW THE GENERAL SCOPE OF THE DEMOLITION WORK. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PERFORM ALL DEMOLITION WORK NECESSARY TO ACCOMPLISH NEW WORK. THE DEMOLITION DRAWINGS AND DETAILS MAY NOTE TYPICAL ITEMS IN SOME AREAS, WHICH APPLY IN OTHER AREAS (AND ARE DESIGNATED WITH DASHED, HIDDEN OR STRUCK THRU LINES). COORDINATE ALL DEMOLITION WORK WITH ALL ARCHITECTURAL, STRUCT., MECH. AND ELEC. DRAWINGS. CONTRACTOR RESPONSIBLE TO REFERENCE ALL DRAWINGS/ SPECIFICATIONS TO CONFIRM EXTENT OF DEMOLITION WORK.

B. ALL REMOVED ITEMS, WALLS, FLOORS CEILING, OPENINGS, ETC ARE TO BE PATCHED/REPAIRED AND PREPPED TO RECEIVE NEW WORK AND/OR FINISHES.

C. ALL CONSTRUCTION AND DEMOLITION MEANS, METHODS AND SAFETY PRECAUTIONS SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

D. WALL REMOVAL THAT TERMINATES INTO A WALL OR CEILING TO REMAIN SHALL BE COMPLETELY REMOVED FREE OF PROJECTIONS, READY TO RECEIVE NEW WORK.

E. REMOVE ALL ITEMS PROJECTING FROM EXISTING WALLS OR FLOORS TO REMAIN (BLOCKING, SCREWS, FASTENERS, PIPES, CONDUITS, MOUNTING PLATES, FIXED EQUIPMENT, ETC). PATCH AND REPAIR FOR NEW FINISH.

F. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING AND UNDERSTANDING EXISTING CONDITIONS PRIOR TO BIDDING.

G. CONTRACTOR SHALL PROTECT EXISTING BUILDING ELEMENTS FROM DAMAGE CAUSED BY CONSTRUCTION OR CONSTRUCTION TRADES. CONTRACTOR SHALL REPAIR ALL DAMAGED AREAS (IDENTIFIED BY OWNER, ARCHITECT, OR GENERAL CONTRACTOR) AT NO ADDITIONAL COST.

H. MAINTAIN EXISTING FIRE RATING WHERE OCCURS AND WHERE POSSIBLE DURING DEMOLITION. REFER TO CODE AND LIFE SAFETY SHEETS FOR MORE INFORMATION AS WELL AS GENERAL CONTRACTOR'S INSTRUCTIONS.

I. ASBESTOS AND OTHER HAZARDOUS MATERIALS WILL BE REMOVED BY OWNER'S ABATEMENT CONTRACTOR PRIOR TO START OF CONSTRUCTION. IF ANY SUSPECTED HAZARDOUS MATERIAL IS ENCOUNTERED, STOP WORK IN THAT AREA AND IMMEDIATELY INFORM THE ARCHITECT, GENERAL CONTRACTOR, AND OWNER.

J. DISPOSE OF ALL DEMOLITION MATERIALS LEGALLY OFF-SITE, U.O.N.

K. REFER TO SPECIFICATION SECTION 012300 FOR ADDITIONAL DESCRIPTIONS OF ALTERNATES.

DEMO PLAN KEYNOTES

1 REMOVE DOOR AND FRAME - COMPLETE

2 REMOVE ALUM STOREFRONT SYSTEM AND INTERIOR SILL - COMPLETE

3 REMOVE STRUCTURE - COMPLETE - INCLUDING ALL SUBGRADE STRUCTURE

4 REMOVE ALL EXISTING FACE BRICK, MEMBRANOUS MATERIAL, AND MASONRY TIES DOWN TO FOUNDATION. CLEAN, PATCH, AND PREPARE TOP OF FOUNDATION AND EXISTING SHEATHING FOR NEW FACE BRICK.

5 REMOVE PORTION OF EXISTING 2X6 STUD WALL FOR INSTALLATION OF NEW WINDOW AND ASSOCIATED ELEMENTS

6 REMOVE EXTERIOR WOOD STUD WALL AND ASSOCIATED FINISHES INTERIOR AND EXTERIOR COMPLETE, COORD W/ NEW WORK AND PROTECT FOUNDATION AND ROOF CONSTRUCTION

7 REMOVE PORTION OF WALL INCL BRICK VENEER, INSUL, WD STUD, CMU, AND GYP BD - COORD. W/ NEW WORK

8 REMOVE CONCRETE WALK AND RAMPS ADJOINING BUILDING

9 REMOVE ALL FLOOR FINISHES AND WALL BASE DOWN TO SLAB, PREP SLAB FOR NEW FLOOR FINISH.

10 REMOVE GYP AND FURRING, COORD W/ NEW WORK

11 REMOVE SUSP CLG GRID, AC CLG TILES,GRID SUSP CABLES, AND LIGHT FIXTURES - REFER TO ELEC. - COMPLETE

12 REMOVE WD STUD AND GYP WALL - COMPLETE

13 REMOVE EXIST SOFFIT, GUTTER, FASCIA, FLASHING, TRIM, AND ANY ASSOCIATED FIXTURES (ABOVE). PROTECT UNDERLYING STRUCTURE AND SHEATHING

14 REMOVE PLASTER HARD LID CEILING AND ASSOCIATED FIXTURES DOWN TO JOIST

15 REMOVE ALUMINUM STOREFRONT SYSTEM - COMPLETE

16 REMOVE FURNITURE

17 REMOVE BUILT IN SHELVING

18 ORIGINAL STEEL WINDOW AND DOOR SYSTEM PRESENT IN EXISTING UNINSULATED 1950s BRICK AND BLOCK WALL. HEIGHT ABOVE FINISH FLOOR VARIES. FULL EXTENT OF CONDITION WAS ENCAPSULATED DURING 1998 ADDITION AND IS LARGELY UNKNOWN. REMOVE SYSTEM ONLY WHERE WALL IS INDICATED TO BE REMOVED

19 REMOVE GYP. BD. WALL FINISH IN THIS ROOM COMPLETE, PATCH AND REPAIR FURRING WHERE REQ'D FOR INSTALLATION OF NEW GYP. FINISH. COORDINATE WITH NEW WORK.

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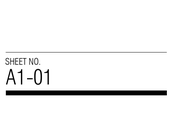
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Growth Works

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PROJECT NO.

23-175

ISSUES / REVISIONS

DRAWN BY

Author

CHECKED BY

APPROVED BY

SHEET NAME

Demolition Floor Plan

SHEET NO.

A1-01

DEMO ROOF PLAN GENERAL NOTES

A. DO NOT SCALE DRAWINGS. USE DIMENSIONS PROVIDED. IF A CONFLICT IS ENCOUNTERED OR REQUIRED DIMENSION IS NOT PROVIDED, REQUEST A CLARIFICATION FROM THE ARCHITECT.

B. ALL PLAN DIMENSIONS ARE NOMINAL TO THE FACE OF WALLS.

C. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION ABOUT ALL ROOF RELATED ITEMS.

D. REFER TO MECHANICAL FOR ALL VENT AND PIPE PENETRATION LOCATIONS. REFER TO SHEET A3-32, ROOF DETAILS.

E. REFER TO EXTERIOR ELEVATIONS FOR ALL GUTTER DOWNSPOUT LOCATIONS.

DEMO ROOF PLAN KEYNOTES

1 REMOVE ROOF ASSEMBLY - COMPLETE - INCLUDING ALL MEMBRANES, SHEATHING, AND DECKING

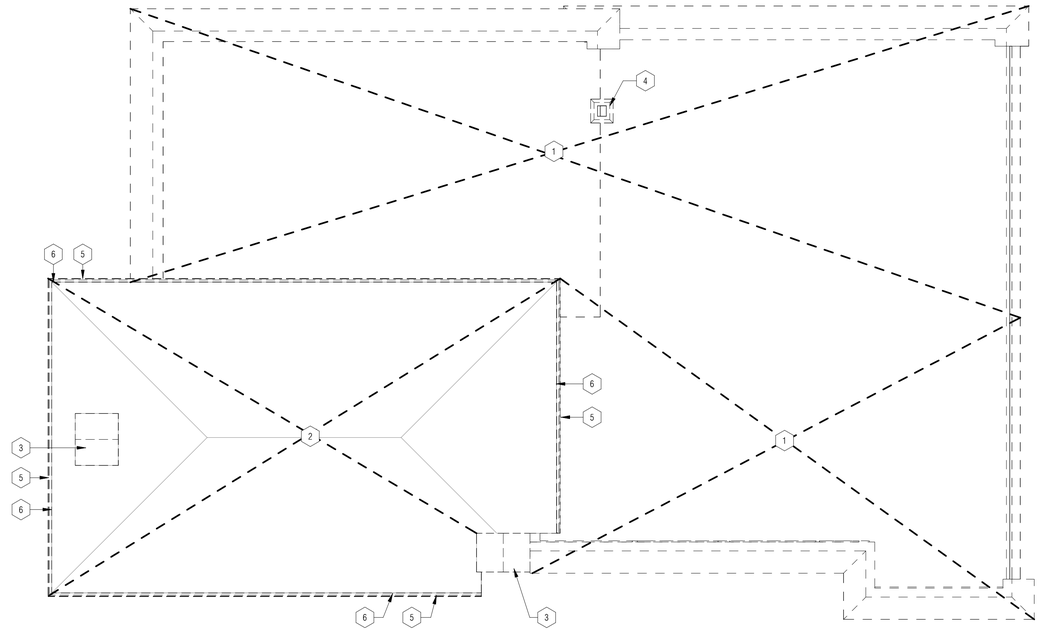
2 REMOVE ASPHALT SHINGLE ROOF TO SHEATHING BELOW

3 REMOVE EIFS DORMER TOWER AND ASSOCIATED TRIM, PROTECT ADJOINING ROOF STRUCTURE AND SHEATHING TO REMAIN

4 REMOVE BRICK CHIMNEY COMPLETE

5 REMOVE GUTTERS AND DOWNSPOUTS

6 REMOVE EXIST SOFFIT, FASCIA, FLASHING, TRIM, AND ANY ASSOCIATED FIXTURES. PROTECT UNDERLYING STRUCTURE AND SHEATHING



1 Demo Roof Plan
1/8" = 1'-0"

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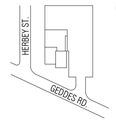
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ISSUES / REVISIONS

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Author

CHECKED BY

APPROVED BY

SHEET NAME

Demo Roof Plan

SHEET NO.

A1-02

DEMO EXTERIOR ELEVATION KEYNOTES

1 AREA OF MASS DEMO, PROTECT ALL ADJOINING INTERIOR AND EXTERIOR STRUCTURE, FINISHES, FIXTURES, AND UTILITIES UNLESS OTHERWISE NOTED

2 REMOVE ASPHALT SHINGLE ROOF AND UNDERLAYMENT TO SHEATHING

3 REMOVE BRICK CHIMNEY COMPLETE

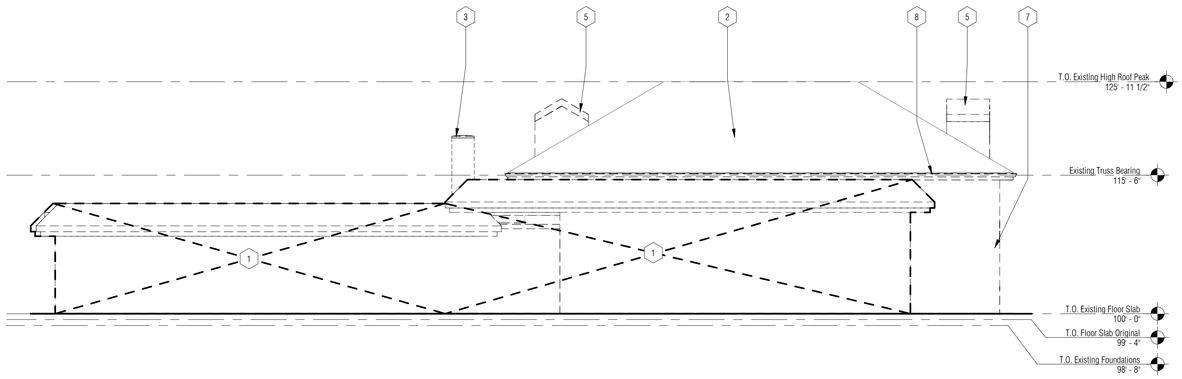
4 REMOVE ALUM STOREFRONT SYSTEM AND INTERIOR PLAM SILL - COMPLETE

5 REMOVE EIFS TOWER AND ASSOCIATED STRUCTURE/ROOFING - COMPLETE

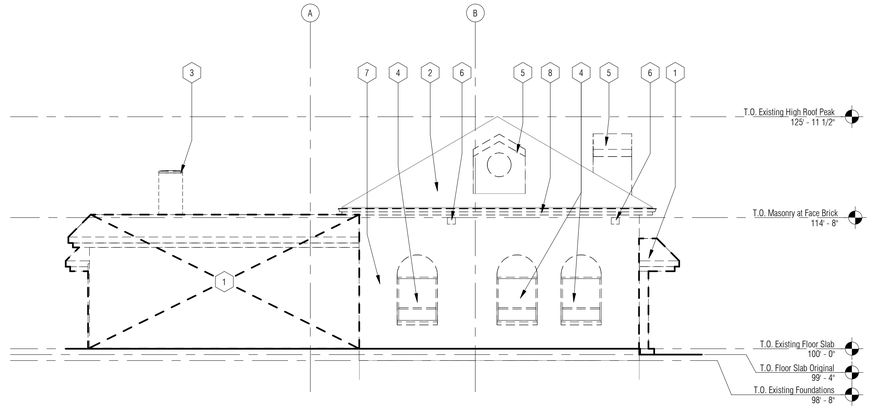
6 REMOVE EXTERIOR LIGHT FIXTURE AND CONDUIT/WIRING BACK TO SOURCE

7 REMOVE CMU WALL CONSTRUCTION AS REQD. FOR INSTALLATION OF NEW DOOR

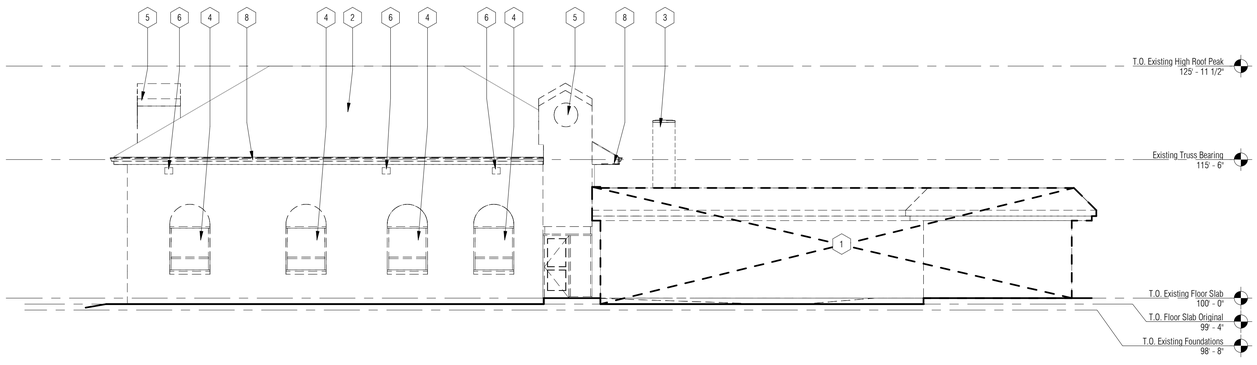
8 REMOVE GUTTERS, FASCIA, TRIM, SOFFIT, AND DOWNSPOUTS



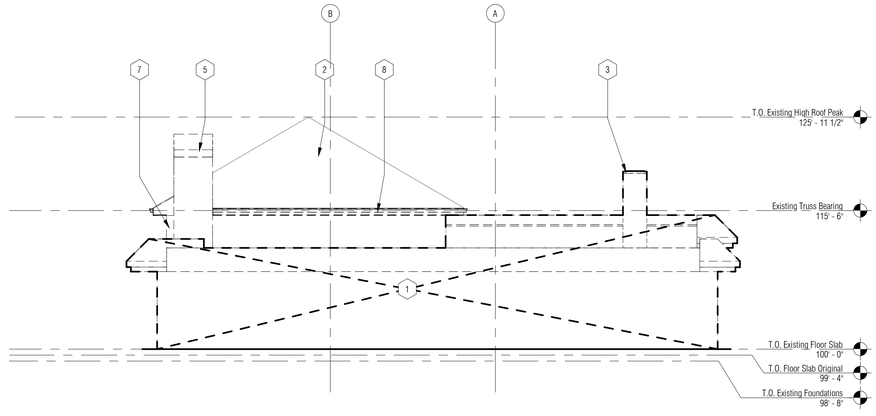
8 A1-01 Demolition Building Elevation - West
1/8" = 1'-0"



7 A1-01 Demolition Building Elevation - South
1/8" = 1'-0"



6 A1-01 Demolition Building Elevation - East
1/8" = 1'-0"



5 A1-01 Demolition Building Elevation - North
1/8" = 1'-0"

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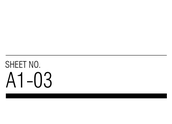
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CONSULTANT

KEY PLAN NORTH



OWNER

Charter Township of Canton - Western Wayne

PROJECT NAME

Growth Works

44582 Geddes Rd, Canton, MI 48188

PROJECT NO.

23-175

ISSUES / REVISIONS

DRAWN BY

Author

CHECKED BY

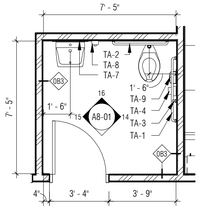
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SHEET NAME

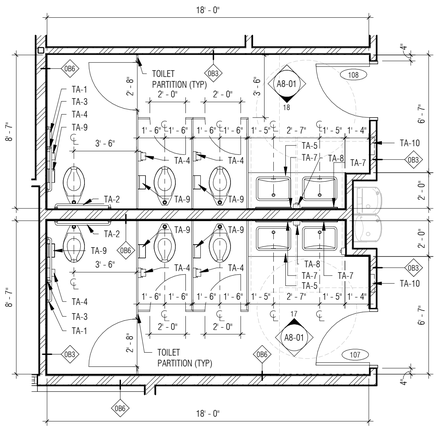
Demo Exterior Elevations

SHEET NO.

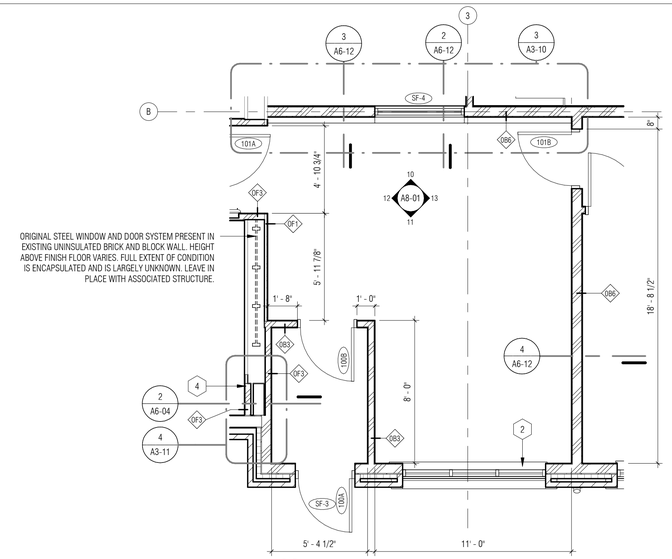
A1-03



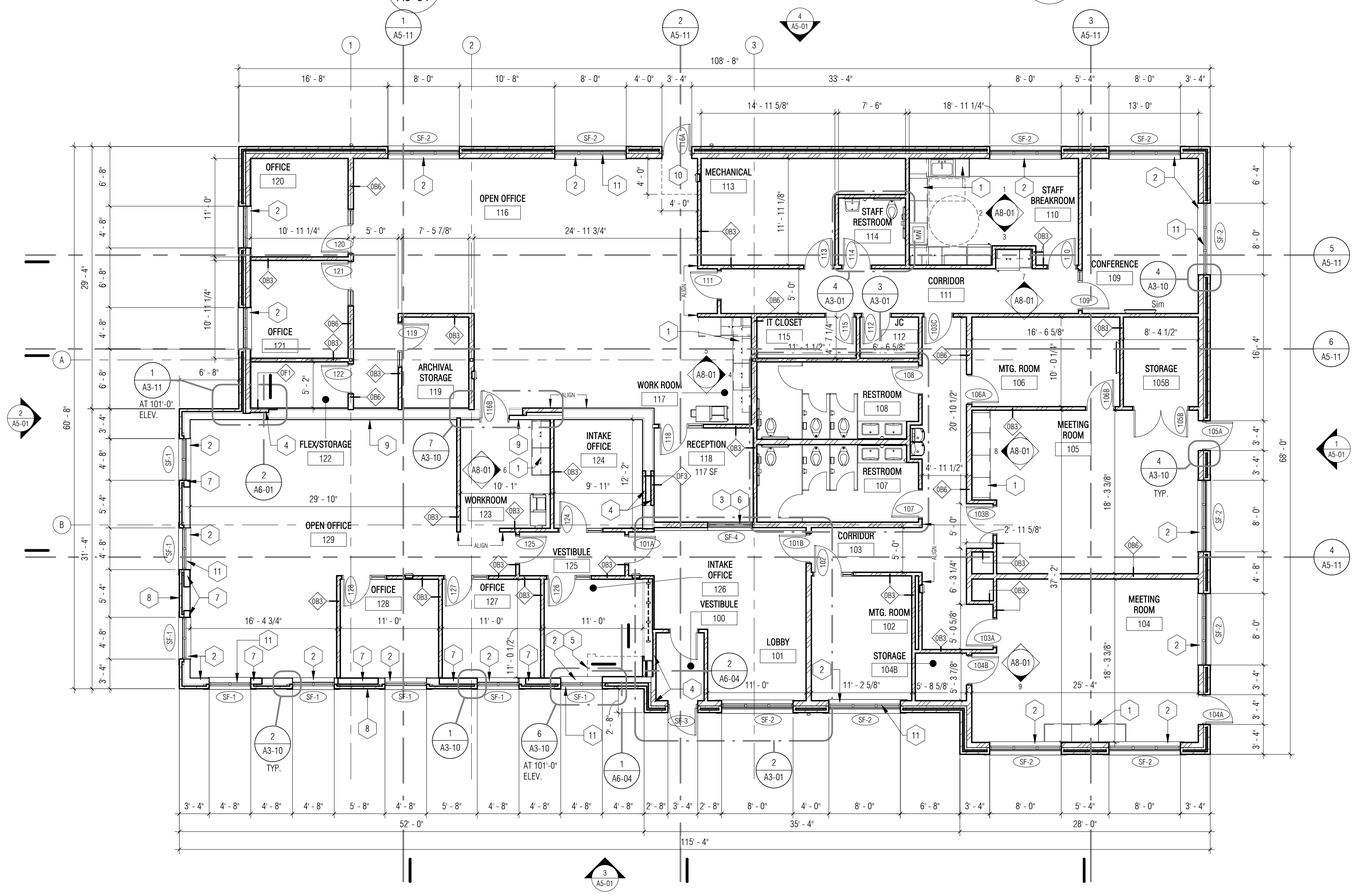
4 A3-01 Enlarged Floor Plan - Staff Restroom
1/4" = 1'-0"



3 A3-01 Enlarged Floor Plan - Restrooms
1/4" = 1'-0"



2 A3-01 Enlarged Floor Plan - Lobby
1/4" = 1'-0"



N

1 Ground Level New Work Plan
1/8" = 1'-0"

TOILET ACCESSORIES LEGEND

TA-1: 42" GRAB BAR

TA-2: 36" GRAB BAR

TA-3: 18" GRAB BAR - VERTICAL

TA-4: TOILET TISSUE DISPENSER

TA-5: NOT USED

TA-6: NOT USED

TA-7: MIRROR

TA-8: SOAP DISPENSER

TA-9: SANITARY NAPKIN DISPOSAL

TA-10: RECESSED PAPER TOWEL DISPENSER/TRASH RECEPTACLE

FLOOR PLAN GENERAL NOTES

A. DO NOT SCALE DRAWINGS. USE DIMENSIONS PROVIDED. IF A CONFLICT IS ENCOUNTERED OR REQUIRED DIMENSION IS NOT PROVIDED, REQUEST A CLARIFICATION FROM THE ARCHITECT.

B. ALL PLAN DIMENSIONS ARE NOMINAL TO THE FACE OF WALLS. REFER TO WALL TYPES ON A0-05 FOR ACTUAL WALL THICKNESSES.

C. COORDINATE SIZE AND LOCATION OF ALL DUCT, SHAFT, AND LOUVER OPENINGS IN WALLS WITH MECHANICAL.

D. ALL EXPOSED CORNERS OF CONCRETE MASONRY UNITS ARE TO BE BULLNOSED.

E. REQUIRED FIRE RATED PARTITIONS, FLOORS, AND CEILINGS ARE INDICATED ON SHEET A0-03, LIFE SAFETY PLAN, AS WELL AS FIRE EXTINGUISHER & CABINET LOCATIONS.

F. REFER TO REFER TO PLUMBING DRAWINGS AND SPECIFICATIONS FOR PLUMBING FIXTURE IDENTIFICATION & LEGEND

FLOOR PLAN KEYNOTES

1 CASEWORK/MILLWORK. REFER TO INTERIOR ELEVATIONS

2 TYPICAL SOLID SURFACE WINDOW SILL. REFER TO INTERIOR ELEVATIONS

3 SOLID SURFACE COUNTER, REFER TO INTERIOR ELEVATIONS

4 NEW FURRING TO INFILL LOCATION WHERE ORIGINAL CONSTRUCTION WAS REMOVED OR MODIFIED, ALIGN FINISH SURFACES

5 LINE BETWEEN EXISTING FLOOR SLAB AND INFILL NEW SLAB, REFER TO STRUCTURAL FOR MORE INFORMATION

6 OPERABLE SECURITY TRANSACTION WINDOW

7 2X8 WD STUD INFILL AT EXISTING EXTERIOR WALL. COORDINATE WITH DEMO. ALIGN NEW INTERIOR FINISHES, ENSURE SEAMLESS APPLICATION OF WATERPROOFING MATERIAL BEHIND NEW FACE BRICK. INFILL WITH BATT INSUL TO MATCH DEPTH OF EXISTING AND INSTALL NEW ½" PLYWOOD SHEATHING

8 NEW FACE BRICK AND TIES AT EXISTING 2X8 WOOD STUD WALL, COORDINATE WITH DEMO

9 NEW GYP. WALL BD. ON EXISTING FURRING OR STUDS

10 EXTENTS OF WALK-OFF CARPET (CPT-4) AT ENTRY/EXIT

11 ALTERNATE #1 - REMOVE WINDOW AND ALL ASSOCIATED FLASHING/SILLS/HEADERS FROM SCOPE. ADJACENT BRICK/FRAMING/WALL COVERINGS TO CONTINUE

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PROJECT NO.

23-175

ISSUES / REVISIONS

Site Plan Approval	7/31/2025
Site Plan Approval Rev. 1	2/13/2026

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JNC

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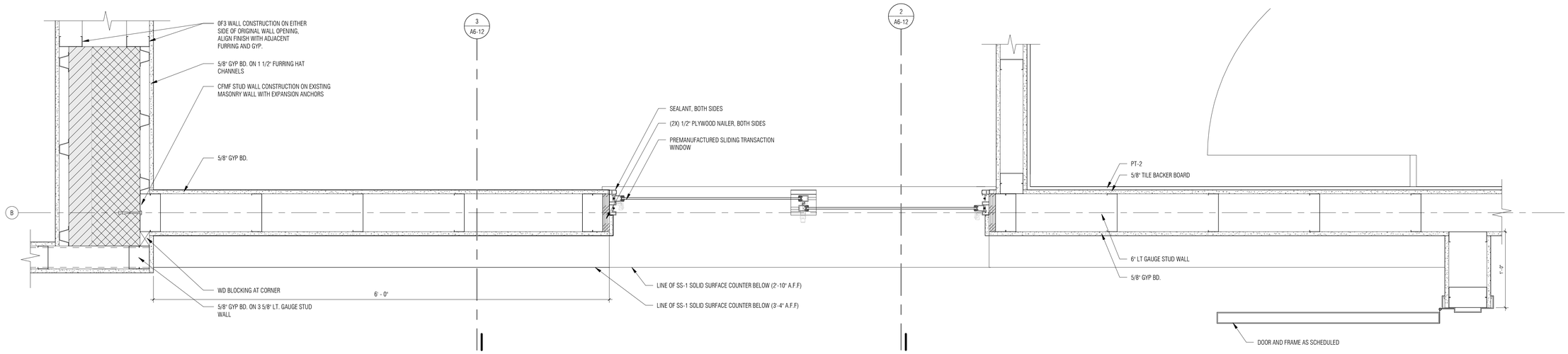
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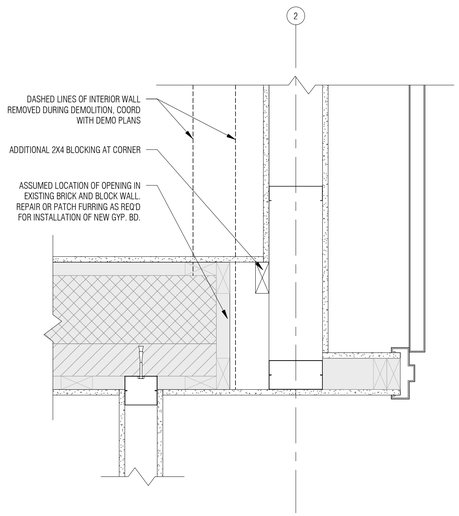
Ground Level Floor Plan

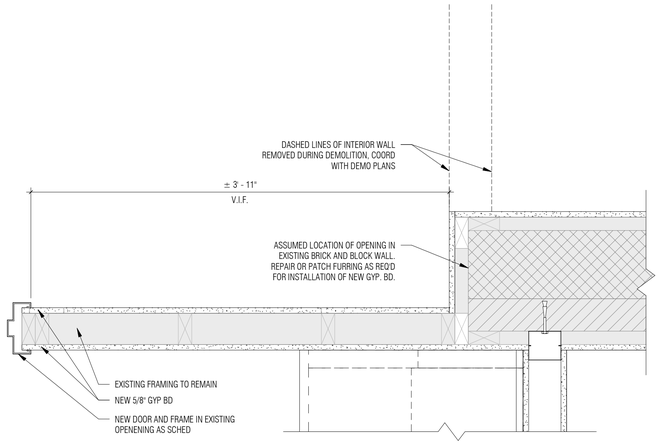
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A3-01

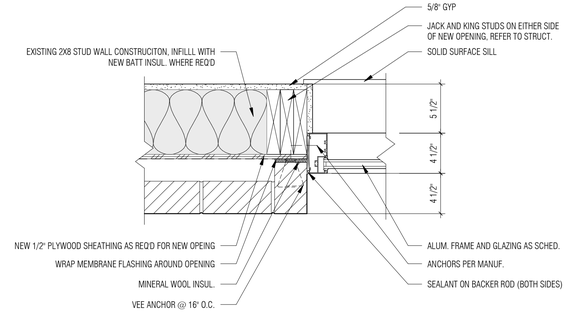


3 A3-01 **Plan Detail at Lobby 101 West Wall**
1 1/2" = 1'-0"

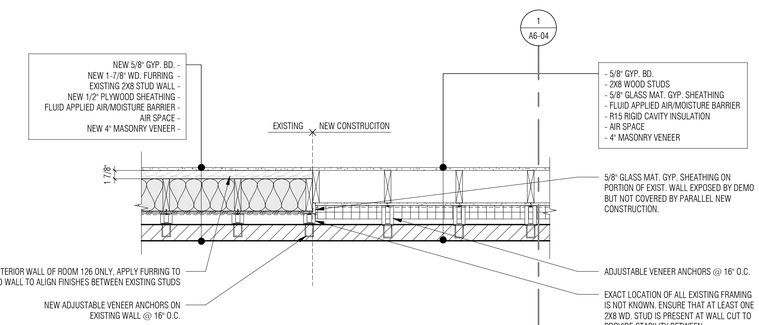




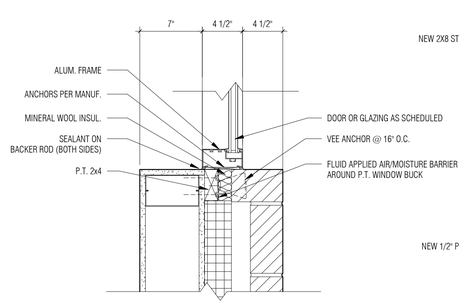
7 A3-01 **Ground Level New Work Plan - Callout 6**
1 1/2" = 1'-0"



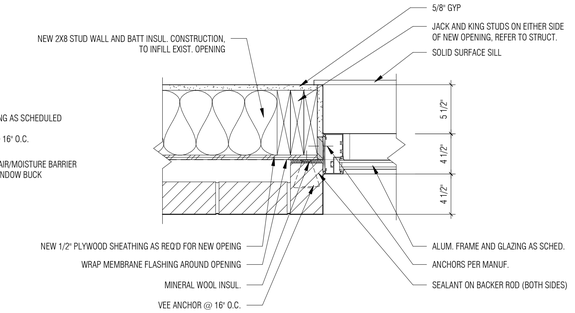
2 A3-01 **Typical Aluminum Jamb at Exist. Ext. Wall.**
1 1/2" = 1'-0"



6 A3-01 **Plan Detail at Room 126 Construction Type Transition**
3/4" = 1'-0"



4 A3-01 **Typical Aluminum Jamb at New Metal Stud Walls**
1 1/2" = 1'-0"



1 A3-01 **Typical Aluminum Jamb at Infill in Exist. Ext. Wall.**
1 1/2" = 1'-0"

3/6/2026 3:47:13 PM C:_Revit\Local\23-175 - Canton Western Wayne Renovation Setback Update_mshowalter440E3.rvt

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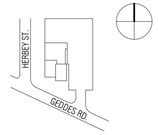
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PROJECT NO.

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JNC

CHECKED BY

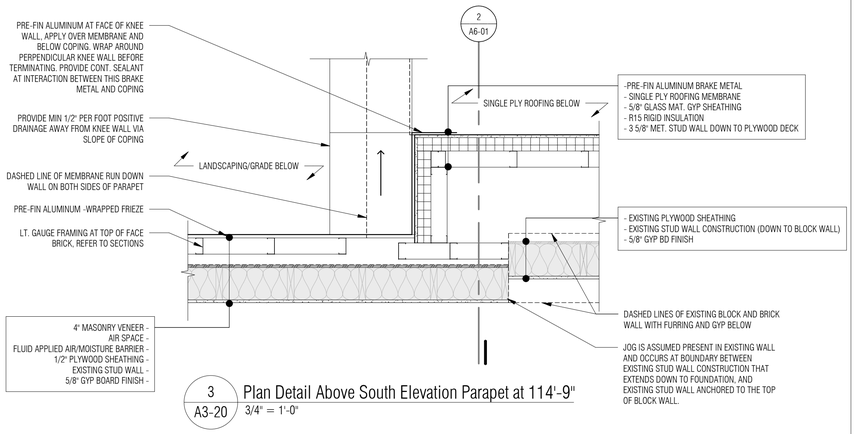
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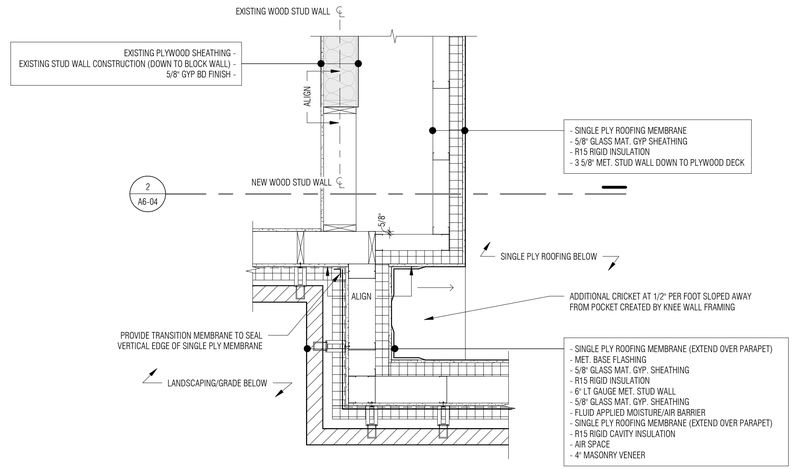
Plan Details

SHEET NO.

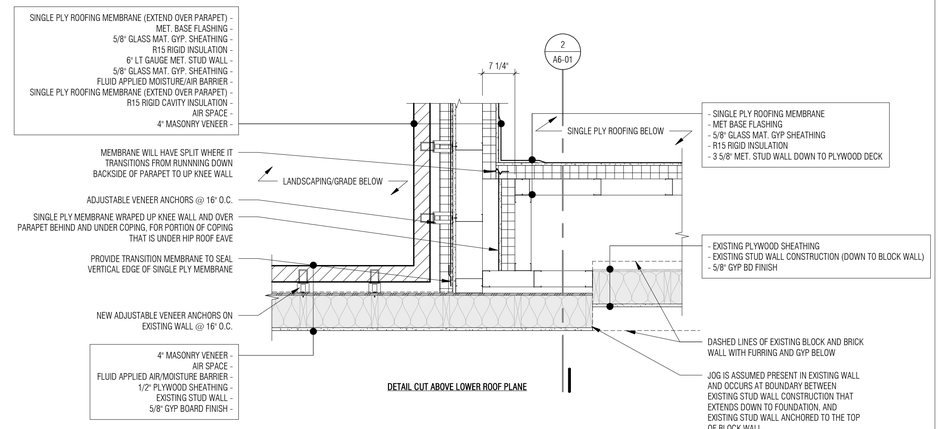
A3-10



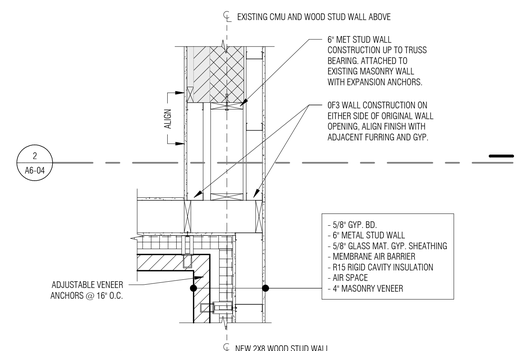
3 A3-20 Plan Detail Above South Elevation Parapet at 114'-9"
3/4" = 1'-0"



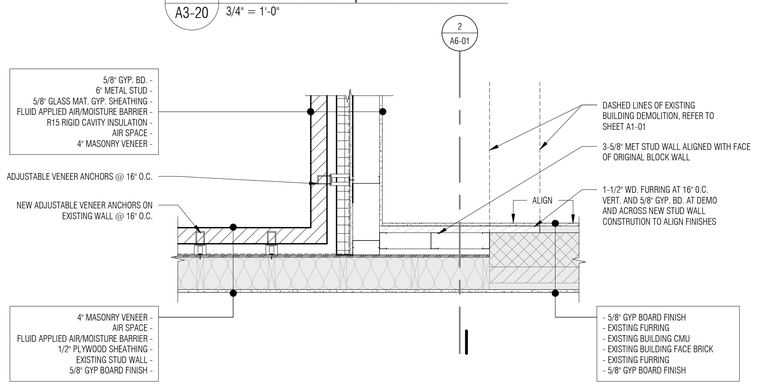
5 A3-20 Roof Detail Above East Elevation at 113'-6"
3/4" = 1'-0"



2 A3-20 South Elevation Parapet Plan Detail at 114'-0"
3/4" = 1'-0"



4 A3-01 Plan Detail
3/4" = 1'-0"



1 A3-01 Plan Detail
3/4" = 1'-0"

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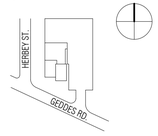
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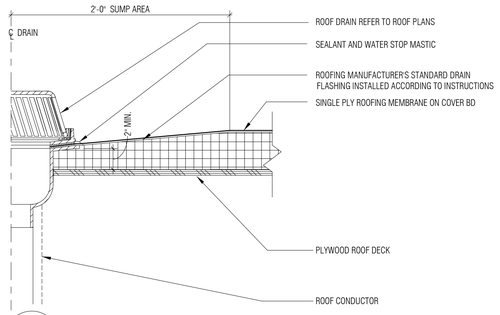
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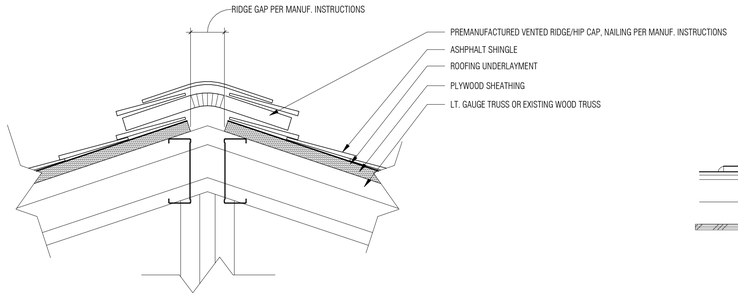
Plan Details

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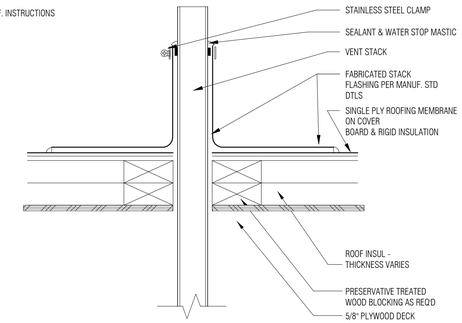
A3-11



6 Typical Sump
1 1/2" = 1'-0"



3 Ridge/Hip Vent - Lt. Gauge
3" = 1'-0"



2 Typical Pipe Penetration
1 1/2" = 1'-0"

ROOF PLAN GENERAL NOTES

A. DO NOT SCALE DRAWINGS. USE DIMENSIONS PROVIDED. IF A CONFLICT IS ENCOUNTERED OR REQUIRED DIMENSION IS NOT PROVIDED, REQUEST A CLARIFICATION FROM THE ARCHITECT.

B. ALL PLAN DIMENSIONS ARE NOMINAL TO THE FACE OF WALLS.

C. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION ABOUT ALL ROOF RELATED ITEMS.

D. REFER TO MECHANICAL FOR ALL VENT AND PIPE PENETRATION LOCATIONS. REFER TO SHEET A3-32, ROOF DETAILS.

E. REFER TO EXTERIOR ELEVATIONS FOR ALL GUTTER DOWNSPOUT LOCATIONS.

ROOF PLAN KEYNOTES

1 ASPHALT SHINGLE ROOF (ASP-1)

2 SINGLE-PLY MEMBRANE ROOF

3 PRE FINISHED METAL PARAPET CAP

4 ICE AND WATER SHIELD UP 5' FROM ROOF EDGE, MIN.

5 5"x5" PRE-FINISHED METAL GUTTER

6 SPLASH BLOCK

7 5" X 5" PRE-FIN ALUMINUM DOWNSPOUT. FASTEN DOWNSPOUT TO FACE OF BUILDING WITH PRE-FIN METAL STRAP TO MATCH DOWNSPOUT AND CONCEAL FASTENERS BEHIND DOWNSPOUT

8 RIDGE VENT

9 DASHED LINE OF HIDDEN-VENT SOFFIT BELOW

10 HIP VENT

11 ROOFTOP MECHANICAL EQUIPMENT, REFER TO MECHANICAL DRAWINGS

12 FIRST 4' OF PLYWOOD SHEATHING OR DECKING THIS ROOF TO BE FRT PLYWOOD, EXTENTS SHOWN WITH DASHED LINE

13 DECORATIVE EXTERIOR LIGHT FIXTURE, REFER TO ELECTRICAL
13 SHINGLE-OVER EDGE VENT AT HIP ROOF AREAS OVER MEMBRANE ROOF.

ATTIC VENTILATION CALCULATIONS

AREA A:

MINIMUM REQUIREMENTS:
- PROVIDE 1 SQ. FT. OF VENTILATION FOR EVERY 300 SQ. FT. OF TRUSSED ROOF AREA, MINIMUM.
- INTAKE & EXHAUST AREA SHOULD BE ROUGHLY EQUAL, BUT EXHAUST SHOULD NOT BE LARGER THAN INTAKE

CALCULATIONS:
- 1963 SQ. FT. GROSS AREA
- 1963 SQ. FT. / 300 SQ. FT. = 6.54 SQ. FT. X 144 SQ. IN. = 942 SQ. IN.
- 942 SQ. IN. / 2= 471 SQ. IN. OF INTAKE AND EXHAUST MINIMUM

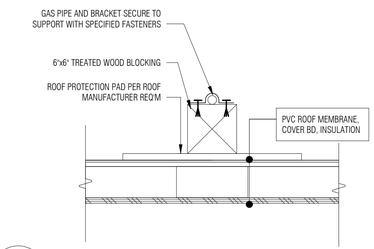
INTAKE/EXHAUST AREA:
- INTAKE AREA:
  - SOFFIT: 9.65 SQ. IN. OF INTAKE PER SF OF SOFFIT
  - APPROX. 153 SQ. FT. OF SOFFIT PROVIDED
  - 153 SQ. FT. X 9.65 SQ. IN. OF INTAKE = 1476 SQ. IN.
  - EDGE VENT: 9 SQ. IN. OF INTAKE PER LF X 83 LF = 747 SQ. IN.
  - 2223 SQ. IN. OF INTAKE AREA PROVIDED> 471
- EXHAUST AREA:
  - RIDGE: 18 SQ. IN. VENTILATION PER LF X 21 LF = 378 SQ. IN.
  - HIP: 9 SQ. IN. VENTILATION PER LF X 100LF = 900 SQ. IN.
  - 1278 SQ. IN. OF EXHAUST PROVIDED> 471

AREA B:

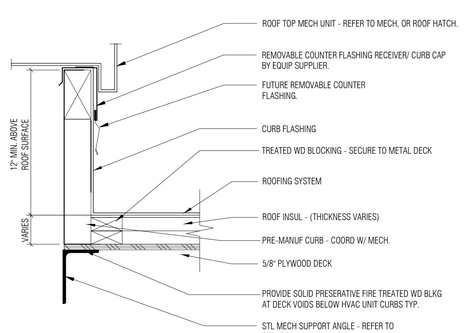
MINIMUM REQUIREMENTS:
- PROVIDE 1 SQ. FT. OF VENTILATION FOR EVERY 300 SQ. FT. OF TRUSSED ROOF AREA, MINIMUM.
- INTAKE & EXHAUST AREA SHOULD BE ROUGHLY EQUAL, BUT EXHAUST SHOULD NOT BE LARGER THAN INTAKE

CALCULATIONS:
- 2201 SQ. FT. GROSS AREA
- 2201 SQ. FT. / 300 SQ. FT. = 9.34 SQ. FT. X 144 SQ. IN. = 1056 SQ. IN.
- 1056 SQ. IN. / 2= 528 SQ. IN. OF INTAKE AND EXHAUST MINIMUM

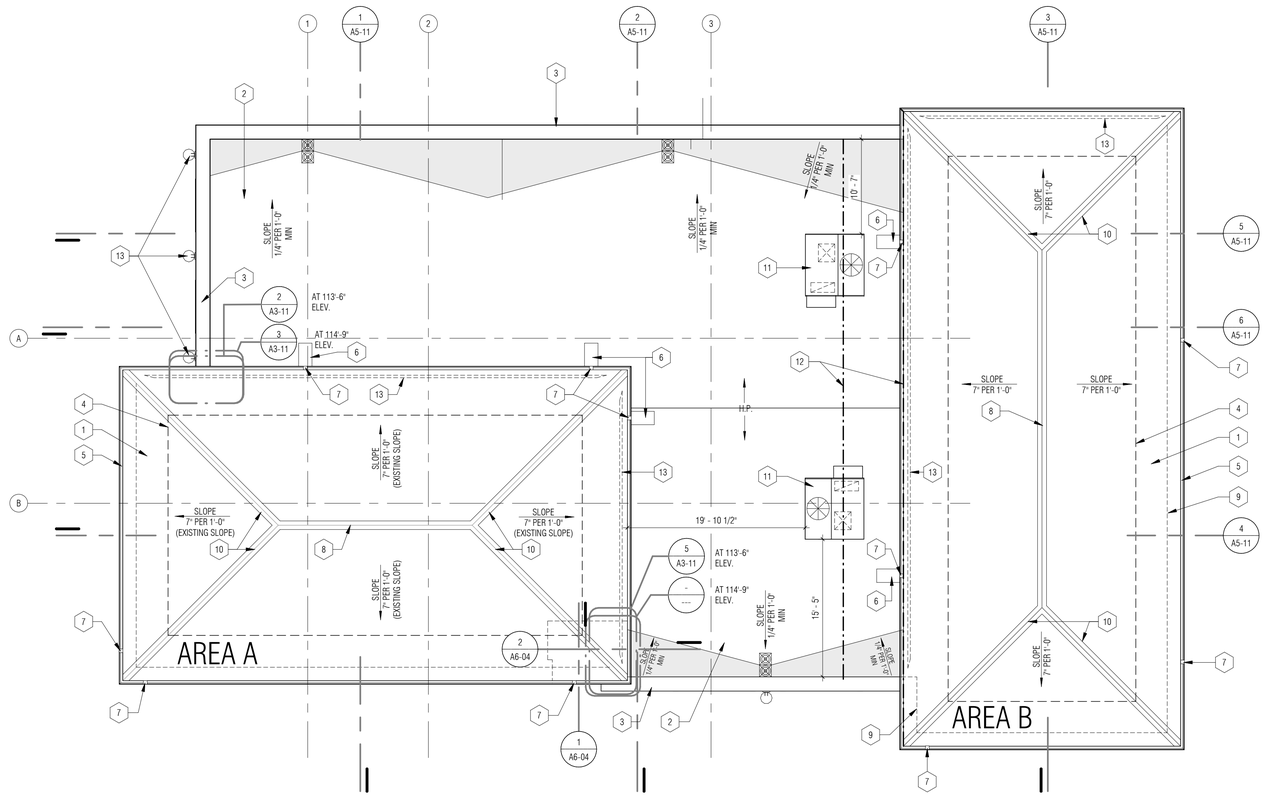
INTAKE/EXHAUST AREA:
- INTAKE AREA:
  - SOFFIT: 9.65 SQ. IN. OF INTAKE PER SF OF SOFFIT
  - APPROX. 148 SQ. FT. OF SOFFIT PROVIDED
  - 148 SQ. FT. X 9.65 SQ. IN. OF INTAKE = 1428.20 SQ. IN.
  - EDGE VENT: 9 SQ. IN. OF INTAKE PER LF X 88 LF = 792 SQ. IN.
  - 2220.20 SQ. IN. OF INTAKE AREA PROVIDED> 528
- EXHAUST AREA:
  - RIDGE: 18 SQ. IN. VENTILATION PER LF X 40 LF = 720 SQ. IN.
  - HIP: 9 SQ. IN. VENTILATION PER LF X 84LF = 756 SQ. IN.
  - 1476 SQ. IN. OF EXHAUST PROVIDED> 528



5 Typical Pipe Support
1 1/2" = 1'-0"



4 Typical Curb
1 1/2" = 1'-0"



1 Roof Plan
1/8" = 1'-0"

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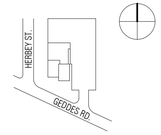
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CONSULTANT

KEY PLAN NORTH



OWNER

Charter Township of Canton - Western Wayne

PROJECT NAME

Growth Works

44582 Geddes Rd, Canton, MI 48188

PROJECT NO.

23-175

ISSUES / REVISIONS

DRAWN BY

JNC

CHECKED BY

APPROVED BY

SHEET NAME

Roof Plan and Roof Details

SHEET NO.

A3-20

RCP GENERAL NOTES

A. REFER TO FLOOR PLANS FOR ROOM NAMES, NUMBERS, AND DIMENSIONS

B. REFER TO ELECTRICAL FOR LIGHT FIXTURE TYPES AND SCHEDULES

C. REFER TO MECHANICAL FOR DIFFUSER, REGISTER, & RETURN TYPES AND SCHEDULES

D. ALL LIGHT FIXTURES ARE TO CENTERED WITH THE CEILING TILE GRID AND GYPSUM BOARD SOFFITS, U.O.N.

E. CEILING GRID IS TO BE CENTERED IN THE ROOM, U.O.N.

F. PAINT ALL EXPOSED STRUCTURE, MECHANICAL, AND ELECTRICAL

RCP KEYNOTES

1 ACT-1: 2X4 LAY-IN CEILING TILES IN SUSPENDED GRID SYSTEM

2 ACT-2: 2X2 LAY IN CEILING TILES IN SUSPENDED GRID SYSTEM

3 GYPSUM BUARD ON METAL STUD

4 HIDDEN VENT SOFFIT

5 DECORATIVE EXTERIOR LIGHT FIXTURE - REFER TO ALTERNATE #3

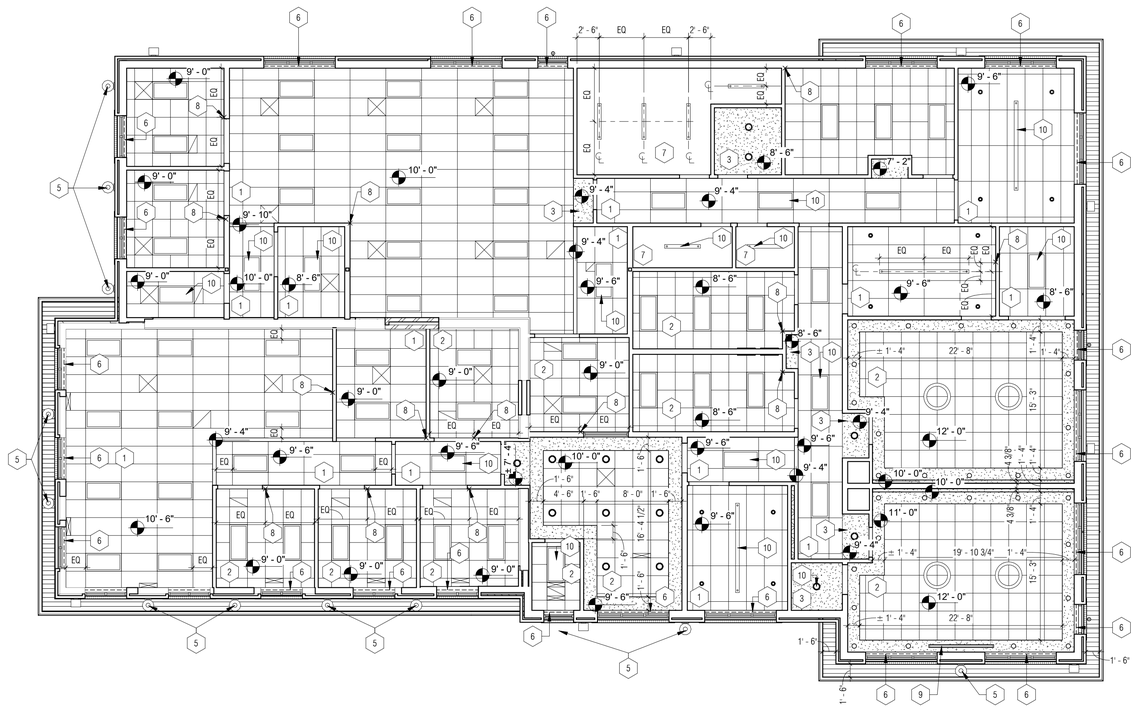
6 ROLLER SHADE WINDOW TREATMENT

7 NO CEILING - OPEN TO DECK ABOVE

8 CEILING GRID START/ORIGIN POINT

9 MANUAL, RECESSED DROP DOWN PROJECTOR SCREEN - COORDINATE WITH ELECTRICAL

10 CEILING GRID CENTERED AROUND FIXTURE IF PRESENT, FIXTURE CENTERED WITHIN ROOM



1 Ground Level RCP
1/8" = 1'-0"

Ceiling Symbols Legend

	Linear Recessed/ Pendant Light
	24" x 24" Recessed Light Fixture
	Pendant/Feature Light
	Recessed Downlight
	Recessed 24" x 48" Light Fixture
	12" x 24" Return Grill
	24" x 24" Return Grill
	12" x 12" Return Grill
	4' x 6" Supply Diffuser
	24" x 24" Supply Diffuser
	Unit Heater

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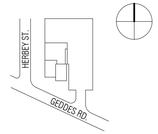
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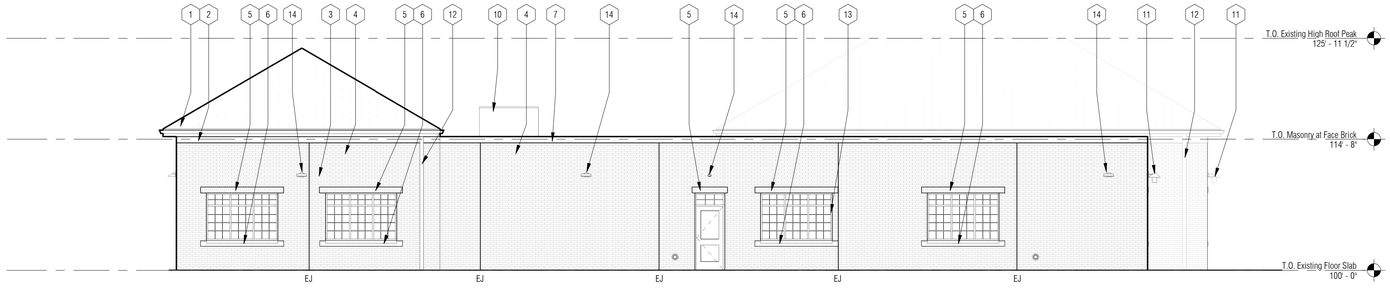
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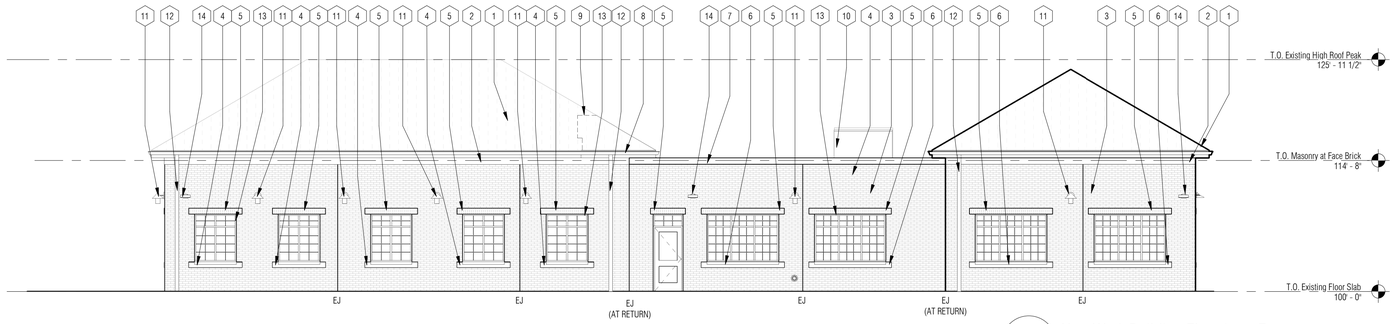
New Work Reflected Ceiling Plan

SHEET NO.

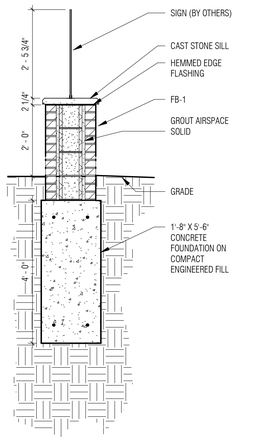
A4-01



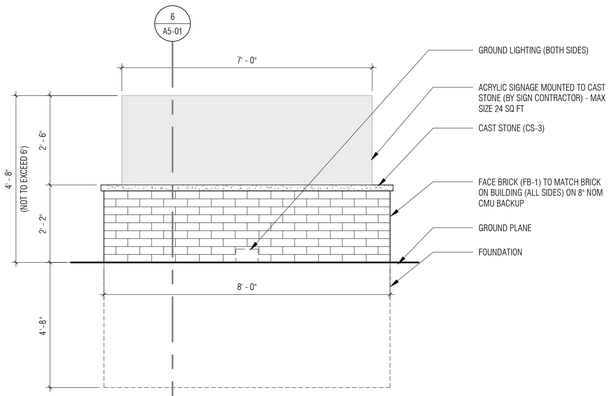
4 A3-01 New Work Building Elevation - West
1/8" = 1'-0"



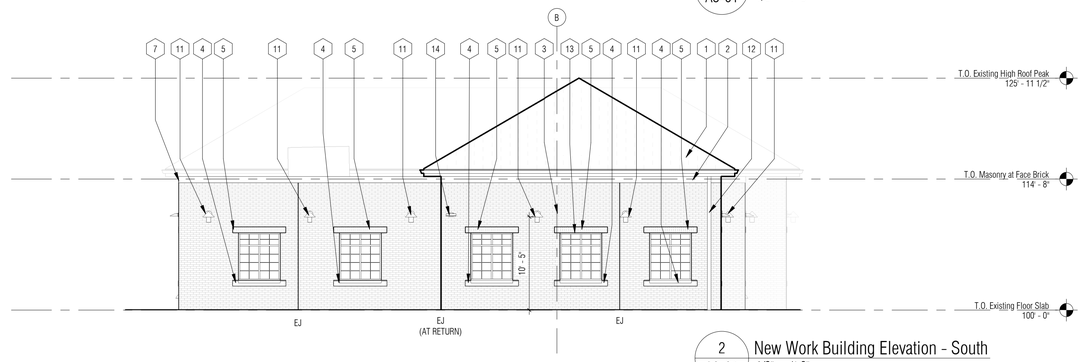
3 A3-01 New Work Building Elevation - East
1/8" = 1'-0"



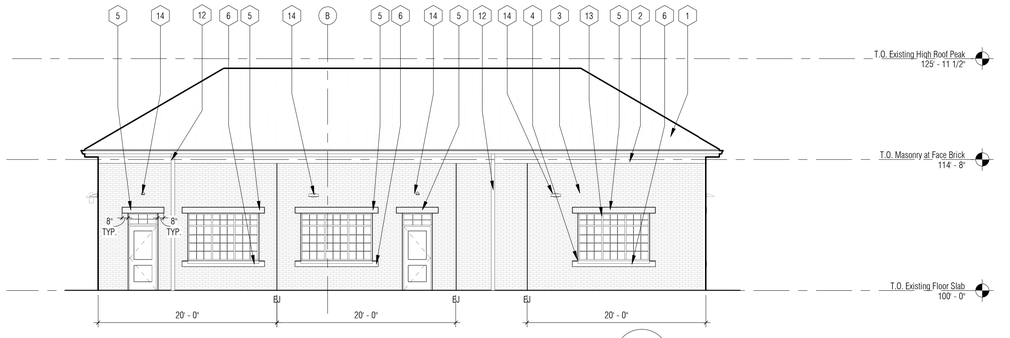
6 A5-01 GROUND SIGN SECTION
1/2" = 1'-0"



5 Ground Sign Elevation
1/2" = 1'-0" **REFER TO CIVIL FOR LOCATION**



2 A3-01 New Work Building Elevation - South
1/8" = 1'-0"



1 A3-01 New Work Building Elevation - North
1/8" = 1'-0"

EXTERIOR ELEVATION KEYNOTES

1 ASPHALT SHINGLE ROOF (ASP-1)

2 PRE-FINISHED METAL FRIEZE, TO MATCH COPING

3 RUNNING BOND FACE BRICK (FB-1)

4 CAST STONE SILL WITH DRIP CUT AND LUGS (CS-1) - TO EXTEND 8" PAST OPENING

5 SOLDIER COURSE FACE BRICK (FB-1) LINTEL - TO EXTEND 8" PAST OPENING

6 CAST STONE SILL WITH DRIP CUT AND LUGS (CS-2) - TO EXTEND 8" PAST OPENING

7 PRE-FINISHED METAL COPING

8 PRE-FINISHED METAL GUTTER

9 DASHED LINE OF AREA TO INFILL ROOFING TO COMPLETE EXISTING HIP ROOF GEOMETERY. REFER TO STRUCTURAL FOR INFILL FRAMING

10 ROOFTOP MECHANICAL EQUIPMENT - REFER TO MECHANICAL DRAWINGS

11 EXTERIOR WALL MOUNTED LIGHT FIXTURE, REFER TO ELECTRICAL DRAWINGS. REMOVE IN ALTERNATE #3

12 PRE-FINISHED METAL DOWNSPOUT

13 ALTERNATE #1 - REMOVE WINDOW AND ALL ASSOCIATED FLASHING/SILLS/HEADERS FROM SCOPE. ADJACENT BRICK TO CONTINUE

14 LIGHT FIXTURE - REFER TO ELECTRICAL

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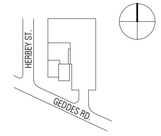
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Site Plan Approval	7/31/2025
Site Plan Approval Rev. 1	2/13/2026

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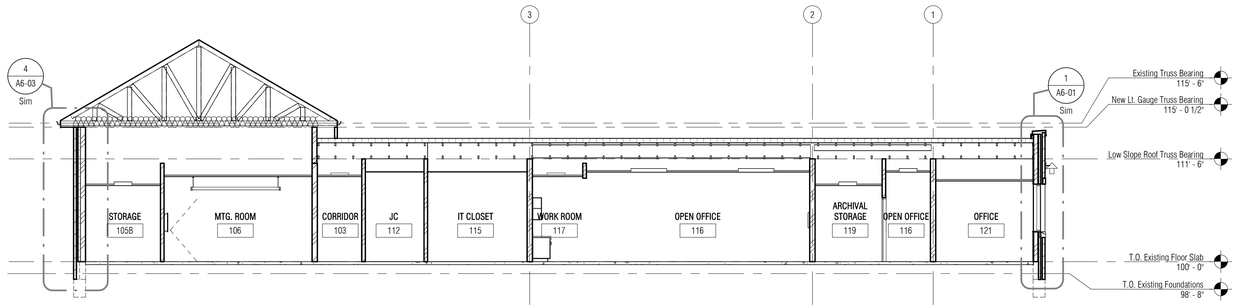
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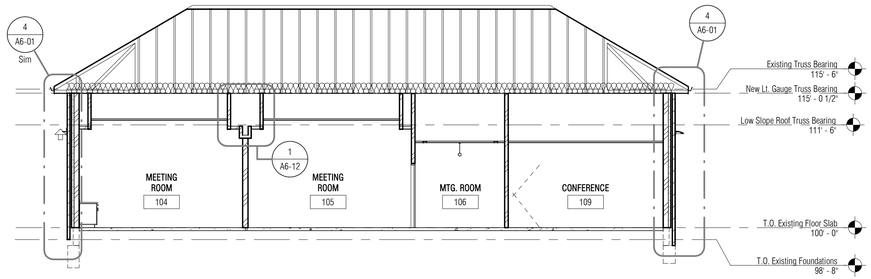
New Work Exterior Elevations

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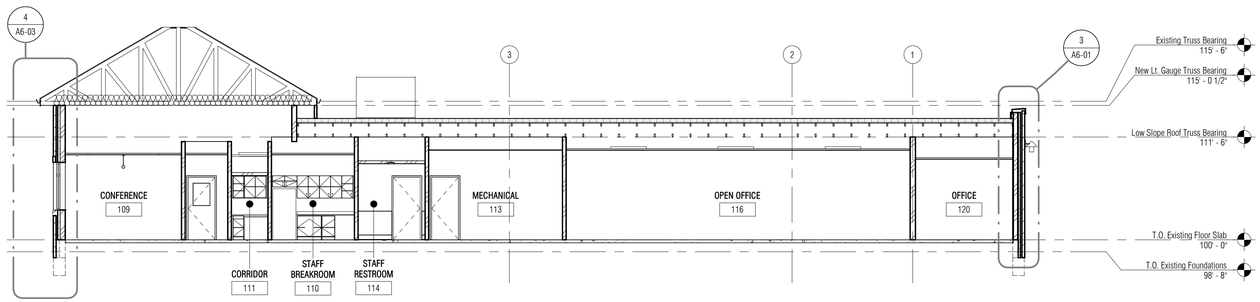
A5-01



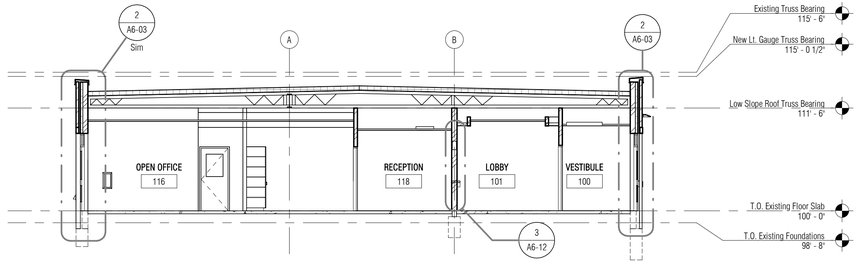
6 A3-01 Building Section
1/8" = 1'-0"



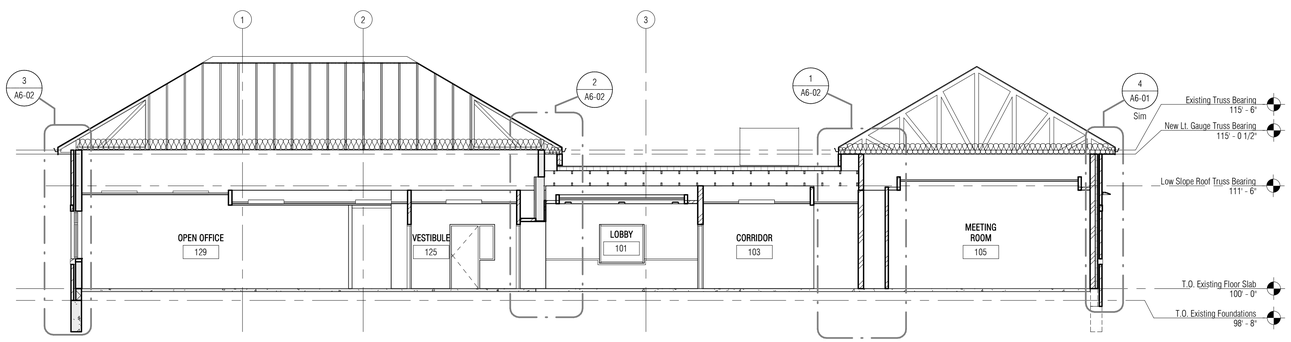
3 A3-01 Building Section
1/8" = 1'-0"



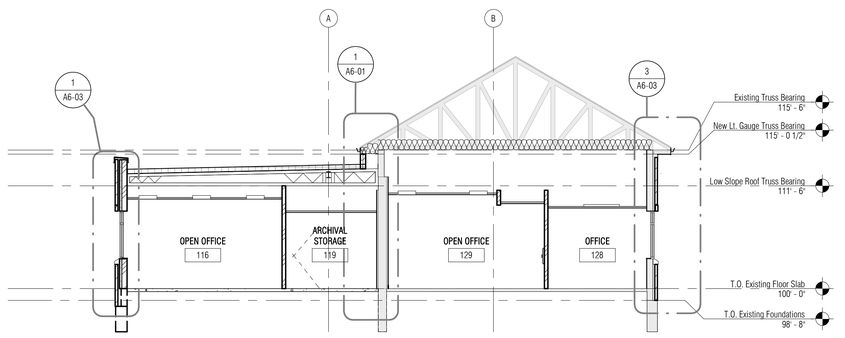
5 A3-01 Building Section
1/8" = 1'-0"



2 A3-01 Building Section
1/8" = 1'-0"



4 A3-01 Building Section
1/8" = 1'-0"



1 A3-01 Building Section
1/8" = 1'-0"

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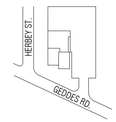
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PROJECT NO.

23-175

ISSUES / REVISIONS

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Author

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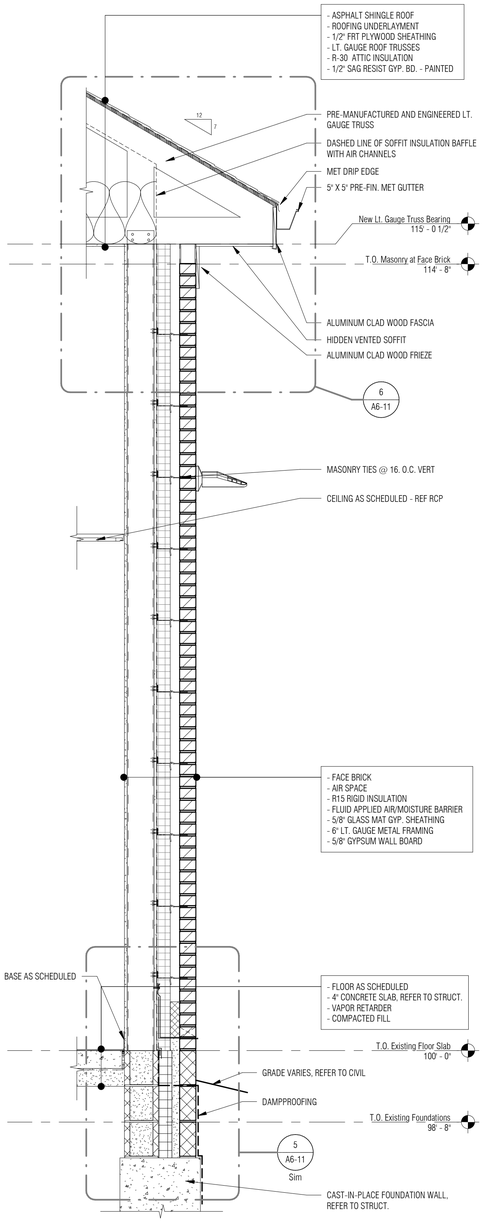
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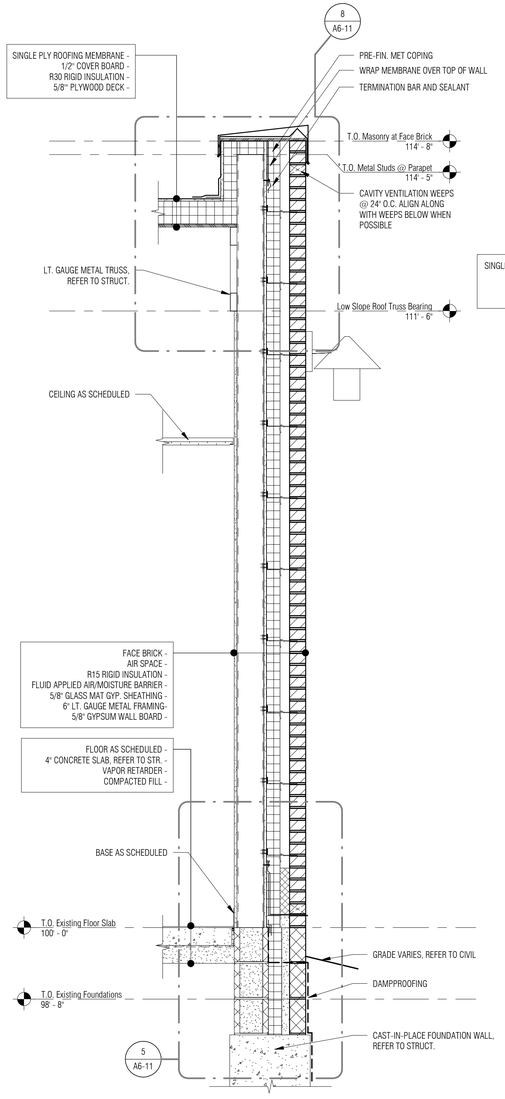
Building Sections

SHEET NO.

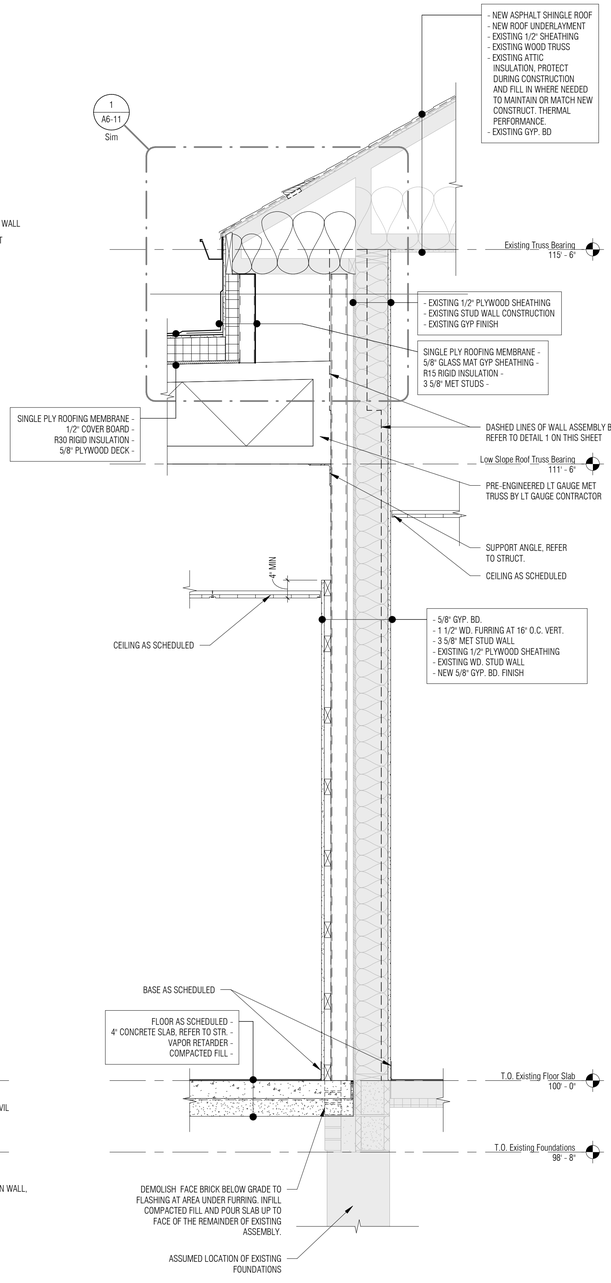
A5-11



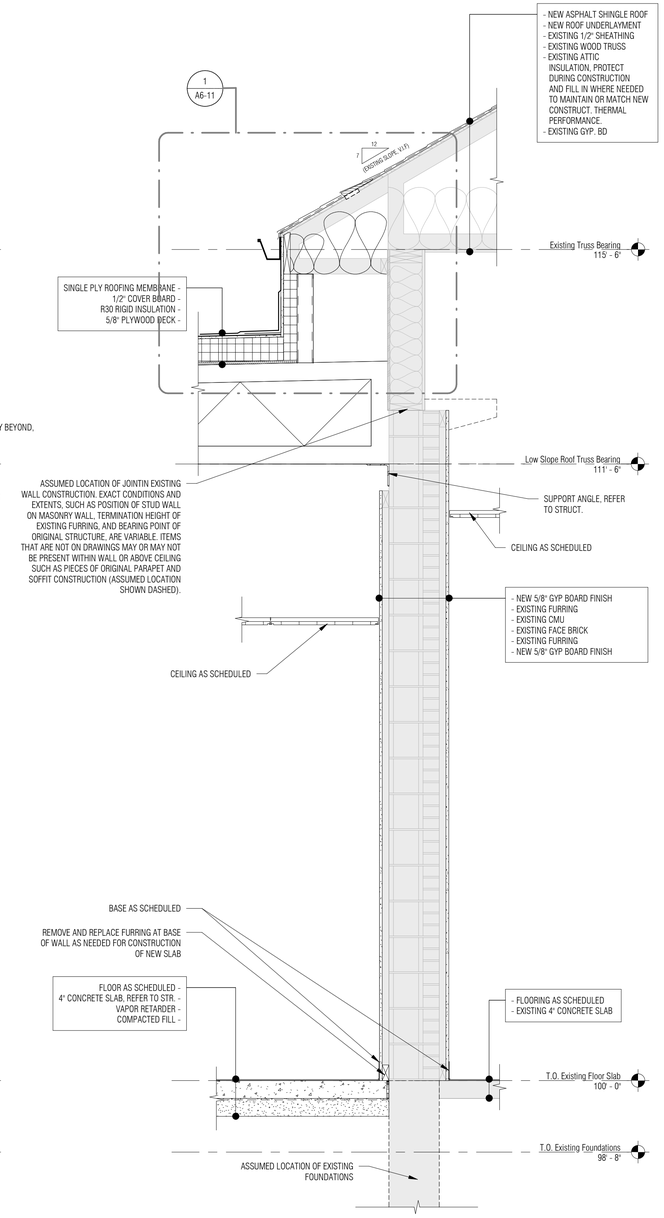
4 A5-11 Wall Section
3/4" = 1'-0"



3 A5-11 Wall Section
3/4" = 1'-0"



2 A3-01 Wall Section
3/4" = 1'-0"



1 A5-11 Wall Section
3/4" = 1'-0"

3/6/2026 3:47:22 PM C:_Revit\Local\23-175 - Canton Western Wayne Renovation Setback Update_mshowalter440E3.rvt

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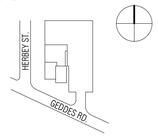
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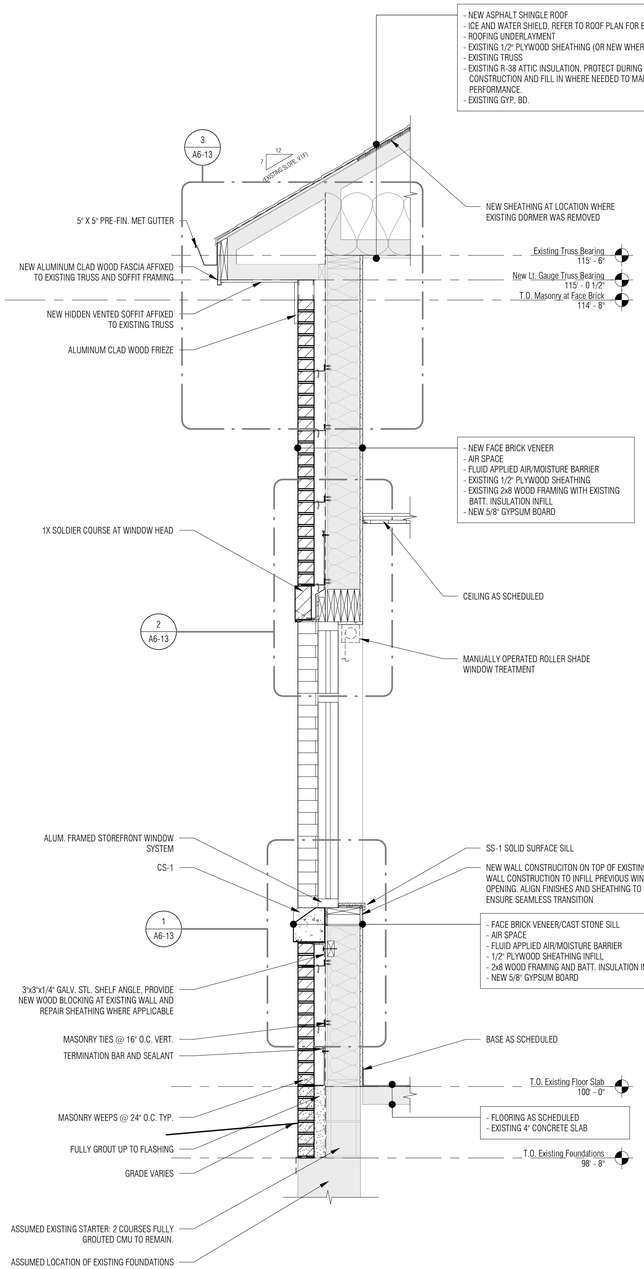
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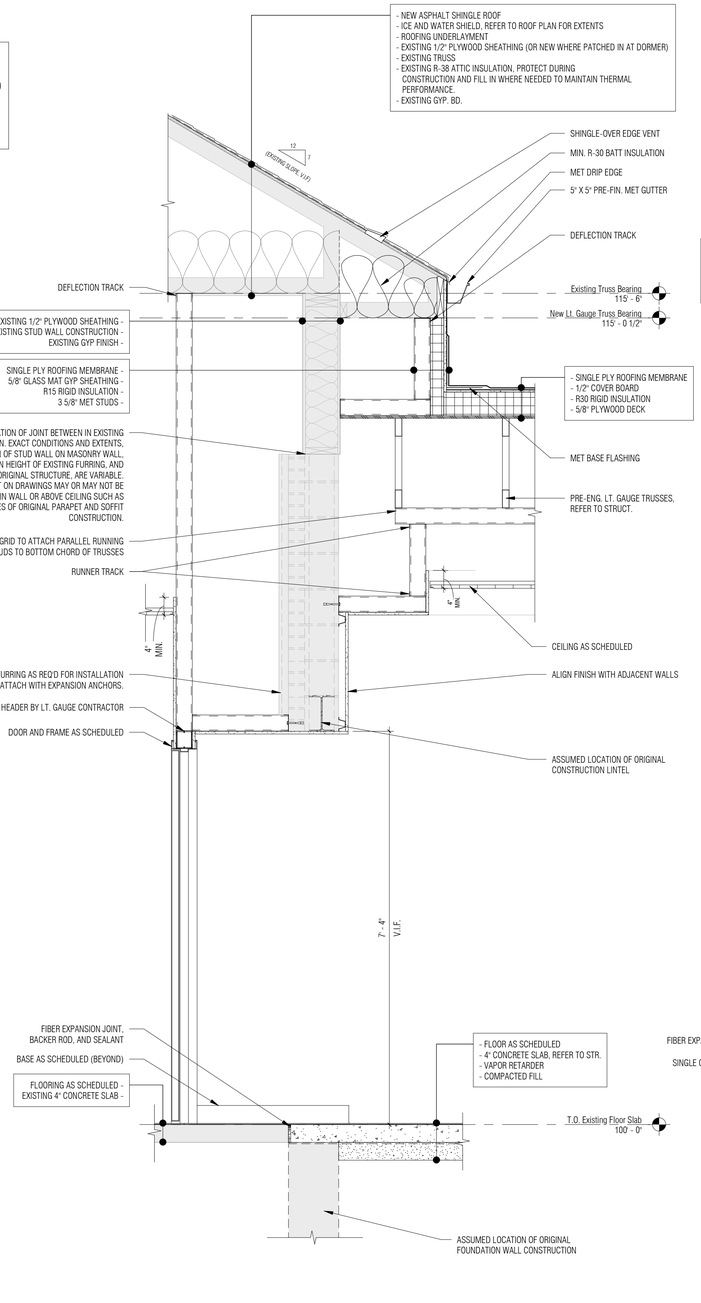
Wall Sections

SHEET NO.

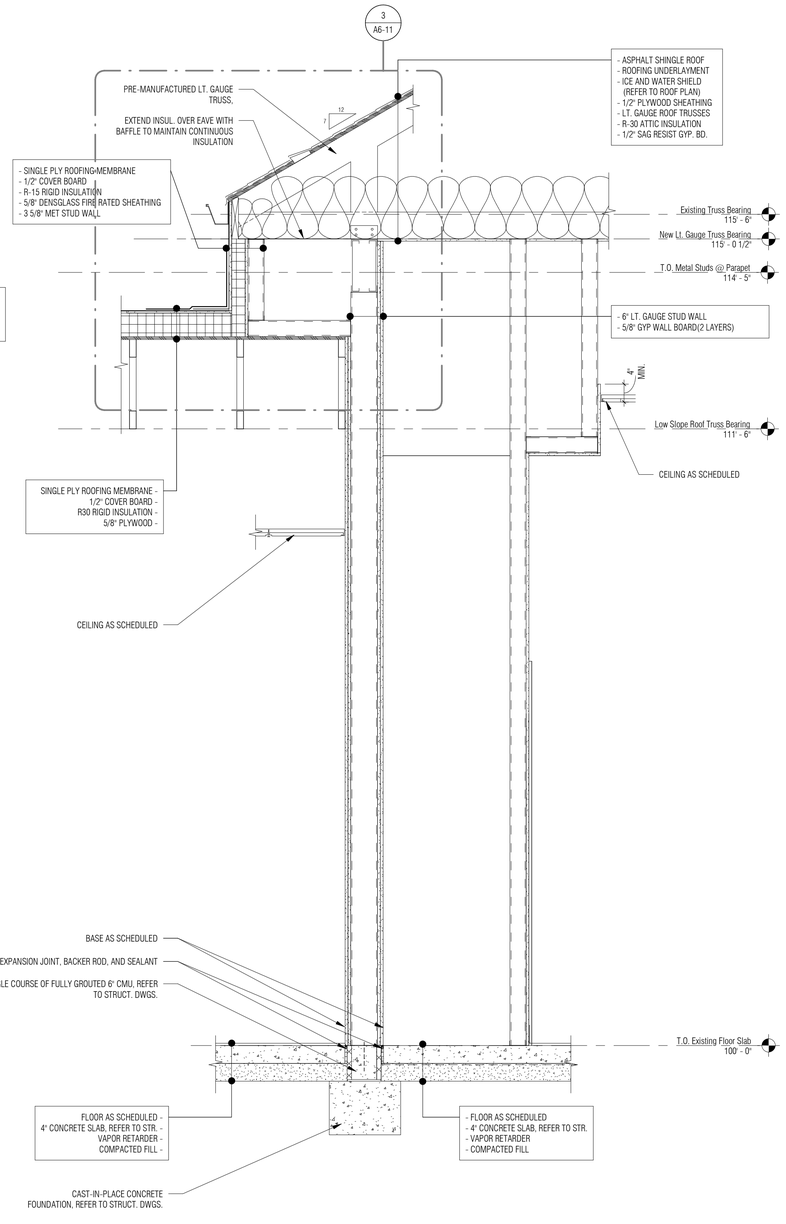
A6-01



3 A5-11 Wall Section
3/4" = 1'-0"



2 A5-11 Wall Section
3/4" = 1'-0"



1 A5-11 Wall Section
3/4" = 1'-0"

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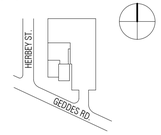
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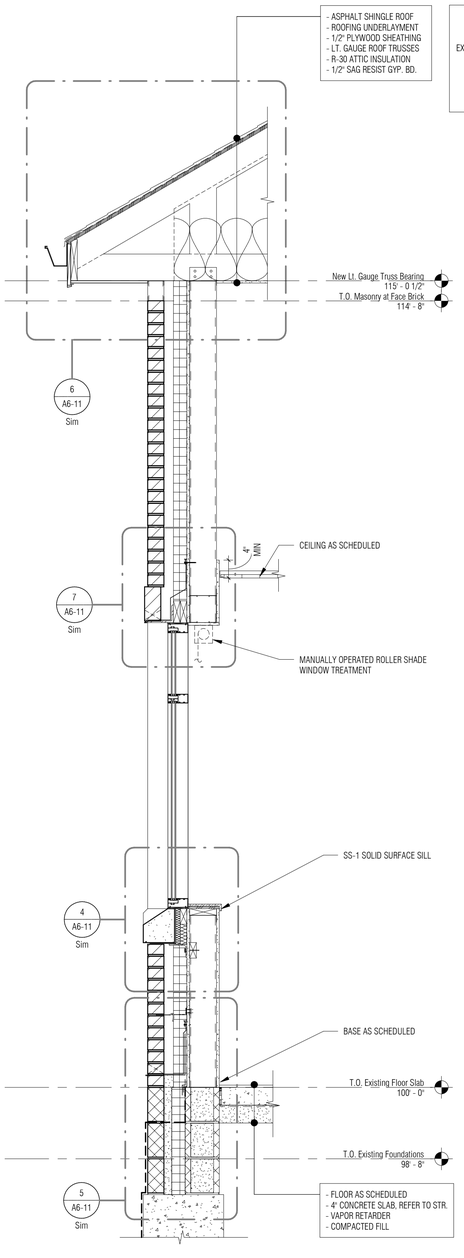
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Wall Sections

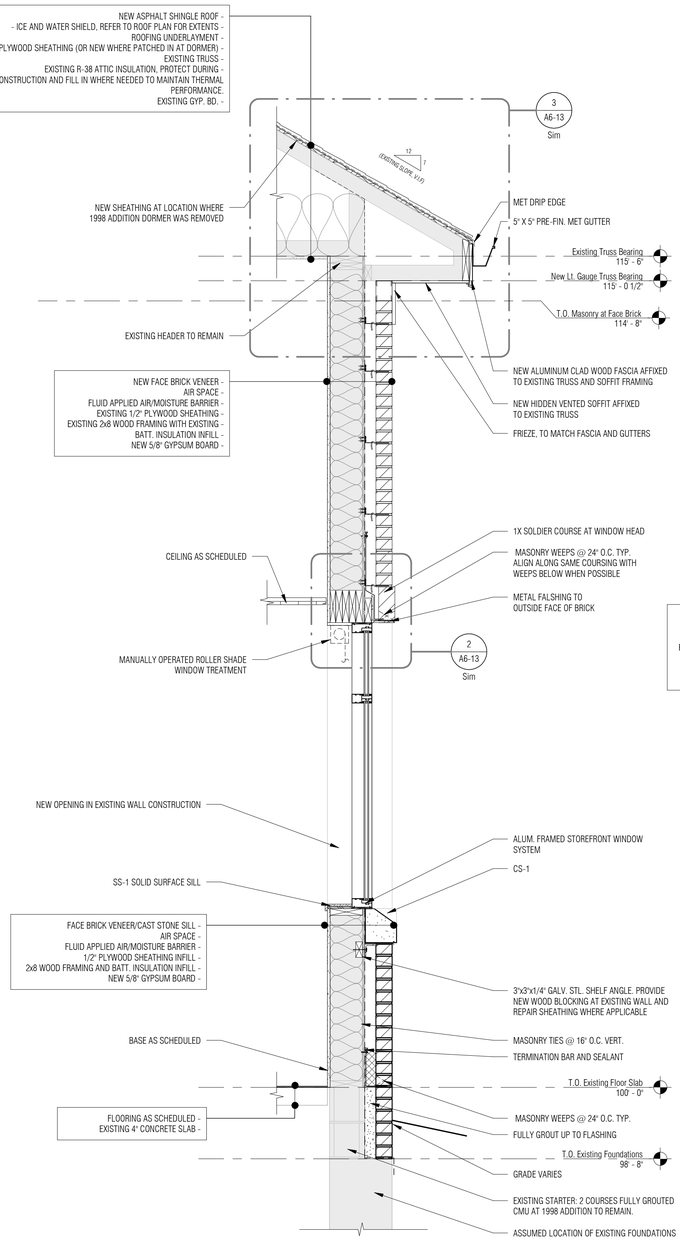
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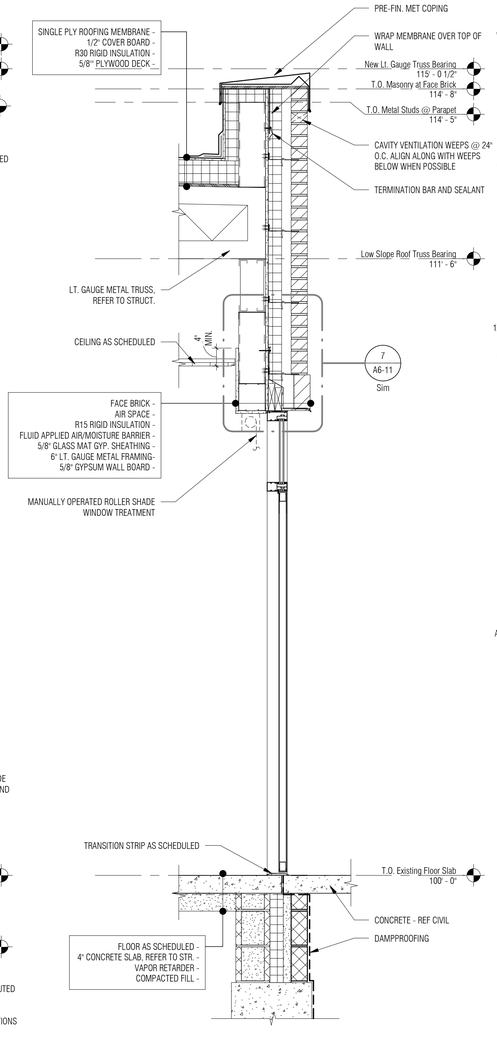
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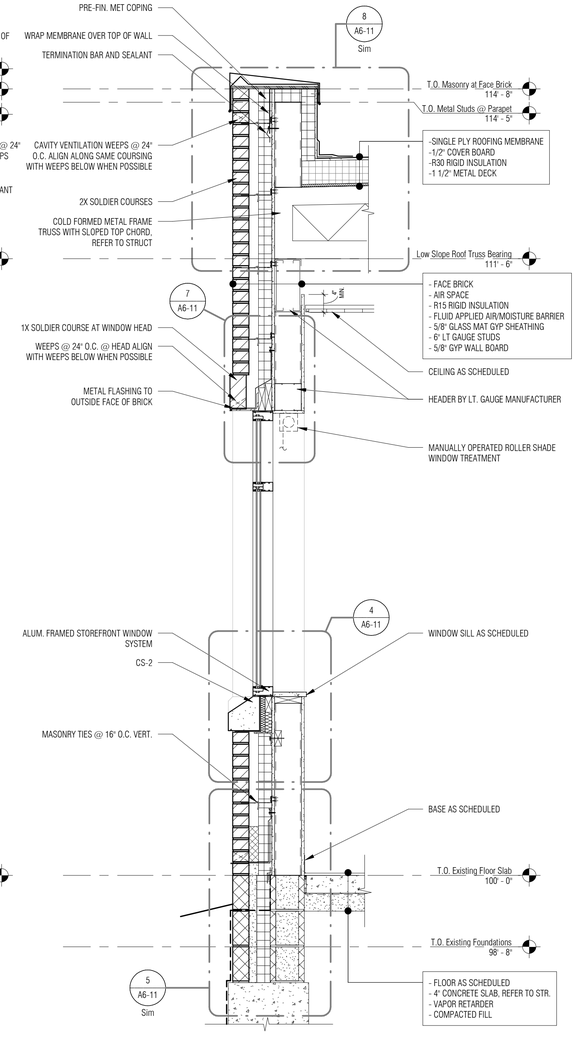
4 A5-11 Wall Section
3/4" = 1'-0"



3 A5-11 Wall Section
3/4" = 1'-0"



2 A5-11 Wall Section
3/4" = 1'-0"



1 A5-11 Wall Section
3/4" = 1'-0"

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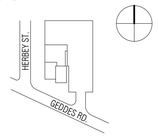
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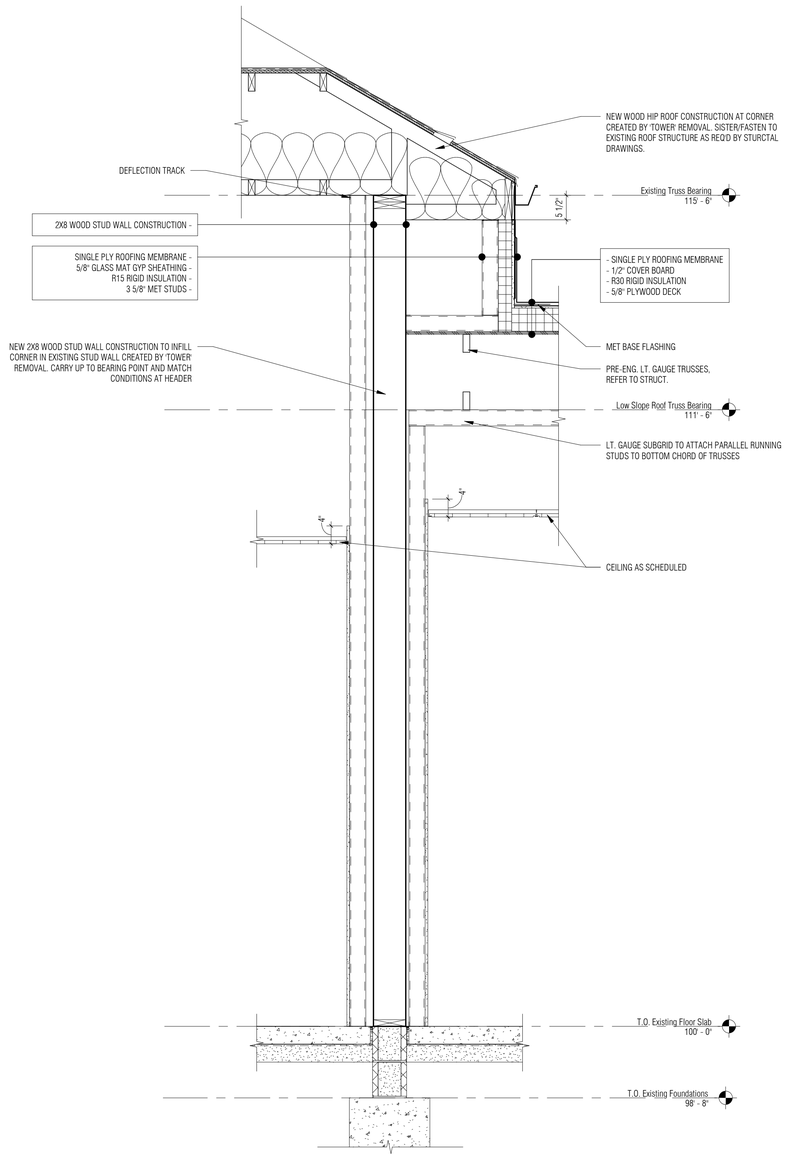
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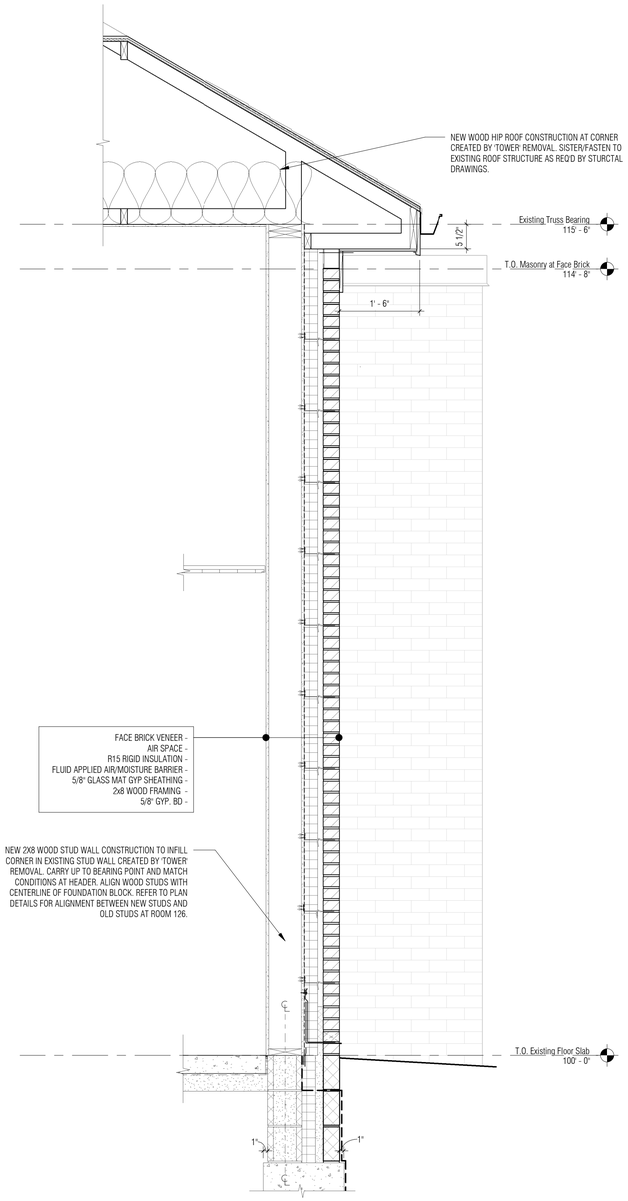
Wall Sections

SHEET NO.

A6-03



2 / A3-01 Wall Section
3/4" = 1'-0"



1 / A3-01 Wall Section
3/4" = 1'-0"

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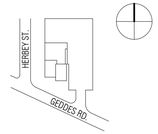
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CONSULTANT

KEY PLAN

NORTH



OWNER

Charter Township of Canton - Western Wayne

PROJECT NAME

Growth Works

44582 Geddes Rd, Canton, MI 48188

PROJECT NO.

23-175

ISSUES / REVISIONS

DRAWN BY

JNC

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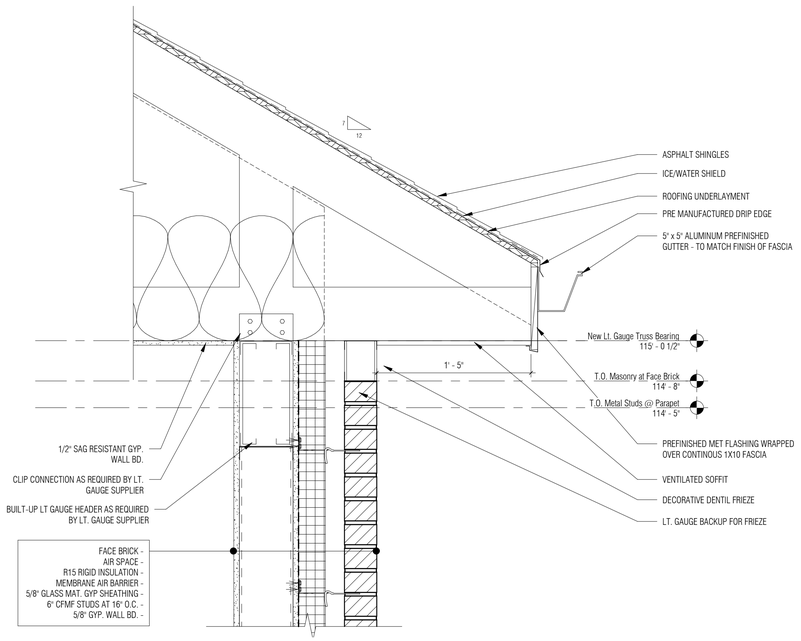
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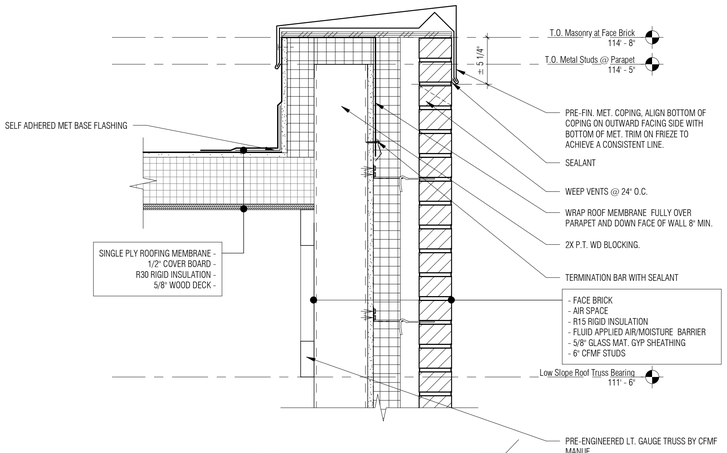
Wall Sections

SHEET NO.

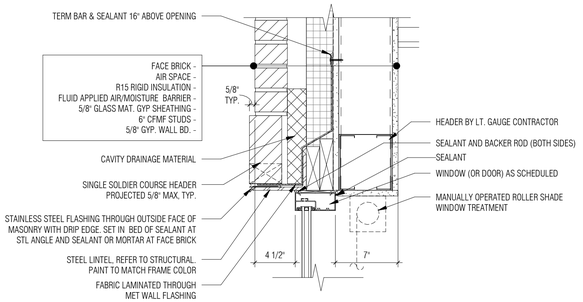
A6-04



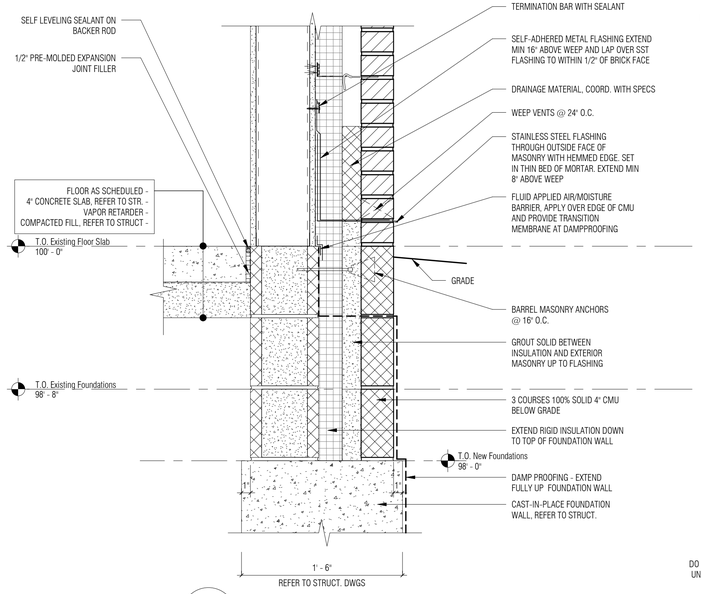
6 A6-01 Section 13 - Callout 1 - Callout 1
1 1/2" = 1'-0"



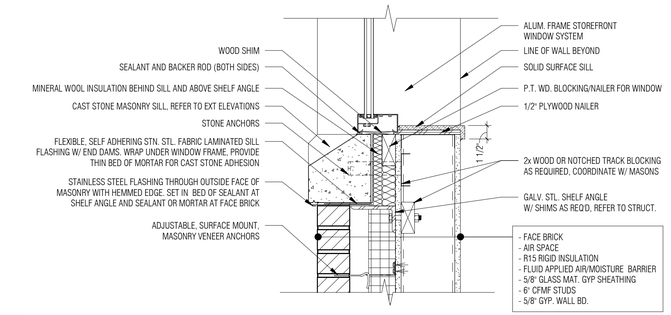
8 A6-01 Section 15 - Callout 1 - Callout 1
1 1/2" = 1'-0"



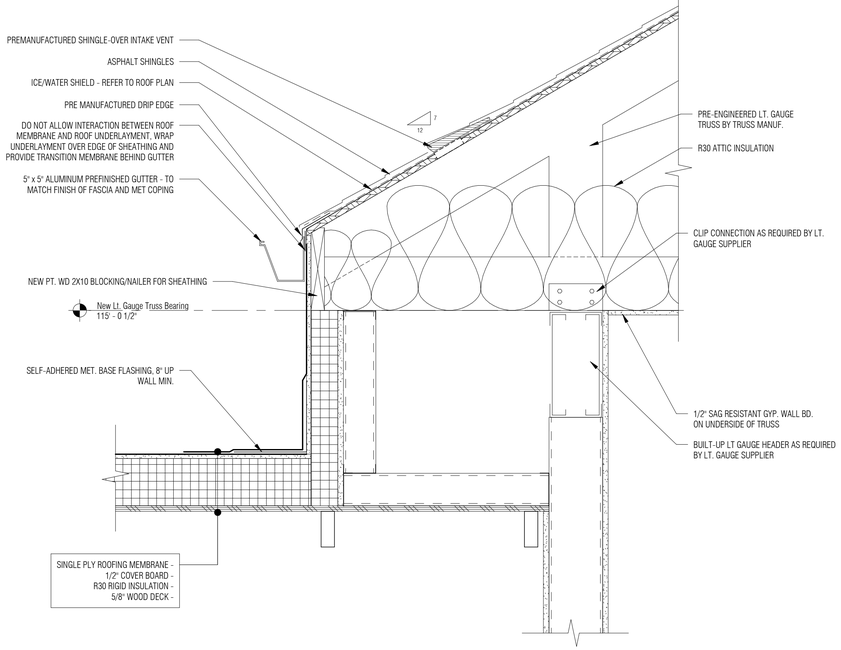
7 A6-03 Detail @ Window Head in New Construction
1 1/2" = 1'-0"



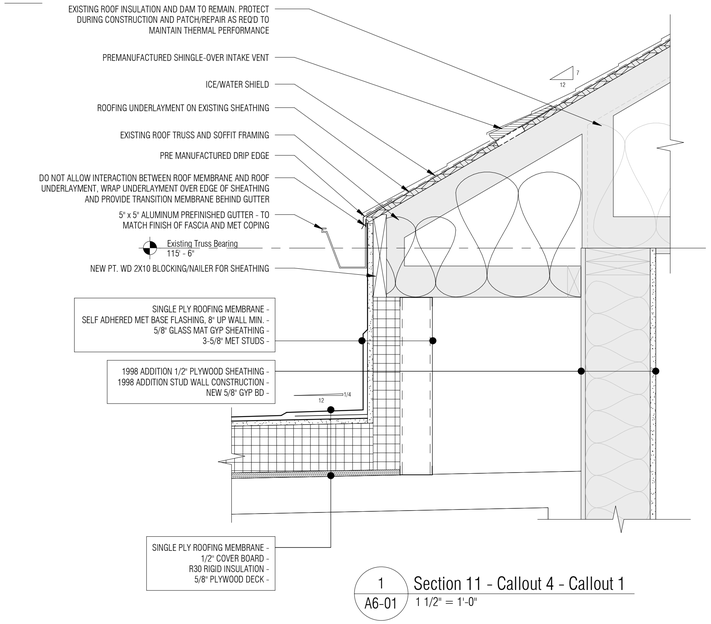
5 A6-01 Section 15 - Callout 1 - Callout 2
1 1/2" = 1'-0"



4 A6-03 Section Detail @ Window Sill in New Construction
1 1/2" = 1'-0"



3 A6-02 Section 14 - Callout 2 - Callout 1
1 1/2" = 1'-0"



1 A6-01 Section 11 - Callout 4 - Callout 1
1 1/2" = 1'-0"

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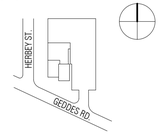
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PROJECT NO.

23-175

ISSUES / REVISIONS

DRAWN BY

JNC

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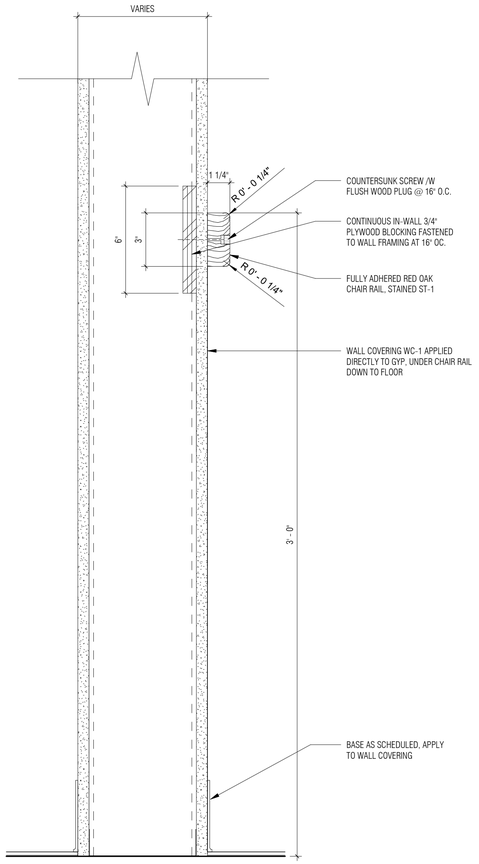
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SHEET NAME

Section Details

SHEET NO.

A6-11



COUNTERSUNK SCREW /W FLUSH WOOD PLUG @ 16" O.C.

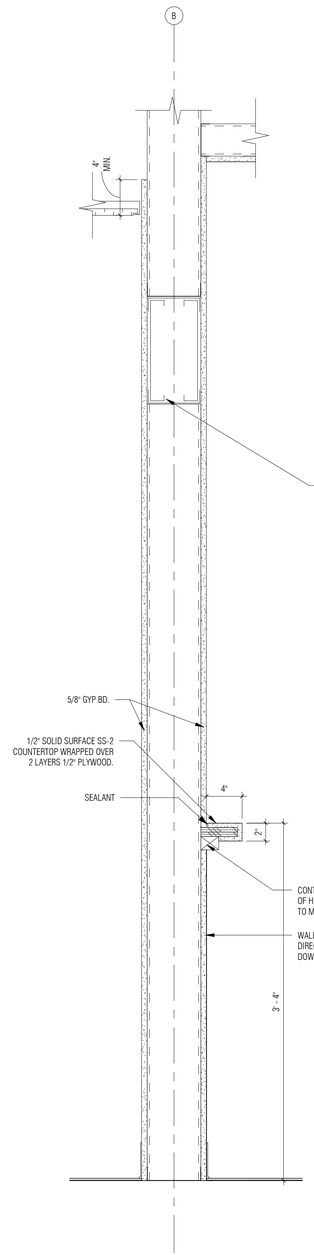
CONTINUOUS IN-WALL 3/4" PLYWOOD BLOCKING FASTENED TO WALL FRAMING AT 16" OC.

FULLY ADHERED RED OAK CHAIR RAIL, STAINED ST-1

WALL COVERING WC-1 APPLIED DIRECTLY TO GYP, UNDER CHAIR RAIL DOWN TO FLOOR

BASE AS SCHEDULED, APPLY TO WALL COVERING

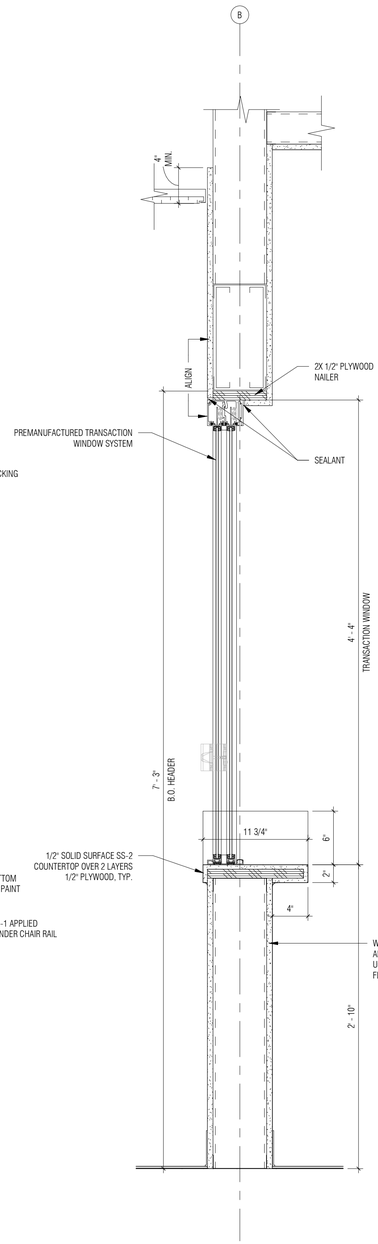
4 / A3-01 Typical Wainscott/Chair Rail
3" = 1'-0"



CONT. CLEAT AT BOTTOM OF HIGH COUNTER - PAINT TO MATCH WALL

WALL COVERING WC-1 APPLIED DIRECTLY TO GYP, UNDER CHAIR RAIL DOWN TO FLOOR

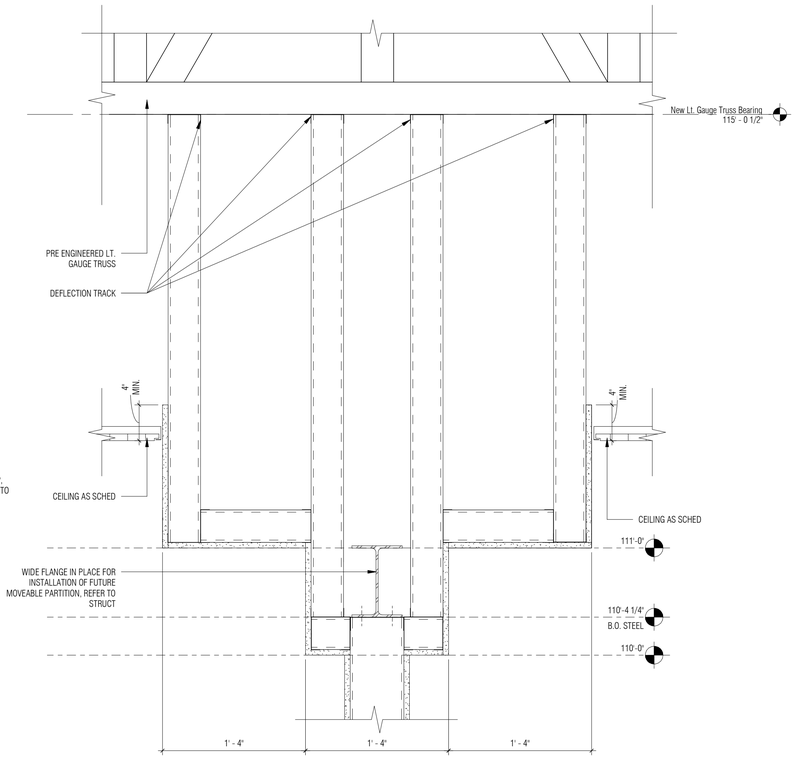
3 / A3-01 Lobby 101 Feature Wall Through Display Case
1 1/2" = 1'-0"



1/2" SOLID SURFACE SS-2 COUNTERTOP OVER 2 LAYERS 1/2" PLYWOOD, TYP.

WALL COVERING WC-1 APPLIED DIRECTLY TO GYP, UNDER CHAIR RAIL DOWN TO FLOOR

2 / A3-01 Section Detail Through Transaction Window
1 1/2" = 1'-0"



1 / A5-11 Section Detail
1 1/2" = 1'-0"

3/6/2026 3:47:27 PM C:_Revit\Local\23-175 - Canton Western Wayne Renovation Setback Update_mshowalter44QE3.rvt

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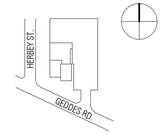
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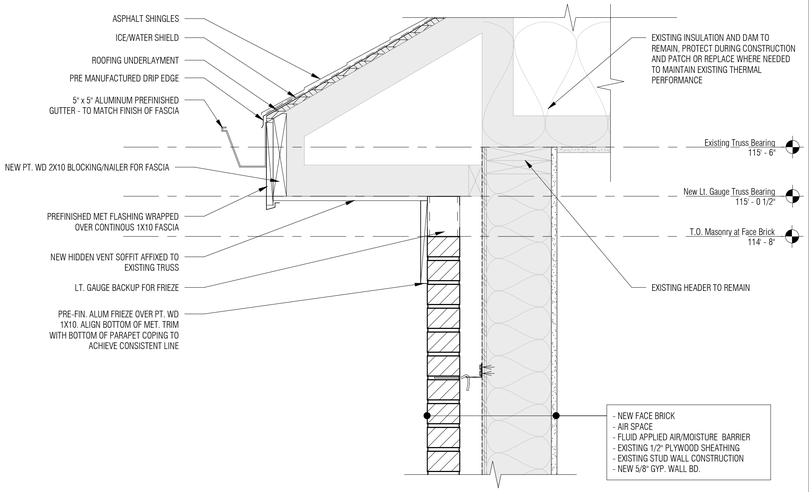
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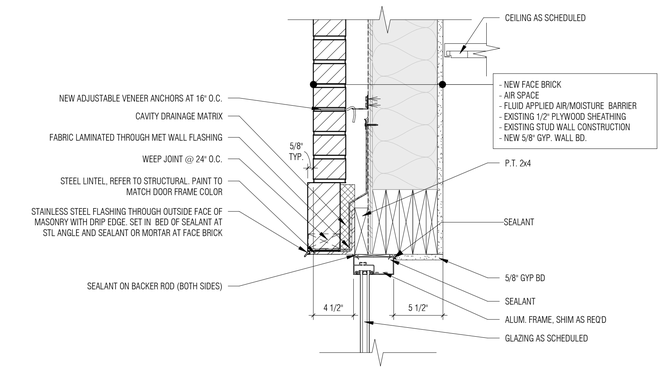
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SHEET NAME
Section Details

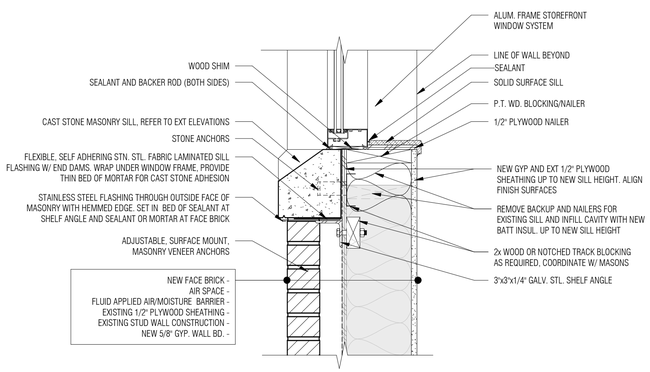
SHEET NO.
A6-12



3 / A6-02 Section Detail
1 1/2" = 1'-0"



2 / A6-02 Section Detail
1 1/2" = 1'-0"



1 / A6-02 Section Detail
1 1/2" = 1'-0"

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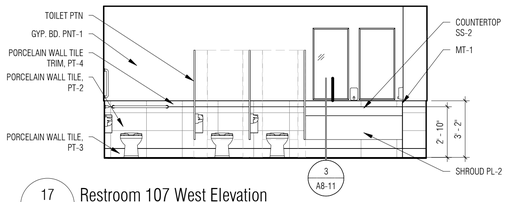
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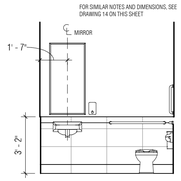
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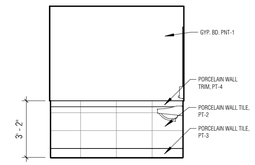
A6-13



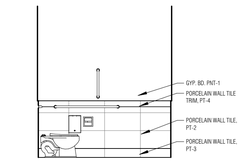
17 A3-01 Restroom 107 West Elevation
1/4" = 1'-0"



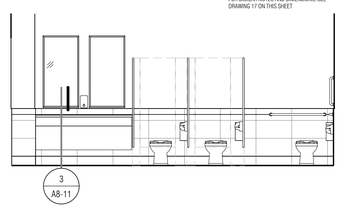
16 A3-01 Staff Restroom 114 East Elevation
1/4" = 1'-0"



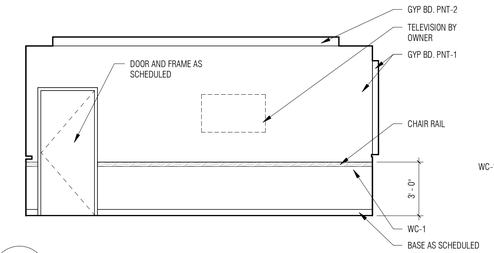
15 A3-01 Staff Restroom 114 South Elevation
1/4" = 1'-0"



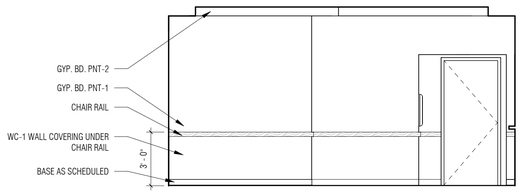
14 A3-01 Staff Restroom 114 West Elevation
1/4" = 1'-0"



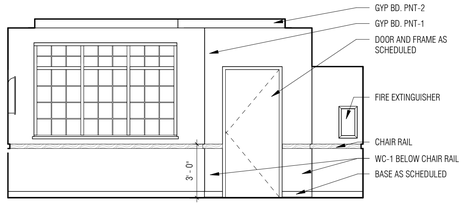
18 A3-01 Restroom 108 East Elevation
1/4" = 1'-0"



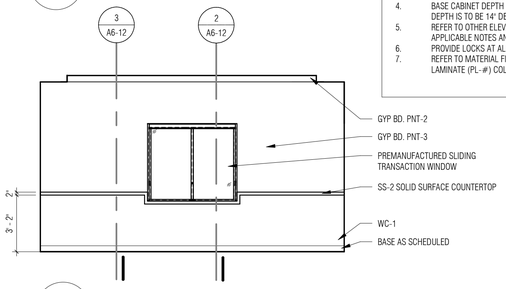
13 A3-01 Lobby 101 North Elevation
1/4" = 1'-0"



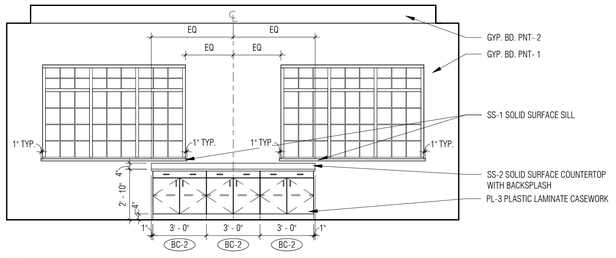
12 A3-01 Lobby 101 South Elevation
1/4" = 1'-0"



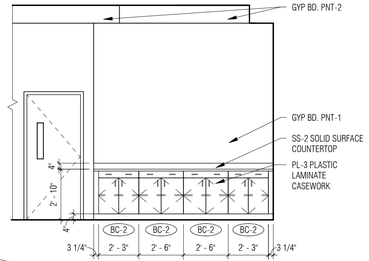
11 A3-01 Lobby 101 East Elevation
1/4" = 1'-0"



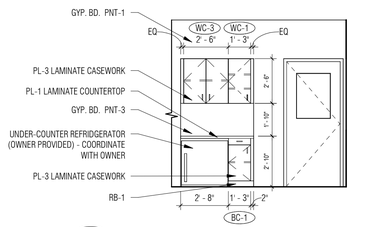
10 A3-01 Lobby 101 West Elevation
1/4" = 1'-0"



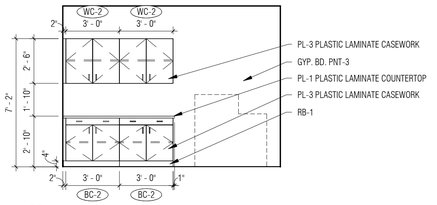
9 A3-01 Large Group Meeting Room 104 East Elevation
1/4" = 1'-0"



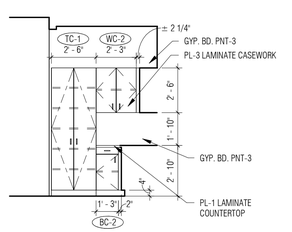
8 A3-01 Large Meeting Room 105 South Elevation
1/4" = 1'-0"



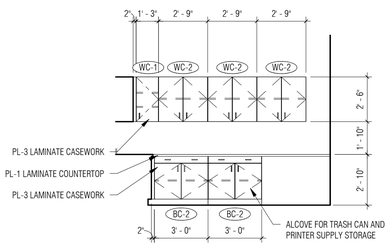
7 A3-01 Corridor 111 Alcove West Elevation
1/4" = 1'-0"



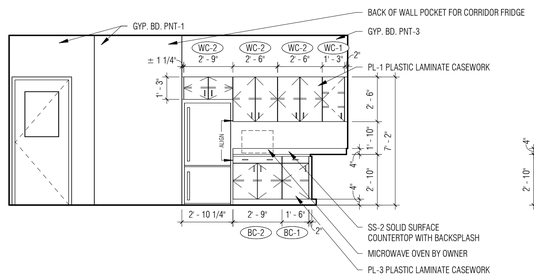
6 A3-01 Work Room 123 West Elevation
1/4" = 1'-0"



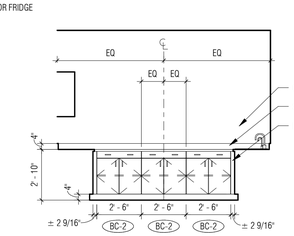
5 A3-01 Work Room 117 West Elevation
1/4" = 1'-0"



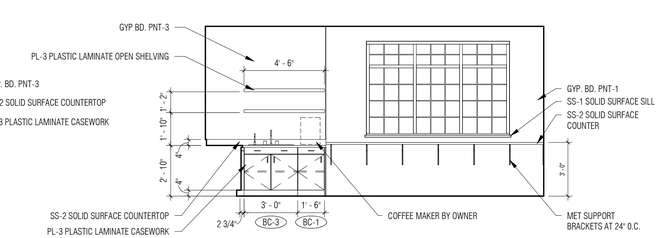
4 A3-01 Work Room 117 North Elevation
1/4" = 1'-0"



3 A3-01 Staff Break Room 110 East Elevation
1/4" = 1'-0"



2 A3-01 Staff Break Room 110 South Elevation
1/4" = 1'-0"



1 A3-01 Staff Break Room 110 West Elevation
1/4" = 1'-0"

CASEWORK LEGEND

CASEWORK MODEL NUMBERS ARE DERIVED FROM NAAWS CDS CABINET DESIGN SERIES AS A BASIS OF DESIGN

BASE CABINETS:

BC-1 DOOR W / DRAWERS STORAGE - 211
BC-2 DOORS W / DRAWERS STORAGE - 212
BC-3 DOORS W/O DRAWERS UNDER SINK UNIT - 156

WALL HUNG CABINETS:

WC-1 STORAGE W/ DOOR - 311
WC-2 STORAGE W/ DOORS - 312

TALL CABINETS:

TC-1 SHELVING CABINET W/ DOORS - 402

GENERAL NOTES

1. REFER TO MATERIAL FINISH/COLOR SCHEDULE (SPEC SECTION 000200) FOR COLORS.
2. ALL WD TRIM TO HAVE EASED EDGES

GENERAL CASEWORK NOTES

1. ALL EXPOSED SURFACES ARE TO BE FINISHED
2. PROVIDE FINISHED FILLER PANELS AS REQUIRED AT ALL SPACES BETWEEN CABINETS AND BETWEEN CASEWORK AND WALLS
3. CAULK AROUND ENTIRE PERIMETER OF ALL CABINETS AND COUNTERTOPS AT INTERSECTION OF DISIMILAR SURFACES
4. BASE CABINET DEPTH IS TO BE 24" DEEP NOMINAL (U.O.N.), WALL CABINET DEPTH IS TO BE 14" DEEP NOMINAL (U.O.N.)
5. REFER TO OTHER ELEVATIONS WITHIN THE SAME ROOM FOR SIMILAR APPLICABLE NOTES AND REQUIREMENTS
6. PROVIDE LOCKS AT ALL DRAWER LOCATIONS - KEYED PER ROOM
7. REFER TO MATERIAL FINISH/COLOR SCHEDULE (SPEC SECTION 000200) FOR LAMINATE (PL-#) COLORS

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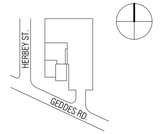
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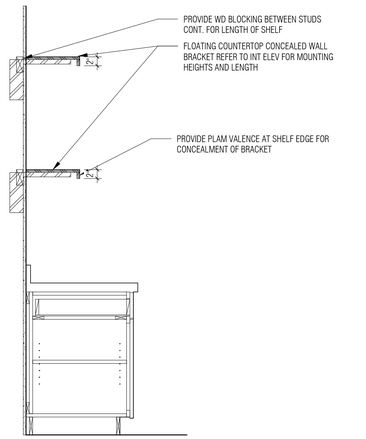
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SHEET NAME

Interior Elevations

SHEET NO.

A8-01



5 Typ. Floating Shelf Detail
3/4" = 1'-0"

CASEWORK LEGEND

CASEWORK MODEL NUMBERS ARE DERIVED FROM NAAWS CDS CABINET DESIGN SERIES AS A BASIS OF DESIGN

BASE CABINETS:

BC-1 DOOR W / DRAWERS STORAGE - 211
BC-2 DOORS W / DRAWERS STORAGE - 212
BC-3 DOORS W/O DRAWERS UNDER SINK UNIT - 156

WALL HUNG CABINETS:

WC-1 STORAGE W/ DOOR - 311
WC-2 STORAGE W/ DOORS - 312

TALL CABINETS:

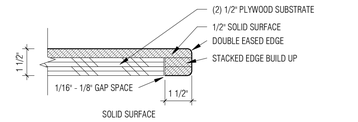
TC-1 SHELVING CABINET W/ DOORS - 402

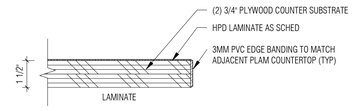
GENERAL NOTES

1. REFER TO MATERIAL FINISH/COLOR SCHEDULE (SPEC SECTION 000200) FOR COLORS.
2. ALL WD TRIM TO HAVE EASED EDGES

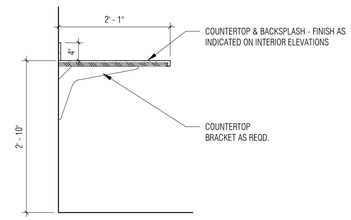
GENERAL CASEWORK NOTES

1. ALL EXPOSED SURFACES ARE TO BE FINISHED
2. PROVIDE FINISHED FILLER PANELS AS REQUIRED AT ALL SPACES BETWEEN CABINETS AND BETWEEN CASEWORK AND WALLS
3. CAULK AROUND ENTIRE PERIMETER OF ALL CABINETS AND COUNTERTOPS AT INTERSECTION OF DISIMILAR SURFACES
4. BASE CABINET DEPTH IS TO BE 24" DEEP NOMINAL (U.O.N.), WALL CABINET DEPTH IS TO BE 14" DEEP NOMINAL (U.O.N.)
5. REFER TO OTHER ELEVATIONS WITHIN THE SAME ROOM FOR SIMILAR APPLICABLE NOTES AND REQUIREMENTS
6. PROVIDE LOCKS AT ALL DRAWER LOCATIONS - KEYED PER ROOM
7. REFER TO MATERIAL FINISH/COLOR SCHEDULE (SPEC SECTION 000200) FOR LAMINATE (PL-#) COLORS

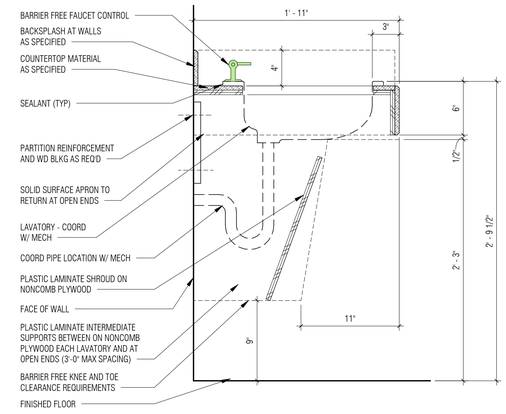




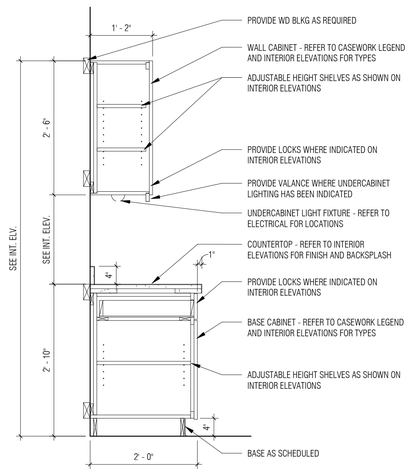
4 Typ. Countertop Edge
3" = 1'-0"



2 Typ. Countertop
3/4" = 1'-0"



3 A8-01 ADA Bathroom Counter
1 1/2" = 1'-0"



1 Typ. Casework Detail
3/4" = 1'-0"

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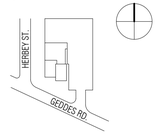
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CONSULTANT

KEY PLAN NORTH



OWNER

Charter Township of Canton - Western Wayne

PROJECT NAME

Growth Works

44582 Geddes Rd, Canton, MI 48188

PROJECT NO.

23-175

ISSUES / REVISIONS

DRAWN BY

Author

CHECKED BY

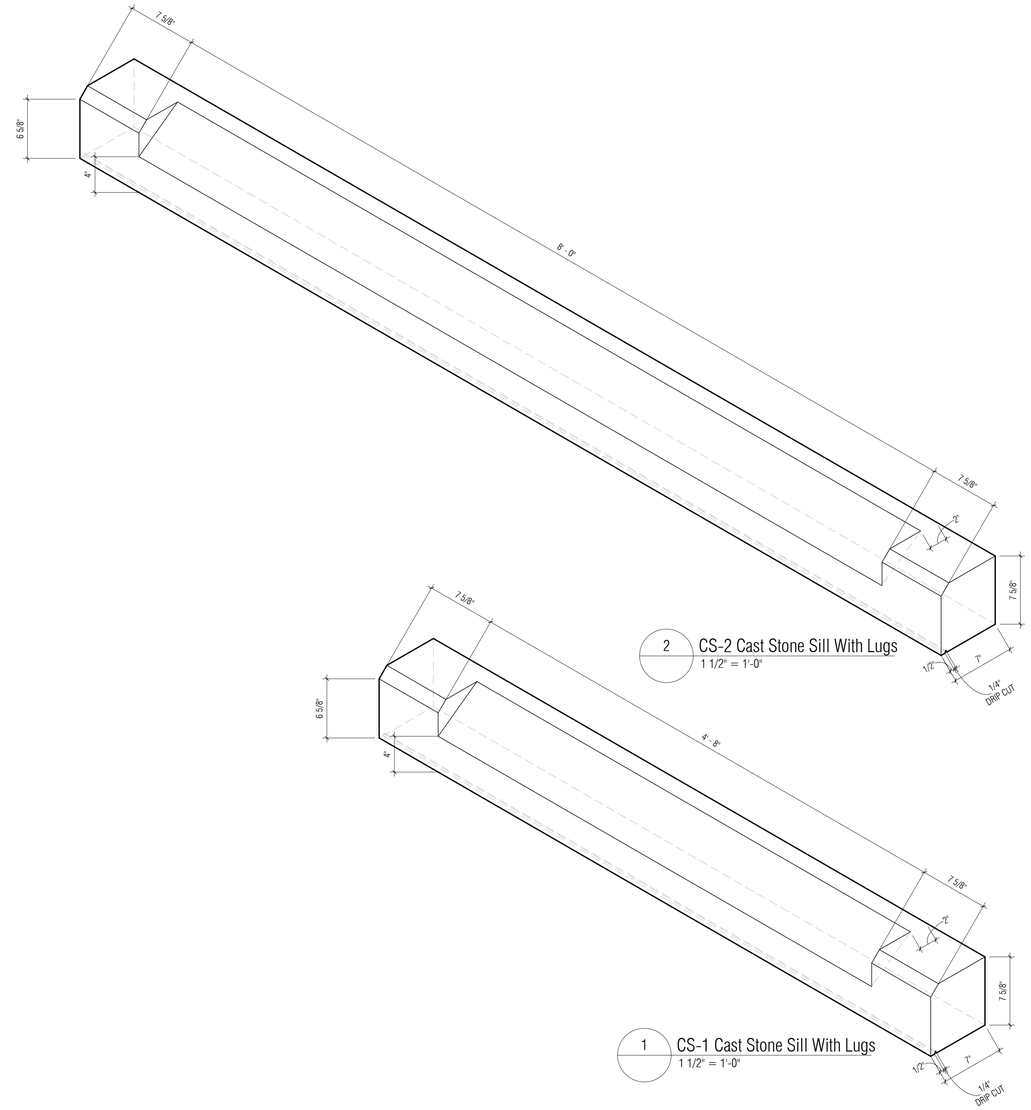
APPROVED BY

SHEET NAME

Casework Details

SHEET NO.

A8-11



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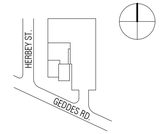
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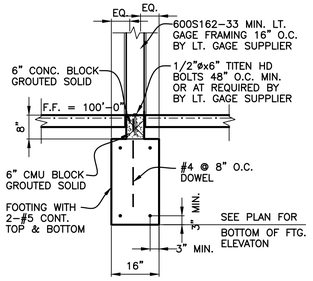
APPROVED BY

SHEET NAME

Cast Stone Profiles

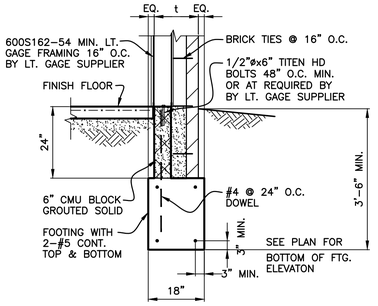
SHEET NO.

A8-12



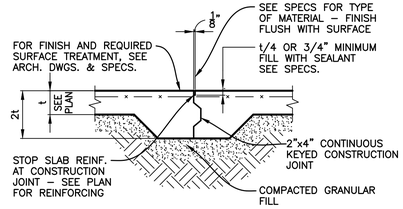
4 S3-01 INTERIOR WALL FOOTING AT LT. GAGE WALL

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



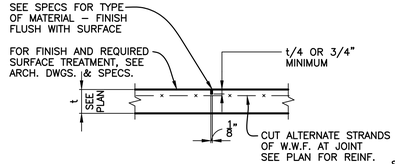
3 S3-01 TYPICAL EXTERIOR WALL FOOTING WITH LT. GAGE STUDS

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



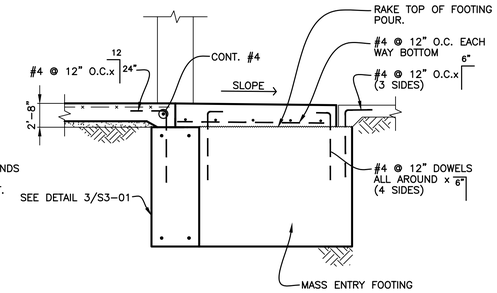
2A S3-01 TYPICAL FLOOR CONSTRUCTION JOINT

SCALE : 1" = 1'-0"



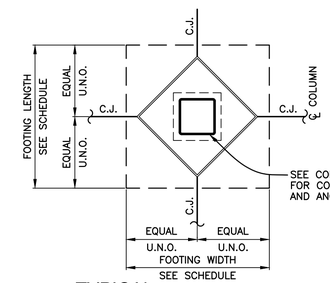
2 S3-01 TYPICAL FLOOR CONTROL JOINT

SCALE : 1" = 1'-0"



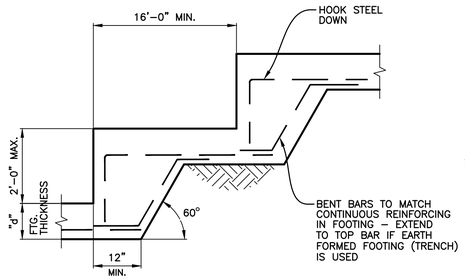
1 S3-01 TYPICAL MASS ENTRANCE SLAB

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



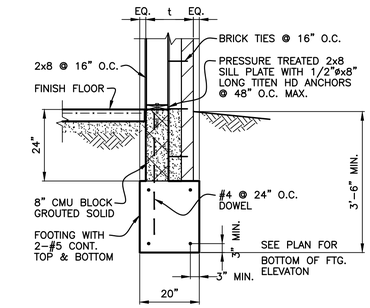
6 S3-01 TYPICAL ISOLATION JOINT AT COLUMN

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



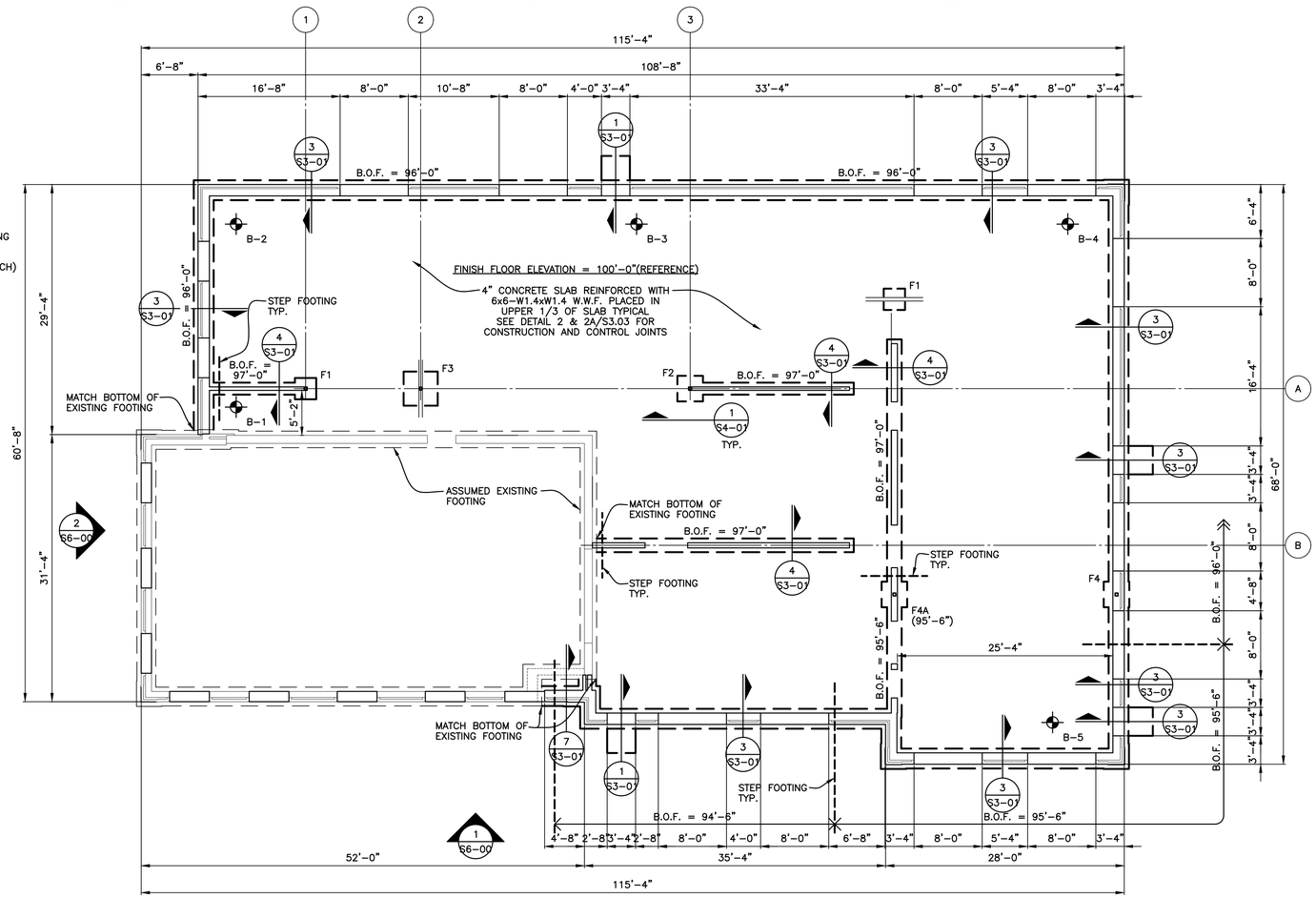
5 S3-01 TYPICAL STEP FOOTING DETAIL

SCALE : NONE (IF REQUIRED)



7 S3-01 TYPICAL EXTERIOR WALL FOOTING WITH WOOD STUDS

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



FOUNDATION PLAN

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

INDICATES APPROXIMATE LOCATION OF SOIL BORING. SEE TESTING ENGINEERS & CONSULTANTS, INC TEC REPORT: 65236 OCTOBER 6, 2025. SEE SOIL REPORT FOR SITE PREPARATIONS, AND FOUNDATION RECOMMENDATIONS.

BOTTOM OF EXTERIOR FOOTING ELEVATION = 96'-0" UNLESS OTHERWISE NOTED (X'-X")

TOP OF INTERIOR FOOTING ELEVATION = 99'-4" UNLESS OTHERWISE NOTED (X'-X")

BOTTOM OR INTERIOR FOOTING ELEVATION = 97'-0" UNLESS OTHERWISE NOTED (X'-X")

F1: 2'-6"x2'-6"x28" DEEP WITH 4-#4 EACH WAY BOTTOM

F2: 3'-0"x3'-0"x28" DEEP WITH 4-#4 EACH WAY BOTTOM

F3: 4'-0"x4'-0"x28" DEEP WITH 4-#4 EACH WAY BOTTOM

F4: 2'-0"x2'-0"x40" DEEP RUN WALL FOOTING REINFORCING THOUGH FOOTING

F4A: 2'-0"x2'-0"x46" DEEP RUN WALL FOOTING REINFORCING THOUGH FOOTING

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KEY PLAN

OWNER

Charter Township of Canton - Western Wayne

PROJECT NAME

Growth Works

44582 Geddes Rd. Canton, MI 48188

PROJECT NO.

23-175

ISSUES / REVISIONS

BIDDING/CONSTRUCTION 03/05/2026

DRAWN BY

RC

CHECKED BY

TS

APPROVED BY

TS

SHEET NAME

FOUNDATION PLAN

SHEET NO.

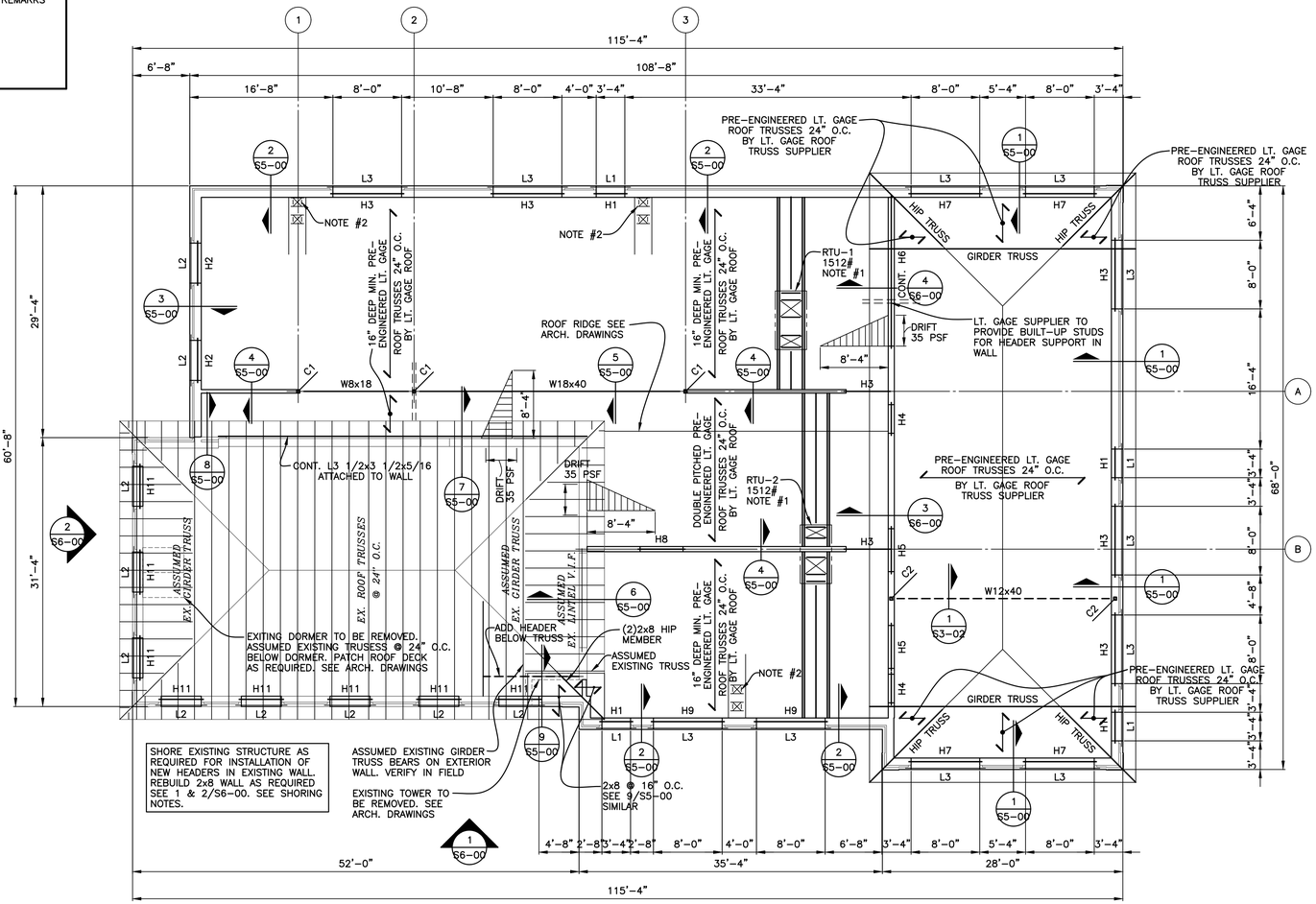
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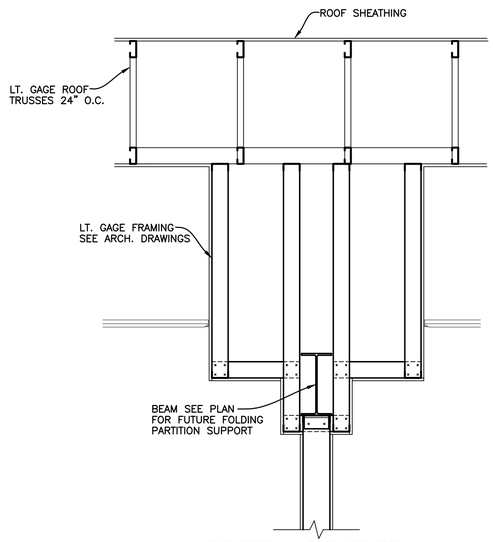
HEADER SCHEDULE

MARK	DESCRIPTION	REMARKS
H1	(2)600S162-54 STUDS + 600T125-54 TRACK TOP & BOTTOM MIN. BY LT. GAGE SUPPLIER	
H2	(2)600S162-54 STUDS + 600T125-54 TRACK TOP & BOTTOM MIN. BY LT. GAGE SUPPLIER	
H3	(2)800S162-68 STUDS + 600T125-54 TRACK TOP & BOTTOM MIN. BY LT. GAGE SUPPLIER	
H4	(2)600S162-54 STUDS + 600T125-54 TRACK TOP & BOTTOM MIN. BY LT. GAGE SUPPLIER	
H5	(2)800S162-54 STUDS + 600T125-54 TRACK TOP & BOTTOM MIN. BY LT. GAGE SUPPLIER	
H6	(2)1200S162-97 STUDS + 600T125-54 TRACK TOP & BOTTOM MIN. BY LT. GAGE SUPPLIER	
H7	(2)800S162-54 STUDS + 600T125-54 TRACK TOP & BOTTOM MIN. BY LT. GAGE SUPPLIER	
H8	(2)800S162-54 STUDS + 600T125-54 TRACK TOP & BOTTOM MIN. BY LT. GAGE SUPPLIER	
H9	(2)800S162-68 STUDS + 600T125-54 TRACK TOP & BOTTOM MIN. BY LT. GAGE SUPPLIER	
H10	(2)800S162-54 STUDS + 600T125-54 TRACK TOP & BOTTOM MIN. BY LT. GAGE SUPPLIER	
H11	(3)2x8	SEE 1 & 2/S6-00

COLUMN SCHEDULE

		C2	C1	MARK
		HSS4x4	HSS4x4x1/4"	SIZE
		10x3/4x0'-10"	10x3/4x0'-10"	BASE PLATE
		(4)3/4"Øx1'-4" HEADED ANCHORS	(4)3/4"Øx1'-4" HEADED ANCHORS	ANCHOR BOLTS
				PIER (IF REQUIRED)
				REMARKS



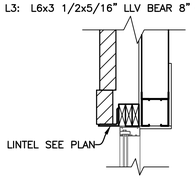


1 S3-02 SECTION AT FUTURE FOLDING PARTITION
SCALE : 3/4" = 1'-0"

L1: L4x3 1/2x5/16" LLV BEAR 8" ON BRICK EACH END

L2: L5x3 1/2x5/16" LLV BEAR 8" ON BRICK EACH END

L3: L6x3 1/2x5/16" LLV BEAR 8" ON BRICK EACH END



TYPICAL LINTEL DETAIL
SCALE : 3/4" = 1'-0"

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

TYPICAL ROOF SHEATHING IS 5/8" WOOD SHEATHING PROVIDE ROOF CLIPS TYPICAL AT PANEL EDGES BETWEEN TRUSSES. STAGGER PLYWOOD JOINTS BETWEEN ROWS OF SHEATHING (OFFSET 4'-0" EACH ROW) ATTACH WITH #10 TEK SCREWS 6" O.C. AT EDGES AND 12" O.C. IN THE FIELD

NOTE #1: LT. GAGE TRUSS SUPPLIER TO DESIGN TRUSSES FOR SUPPORT OF ROOF TOP UNITS. DOUBLE UP/HEADER TRUSSES AS NECESSARY FOR SUPPORT OF ROOF TOP UNITS. COORDINATE LOCATION, AND WEIGHT WITH MECHANICAL CONTRACTOR. PROVIDE DOUBLE LT. GAGE MEMBER ALL AROUND UNDER RTU SUPPORT CURB

NOTE #2: PROVIDE 3 5/8"x1 5/8"-20 GA. FRAMING MIN. AROUND ROOF SUMPS TYP.

NOTE: LT. GAGE TRUSSES AT 116'-6" ROOF (DETAILS 2, 3, 4 & 5/S5-00) DO NOT HAVE CEILING SHEATHING AT TRUSS BOTTOM CHORD. TRUSS SUPPLIER TO PROVIDE BRIDGING AT TRUSS BOTTOM CHORD AS NECESSARY FOR TRUSS DESIGN.

EXTERIOR WALL STUD NOTES

1: ALL EXTERIOR WALL STUDS AT 111'-6" TRUSS BEARING ELEVATIONS ARE TO BE 600S162-54 MINIMUM LT. GAGE STUDS 16" O.C. PROVIDE ADDITIONAL STUDS AT OPENINGS AS NECESSARY FOR HEADER SUPPORT. SEE LT. GAGE NOTES 1-6 ON SHEET S4-00.

2: ALL EXTERIOR WALL STUDS AT 115'-0 1/2" TRUSS BEARING ELEVATIONS ARE TO BE 600S200-54 MINIMUM LT. GAGE STUDS 16" O.C. PROVIDE ADDITIONAL STUDS AT OPENINGS AS NECESSARY FOR HEADER SUPPORT. SEE LT. GAGE NOTES 1-6 ON SHEET S4-00.

3: ALL INTERIOR LT. GAGE BEARING WALL STUDS ARE TO BE 600S162-33 MINIMUM LT. GAGE STUDS 16" O.C. PROVIDE ADDITIONAL STUDS AT OPENINGS AS NECESSARY FOR HEADER SUPPORT SEE LT. GAGE NOTES 1-6 ON SHEET S4-00.

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KEY PLAN

OWNER

Charter Township of Canton - Western Wayne

PROJECT NAME

Growth Works

44582 Geddes Rd. Canton, MI 48188

PROJECT NO.

23-175

ISSUES / REVISIONS

BIDDING/CONSTRUCTION 03/05/2026

DRAWN BY

RC

CHECKED BY

TS

APPROVED BY

TS

SHEET NAME

ROOF FRAMING PLAN

SHEET NO.

S3-02

G E N E R A L N O T E S

GENERAL CONDITIONS

1. IF ANY GENERAL NOTE CONFLICTS WITH ANY DETAIL OR NOTE ON THE PLANS OR IN THE SPECIFICATIONS, THE STRICTEST PROVISION SHALL GOVERN.

2. THE STRUCTURAL DRAWINGS ARE FOR THE PLACEMENT AND SIZE OF STRUCTURAL COMPONENTS ONLY. O.S.H.A., LOCAL GOVERNMENT CODES AND SAFETY CODE REQUIREMENTS SHALL BE ADHERED TO BY THE CONTRACTOR.

3. THE STRUCTURE IS DESIGNED TO BE SELF-SUPPORTING AND STABLE AFTER IT IS FULLY COMPLETED. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE ERECTION PROCEDURE AND SEQUENCE, AND TO ENSURE THE SAFETY OF THE STRUCTURE AND ITS COMPONENT PARTS DURING ERECTION. THIS INCLUDES PROVIDING TEMPORARY BRACING, SHORING, GUYS OR TIE- DOWNS. THESE TEMPORARY SUPPORTS WILL REMAIN IN PLACE UNTIL ALL STRUCTURAL COMPONENTS ARE IN PLACE AND COMPLETED.

4. USE OF ENGINEERING DRAWINGS AS ERECTION DRAWINGS BY THE CONTRACTOR IS STRICTLY PROHIBITED. DIMENSIONS SHOWN ON THE STRUCTURAL DRAWINGS ARE FOR REFERENCE ONLY AND SHOULD NOT BE USED FOR BUILDING LAYOUT AND LOCATION. SEE ARCHITECTURAL DRAWINGS AND SITE PLAN FOR THESE PURPOSES.

5. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AT THE RATE OF NO MORE THAN 80 DRAWINGS PER WEEK. THE CONTRACTOR SHALL SUBMIT A SCHEDULE OF SHOP DRAWINGS PRIOR TO SUBMITTAL. THE CONTRACTOR SHALL CHECK SHOP DRAWINGS PRIOR TO SUBMITTAL AND IS SOLELY RESPONSIBLE FOR ERRORS & OMISSION IN THE PREPARATION OF SHOP DRAWINGS TO CONFORM TO THE DESIGN DRAWINGS. SUBMIT ELECTRONIC SHOP DRAWINGS FOR ENGINEER REVIEW.

6. IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY ALL RELEVANT DIMENSIONS AND ELEVATIONS FOR EQUIPMENT INSTALLATIONS AGAINST PURCHASED MANUFACTURER'S CERTIFIED EQUIPMENT DRAWINGS. DIMENSIONS THAT DEPEND UPON SPECIFIC EQUIPMENT SUCH AS ELEVATOR OPENINGS, MECHANICAL EQUIPMENT SUPPORTS, ETC. SHALL BE COORDINATED BY THE CONTRACTOR PRIOR TO SUBMITTAL TO THE ARCHITECT/ENGINEER. SUCH DIMENSIONS SHALL BE PROVIDED ON THE SHOP DRAWINGS BY THE CONTRACTOR PRIOR TO SUBMITTAL TO THE ARCHITECT/ENGINEER.

7. PRE-MANUFACTURED ITEMS SUCH AS CANOPIES, AWNINGS, SUNSHADES, ETC. SHALL BE DESIGNED BY SUPPLIER. SUPPLIER SHALL SUBMIT SIGNED AND SEALED SHOP DRAWINGS AND CALCULATIONS BY A REGISTERED ENGINEER IN THE STATE OF MICHIGAN FOR RECORD TO ARCHITECT. SHOP DRAWINGS SHALL INDICATE ALL DESIGN LOADS AND INCLUDE ALL CONNECTIONS AND MATERIAL NECESSARY FOR INSTALLATION OF PRE-MANUFACTURED ITEMS.

EXISTING CONDITIONS

1. VERIFY ALL EXISTING ASSUMED DIMENSIONS AND CONDITIONS (I.E. EXISTING MATERIALS; FRAMING MEMBER SIZES AND LOCATIONS; METHODS OF CONSTRUCTION; ETC.) AT THE SITE PRIOR TO CONSTRUCTION AND FABRICATION. IF DISCREPANCIES ARE FOUND, NOTIFY ARCHITECT BEFORE PROCEEDING WITH WORK.

FOUNDATIONS

1. FOOTINGS SHALL BEAR ON FIRM, UNDISTURBED SOIL OR ENGINEERED FILL WITH AN ASSUMED SAFE BEARING CAPACITY OF 3500 P.S.F. IF SOIL OF THIS CAPACITY IS NOT FOUND AT THE ELEVATIONS INDICATED, FOOTINGS SHALL BE ENLARGED OR LOWERED AT THE DIRECTION OF THE ARCHITECT. VERIFY FOUNDATION SOIL BEARING PRESSURE IN FIELD BY SOILS ENGINEER.

2. WHERE NEW FOOTINGS ABUT EXISTING FOUNDATIONS, CAREFULLY HAND EXCAVATE AND PLACE BOTTOM OF NEW FOOTING AT THE SAME ELEVATION AS THE EXISTING.

3. PROVIDE NECESSARY SHEETING SHORING BRACING, ETC. AS REQUIRED DURING EXCAVATIONS TO PROTECT SIDES OF EXCAVATIONS.

4. COMPLY FULLY WITH REQUIREMENTS OF OSHA AND OTHER REGULATORY AGENCIES FOR SAFETY PROVISIONS.

CONCRETE

1. MINIMUM CONCRETE STRENGTH TO BE 3000 P.S.I. @ 28 DAYS, U.O.N.; SLABS SHALL BE 3500 P.S.I. MIN. U.O.N. EXPOSED CONCRETE SHALL BE 4000 PSI WITH 6% + 1% ENTRAINED AIR U.O.N.

   A. PROVIDE 3000 P.S.I. 28-DAY COMPRESSIVE STRENGTH; W/C RATIO, 0.58 MAXIMUM (NON-AIR-ENTRAINED), 5.0 BAG CEMENT MIX FOR ALL FOUNDATION WORK UNLESS NOTED OTHERWISE.

   B. PROVIDE 3500 P.S.I. 28-DAY COMPRESSIVE STRENGTH; W/C RATIO, 0.53 MAXIMUM (NON-AIR-ENTRAINED), 5.5 BAG CEMENT MIX FOR ALL INTERIOR SLABS UNLESS NOTED OTHERWISE.

   C. PROVIDE 4000 P.S.I. 28-DAY COMPRESSIVE STRENGTH; W/C RATIO, 0.45 MAXIMUM (AIR-ENTRAINED), 6.0 BAG CEMENT MIX FOR ALL EXTERIOR CONCRETE UNLESS NOTED OTHERWISE.

2. FLYASH OR GROUND GRANULATED BLAST FURNACE SLAG MAY BE SUBSTITUTED UP TO 25% MAXIMUM OF MIX DESIGN CEMENT CONTENT IN NON-EXPOSED CONCRETE MIXES. DO NOT USE IN EXPOSED MIX DESIGNS.

3. ALL CONCRETE WORK AND PLACEMENT SHALL CONFORM TO THE LATEST RECOMMENDATIONS OF A.C.I.

4. ALL REINFORCING BARS, DOWELS AND TIES SHALL CONFORM TO A.S.T.M. A615 GRADE 60. REINFORCING STEEL SHALL BE CONTINUOUS AND SHALL HAVE MINIMUM 36 BAR DIAMETER LAP AND BE FABRICATED AND PLACED IN ACCORDANCE WITH A.C.I. - 315 LATEST EDITION.

5. REINFORCED CONCRETE WALL FOOTINGS SHALL HAVE CORNER BARS AT ALL INTERSECTIONS OF THE SAME SIZE AND SPACING AS THE MAIN HORIZONTAL REINFORCING.

6. ALL SLABS ON GROUND SHALL BE 4" THICK AND HAVE 6" X 6" W1.4 X W1.4 WELDED WIRE FABRIC IN THE TOP 1/3 OF THE SLAB, UNLESS OTHERWISE NOTED.

7. CONCRETE CONTRACTOR SHALL INCLUDE IN HIS COST ADDITIONAL CONCRETE QUANTITY AS REQUIRED TO COMPENSATE FOR DEFLECTIONS OF METAL DECK AND UNSHORED COMPOSITE BEAMS AND TO PROVIDE A LEVEL CONCRETE SURFACE.

8. FIELD AND SHOP TESTING OF CONCRETE WORK SHALL INCLUDE INSPECTION OF REINFORCING STEEL PLACEMENT, REBARS, NUMBER, LOCATION, AND LAP SPLICE LENGTH.

9. PROVIDE DOWELS INTO FOUNDATION TO MATCH SIZE AND SPACING OF VERTICAL REINFORCEMENT AT ALL COLUMNS AND WALLS, UNLESS OTHERWISE NOTED.

10. UNLESS OTHERWISE SHOWN, PROVIDE THE FOLLOWING COVER FOR REINFORCING STEEL:

A. UNFORMED SURFACES IN CONTACT WITH EARTH	-3 IN.
B. UNFORMED SURFACES OVER MOISTURE BARRIERS	-2 IN.
C. FORMED SURFACES EXPOSED TO EARTH OR WEATHER	
OR WATER PROOFING/DAMP PROOFING	
#6 OR LARGER	-2 IN.
#5 OR SMALLER	-1 1/2 IN.
D. FORMED SURFACES NOT EXPOSED TO EARTH	
OR WEATHER	
SLABS AND WALLS	-3/4 IN.
COLUMNS	-1 1/2 IN.
BEAMS AND GIRDERS	-1 1/2 IN.

MASONRY

1. THE MASONRY PORTIONS OF THIS STRUCTURE ARE DESIGNED ACCORDING TO THE LATEST ALLOWABLE STRESS DESIGN PROVISIONS OF THE MASONRY STANDARDS JOINT COMMITTEE (MSJC) BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES (ACI 530/ASCE 602) INCLUDING SECTIONS 2106 AND 2107 OF CHAPTER 21 IN THE MICHIGAN BUILDING CODE. MASONRY COMPONENTS HAVE BEEN DESIGNED ACCORDING TO THE PROVISIONS FOR SEISMIC DESIGN CATEGORY B.

2. ALL STRUCTURAL MASONRY IS TO BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST MASONRY STANDARDS JOINT COMMITTEE (MSJC) BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES (TMS 402/ACI 530/ASCE 5) AND SPECIFICATIONS FOR MASONRY STRUCTURES (TMS 602/ACI 530.1/ASCE 6) MASONRY SUBMITTALS ARE REQUIRED BY ACI 530.1/ASCE 6/TMS 602. SECTION 1.5 MASONRY TESTING AND INSPECTIONS ARE REQUIRED BY ACI 530.1/ASCE 6/TMS 602 SECTION 1.6, TABLE 5.

3. ALL STRUCTURAL MASONRY HAS BEEN ENGINEERED IN ACCORDANCE WITH CHAPTER 2 ALLOWABLE STRENGTH DESIGN. COMPRESSION STRENGTH SHALL BE DETERMINED ACCORDING TO THE UNIT STRENGTH METHOD FOR CONCRETE MASONRY MSJC SECTION 1.4. B.2.b.

4. ALL BLOCK SHALL CONFORM TO ASTM C90, TYPE I, WITH A MINIMUM UNIT NET AREA COMPRESSIVE STRENGTH OF 2000 PSI.

5. MASONRY COMPRESSIVE STRENGTH f'm = 2000 PSI MINIMUM.

6. MORTAR SHALL BE TYPE 'S" (1800 PSI) CONFORMING TO ASTM C-270. USE MORTAR CEMENT WHERE EXTERIOR WALLS ARE UNREINFORCED.

7. PROVIDE HORIZONTAL WIRE TYPE REINFORCING WITH 9 GAUGE SIDE AND CROSS MEMBERS IN EVERY SECOND COURSE (16" O.C.), IN ALL MASONRY WALLS. WALLS WITH VERTICAL REINFORCING SHALL ONLY HAVE 'LADDER" TYPE REINFORCING.

8. ALL REINFORCING BARS, DOWELS AND TIES SHALL CONFORM TO A.S.T.M. A615 GRADE 60. REINFORCING STEEL SHALL BE CONTINUOUS, FABRICATED AND PLACED IN ACCORDANCE WITH A.C.I. - 315 LATEST EDITION AND HAVE THE FOLLOWING MINIMUM LAP LENGTHS:

BAR SIZE	8" CMU	12" CMU
#3	18"	18"
#4	24"	24"
#5	30"	30"
#6	38"	36"
#7		42"
#8	PROVIDE MECH. SPLICE	

9. ALL MASONRY BEARING STEEL BEAMS AND LINTELS TO BEAR 8" MINIMUM ON 3 COURSES SOLID MASONRY, WITH 2-3/4" DIAMETER BOLTS EACH END, UNLESS OTHERWISE NOTED.

10. ALL MASONRY BELOW GRADE SHALL BE GROUTED SOLID.

11. MASONRY GROUT SHALL CONFORM TO ASTM C 476, WITH PEA GRAVEL AGGREGATE AND A MINIMUM STRENGTH OF 2000 PSI, BUT NOT LESS THAN SPECIFIED f'm.

12. UNLESS OTHERWISE NOTED, AT ALL MASONRY WALLS PROVIDE THE FOLLOWING LINTELS:

    8" WALLS

    (2) L4x3 1/2 x 5/16 LLV FOR OPENINGS UP TO 4'-0"
    (2) L5x3 1/2 x 5/16 LLV FOR OPENINGS UP TO 5'-4"
    W8x18 + 3/8" PLATE FOR OPENINGS UP TO 8'-0"
    W8x28 + 3/8" PLATE FOR OPENINGS UP TO 12'-4"

    12" WALLS:

    (3) L4x3- 1/2 x 5/16 LLV FOR OPENINGS UP TO 4'-0"
    (3) L5x3-1/2 x 5/16 LLV FOR OPENINGS UP TO 5'-4"
    W8x18 + 3/8" PLATE FOR OPENINGS UP TO 8'-0"
    W8x28 + 3/8" PLATE FOR OPENINGS UP TO 12'-4"

13. ALL DOUBLE ANGLE LINTELS SHALL BE WELDED BACK TO BACK WITH A MINIMUM 2 INCH STITCH WELD EVERY 8 INCHES.

14. UNLESS OTHERWISE NOTED, PROVIDE L5 X 3-1/2 X 5/16 L.L.V. LINTEL FOR EACH 4" OF MASONRY FOR SPANS UP TO 5'-4" MAX.

15. PROVIDE DOWELS INTO FOUNDATION TO MATCH SIZE AND SPACING OF VERTICAL REINFORCEMENT AT ALL COLUMNS AND WALLS, UNLESS OTHERWISE NOTED.

STRUCTURAL STEEL

1. STEEL DESIGN, FABRICATION AND ERECTION TO BE IN ACCORDANCE WITH THE LATEST A.I.S.C. MANUAL AND SPECIFICATION FOR STRUCTURAL STEEL FOR BUILDINGS. ALL WIDE FLANGE BEAMS AND COLUMNS SHALL CONFORM TO THE LATEST ASTM. SERIAL DESIGNATION A992, GR50; ALL MISCELLANEOUS STEEL PLATES, BARS, ANGLES, ETC., SHALL CONFORM TO ASTM A36; STEEL TUBING TO BE ASTM A500, GRADE B; STEEL PIPE ASTM. A-53, GRADE B. ANCHOR BOLTS TO BE ASTM F1554 GRADE 36 KSI MINIMUM UNLESS OTHERWISE NOTED

2. UNLESS OTHERWISE NOTED OR SHOWN, ALL BEAM CONNECTIONS TO HSS 5 X 5 OR SMALLER COLUMN,5"0 OR SMALLER COLUMN, OR ANY TUBE COLUMN REGARDLESS OF SIZE WITH A WALL THICKNESS LESS THAN 3/8" SHALL BE MADE WITH THRU PLATES WELDED TO BOTH WALLS OF COLUMN.

3. ALL WELDED CONNECTIONS SHALL BE IN ACCORDANCE WITH THE LATEST AWS CODE, E70XX ELECTRODES, WITH WELDING PERFORMED BY QUALIFIED WELDERS.

4. BOLTED CONNECTIONS SHALL BE MADE WITH A-325 OR A-490 BOLTS. ALL BOLTS ARE TO BE INSTALLED IN ACCORDANCE WITH THE LATEST SPECIFICATIONS FOR "STRUCTURAL JOINTS USING A.S.T.M. A-325 OR A-490 BOLTS." TYPICAL BOLTED CONNECTIONS ARE "BEARING TYPE" UNLESS NOTED OTHERWISE.

5. DESIGN CONNECTIONS FOR MINIMUM ONE-HALF THE TOTAL ALLOWABLE UNIFORM LOAD PER A.I.S.C. BEAM LOAD TABLES, UNLESS OTHERWISE NOTED. (MIN. 2 BOLTS EACH CONNECTION).

6. THE STRUCTURAL STEEL CONTRACTOR SHALL INCLUDE (5) TONS OF ADDITIONAL STEEL, INCLUDING FABRICATION AND ERECTION, TO BE USED AT THE DISCRETION OF THE STRUCTURAL ENGINEER. TONNAGE COST IS TO BE BASE ON TONNAGE PRICE PER JOB. ADDITIONAL STEEL NOT USED IS TO BE CREDITED BACK TO THE OWNER. GENERAL CONTRACTOR IS TO COORDINATE WITH STEEL FABRICATOR AND OWNER.

7. THE DESIGN, CONFIGURATION & ERECTION SAFETY OF ALL STRUCTURAL STEEL CONNECTIONS SHALL BE THE RESPONSIBILITY OF THE STRUCTURAL STEEL FABRICATOR. REVIEW AND ACCEPTANCE OF THE SHOP DRAWINGS BY THE ENGINEER SHALL CONSTITUTE APPROVAL OF THE LOAD CARRYING ADEQUACY ONLY.

8. TYPE OF CONSTRUCTION PER ASCE A2.2 IS TYPE 2 "SIMPLE FRAMING" UNLESS NOTED OTHERWISE.

9. TEMPORARY ERECTION SEATS SHALL BE PROVIDED AS RECOMMENDED ON PAGE 3-59 OF THE A.I.S.C. PUBLICATION 'ENGINEERING FOR STEEL CONSTRUCTION".

10. REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL ANGLES, PLATES, BARS, CLIPS, ETC., ATTACHED TO STRUCTURAL STEEL.

STRUCTURAL STEEL(CONT.)

11. THE CONTRACTOR SHALL FURNISH ALL ACCESSORIES INCLUDING CLOSURES, "Z" CLOSURES, COLUMN CLOSURES, SCREED ANGLES AND GIRDER FILLERS AS REQUIRED.

12. NO LOADS SHALL BE PERMITTED TO BE HUNG FROM ANY ROOF DECK. ALL HANGERS FOR CEILINGS, DUCTWORK, ELECTRICAL CONDUIT, PIPING, ETC., SHALL BE HUNG DIRECTLY FROM STRUCTURAL STEEL WORK OR SUPPLEMENTARY MEMBERS.

13. MASONRY AND BRICK LINTELS SHALL BE GALVANIZED G90 PER ASTM A123.

14. PROVIDE L4X4X1/4 SEATS AT COLUMN WEBS WHERE REQUIRED FOR SUPPORT OF ROOF AND FLOOR DECKS. PROVIDE ANGLE OUTRIGGER FROM EXTERIOR COLUMNS FOR SLAB AND ROOF EDGE PLATE SUPPORT.

15. ALL WIDE FLANGE LINTELS TO HAVE MINIMUM 7"x3/8'x0'-7" BEARING PLATE, ALL WIDE FLANGE FLOOR OR ROOF BEAMS TO HAVE MINIMUM 7"x3/8'x0'-7" BEARING PLATE UNLESS OTHERWISE NOTED

LIGHT GAGE FRAMING

1. LIGHT GAGE FRAMING SUPPLIER SHALL SUBMIT SHOP DRAWINGS AND CALCULATIONS SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF MICHIGAN INDICATING ALL DESIGN LOADS AND MATERIALS INCLUDING VERIFYING ANY MEMBER SIZES SHOWN. DESIGN BY SUPPLIERS ENGINEER SHALL INCLUDE ALL CONNECTIONS AND MISCELLANEOUS MATERIALS NECESSARY FOR A COMPLETE STRUCTURE. THE FINAL MEMBER SIZES AND GAGES SHALL BE CALCULATED BY THE LIGHT GAGE ENGINEER. LIGHT GAGE SHOP DRAWINGS NOT SIGNED AND SEALED WILL BE REJECTED.

2. LIGHT GAGE MEMBERS SHALL BE DESIGNED, MANUFACTURED AND INSTALLED IN ACCORDANCE WITH THE LATEST REQUIREMENTS OF THE AMERICAN IRON AND STEEL INSTITUTE (AISI) INCLUDING ANY REQUIRED CLIPS, STIFFENERS, AND BRACING.

3. MEMBER SIZES INDICATED ON DRAWINGS ARE MINIMUM DEPTH AND GAGE REQUIRED TO MEET THE DESIGN INTENT AND ARE BASED ON THE PROPERTIES AND MATERIALS LISTED IN THE STEEL STUD MANUFACTURERS ASSOCIATION (SSMA) PRODUCT CATALOG. ALTERNATE MANUFACTURERS ARE ACCEPTABLE IF THE PHYSICAL PROPERTIES ARE EQUAL OR BETTER THAN THOSE LISTED ACCEPTABLE TO THE PROJECT ARCHITECT AND ENGINEER, AND MEET OR EXCEED PERFORMANCE CRITERIA.

4. LIGHT GAGE DOCUMENTS SUBMITTED BY THE LIGHT GAGE FRAMING SUPPLIER IS A "DEFERRED SUBMITTAL" PER SECTION 107.3.4.1 OF THE MBC 2021

5. DO NOT HANG LT. GAGE FROM ANY ROOF DECK. ALL LT. GAGE FRAMING IS TO BE HUNG DIRECTLY FROM STRUCTURAL STEEL WORK OR SUPPLEMENTARY MEMBERS.

6. ALL LIGHT GAGE BACK UP STUDS FOR BRICK VENEER TO BE 16 GA. MINIMUM (54) AND BE DESIGNED FOR L/600 MINIMUM LATERAL DEFLECTION REQUIREMENT.

SHORING

1. SHORE STRUCTURE AS REQUIRED TO MAINTAIN STRUCTURAL INTEGRITY.

2. ALL SHORING, UNDERPINNING, ETC., SHALL BE PERFORMED BY EXPERIENCED CONTRACTORS.

3. SHORE, UNDERPIN, ETC., ALL QUESTIONABLE AREAS PRIOR TO REMOVAL OF ANY STRUCTURAL SUPPORT TO INSURE STRUCTURAL INTEGRITY.

4. MAINTAIN SHORING UNTIL NEW PERMANENT STRUCTURE IS IN PLACE AND SECURE TO MAINTAIN STRUCTURAL INTEGRITY.

5. REMOVE SHORING AFTER NEW WORK IS IN PLACE AND CONNECTED.

LIGHT GAGE TRUSSES

1. LIGHT GAGE TRUSSES: SHALL BE MANUFACTURED BY AN ACCEPTABLE TRUSS MANUFACTURER, RECOGNIZED BY THE GOVERNING BUILDING CODE. TRUSS MANUFACTURER SHALL SUPPLY ALL HANGERS, PLATES, BLOCKS, CLIPS, BRIDGING AND OTHER ITEMS RELATIVE TO THEIR UNITS. DESIGN CRITERIA ARE AS FOLLOWS:

   ROOF TRUSS

   TC LL = 25 PSF + 5 PSF FOR FUTURE SOLAR PANELS
   DL = 10 PSF
   BC DL = 10 PSF LL = 10 PSF (ADD 10 PSF ATTIC LOAD AT SLOPED ROOF TRUSSES PER SECTION TABLE 1607.1)

   TL = 50 PSF MINIMUM + 10 PSF ATTIC LIVE LOAD + DRIFTING SNOW INDICATED ON PLAN

2. LIGHT GAGE TRUSS TOP CHORD MUST BE BRACED WITH ROOF SHEATHING OR CONTINUOUS LATERAL BRACING AT 3 -0" O.C. BOTTOM CHORD MUST BE BRACED WITH A RIGID CEILING OR CONTINUOUS BRACING AT 10'-0" O.C. PLYWOOD SHEATHING SHALL BE SCREWED TO TRUSS MEMBERS AT 6" O.C. MAXIMUM SPACING.

3. LIGHT GAGE GIRDER TRUSSES SHALL BE DESIGNED TO SUPPORT ALL LOADS FROM THEIR TRIBUTARY AREA.

4. LIGHT GAGE TRUSS MANUFACTURER SHALL PROVIDE SHOP DRAWINGS, WITH DESIGN LOADS, SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF MICHIGAN. TRUSS MANUFACTURER SHALL VERIFY WITH ARCHITECT AND MECHANICAL CONTRACTOR SIZE, LOCATION & SUPPORT OF MECHANICAL UNITS. TRUSS FRAMING AND TRUSS TO TRUSS CONNECTIONS ARE TO BE DESIGNED BY TRUSS MANUFACTURER FOR ALL REQUIRED LOADS. SHOP DRAWINGS NOT SIGNED AND SEALED BY A REGISTERED ENGINEER IN THE STATE OF MICHIGAN WILL BE REJECTED. SEE MECHANICAL AND ARCHITECTURAL DRAWINGS FOR MECHANICAL LOADS AT ROOF AND FLOOR TRUSSES. TRUSS SUPPLIER TO DESIGN TRUSSES FOR SUPPORT OF ALL MECH. UNITS, PIPING, FIRE SUPPRESSION LINES, AND ALL UTILITIES. COORDINATE ADDITIONAL LOADING AND PIPE SUPPORT/UTILITY LOCATIONS WITH MECH. CONTRACTOR.

5. SEE MECHANICAL DRAWINGS FOR MECHANICAL LOADS AT ROOF AND FLOOR TRUSSES. TRUSS SUPPLIER TO DESIGN TRUSSES FOR SUPPORT OF ALL MECH. UNITS, PIPING, FIRE SUPPRESSION LINES, AND ALL UTILITIES. COORDINATE ADDITIONAL LOADING AND PIPE SUPPORT/UTILITY LOCATIONS WITH MECH. CONTRACTOR

6. ALL FABRICATION SHOPS SHALL BE APPROVED BY THE BUILDING DEPARTMENT AND ENGINEER PRIOR TO ANY WORK BEING PERFORMED. SUBMIT ALL CERTIFICATIONS AND DOCUMENTATION FOR THEIR REVIEW.

7. LIGHT GAGE TRUSS DOCUMENTS SUBMITTED BY THE LIGHT GAGE TRUSS TRUSS SUPPLIER IS A "DEFERRED SUBMITTAL" PER SECTION 107.3.4.1 OF THE MBC 2021

WOOD

1. WOOD CONSTRUCTION SHALL BE PER AMERICAN INSTITUTE OF TIMBER CONSTRUCTION (AITC) STANDARDS AND SPECIFICATIONS, AND NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION (NDS) AS PUBLISHED BY NATIONAL FOREST PRODUCTS ASSOCIATION.

2. ALL LUMBER FRAMING MEMBERS ARE TO HAVE THE FOLLOWING MINIMUM BASE DESIGN VALUES IN ACCORDANCE WITH THE LATEST ISSUE OF THE NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION (NDS) AS PUBLISHED BY THE NATIONAL FOREST PRODUCTS ASSOCIATION (NFPA):

   Fb = 850 P.S.I.
   fv = 135 P.S.I.
   E = 1,300,000 P.S.I.
   NO. 2 OR BETTER

WOOD (CONT.)

3. PLYWOOD TO BE CONTINUOUS OVER TWO (2) OR MORE SPANS AND FACE GRAIN PERPENDICULAR TO SUPPORT.

   PLYWOOD OR ORIENTED STRAND BOARD FOR ROOF: 5/8" (32/16) 5 PLY STANDARD GRADE. PROVIDE ROOF CLIPS TYPICAL AT SHEATHING EDGES BETWEEN TRUSSES. STAGGER PLYWOOD JOINTS BETWEEN ROWS OF SHEATHING (OFFSET 4'-0" EACH ROW).

4. HANGERS, STRAPS, CLIPS AND HOLDOWNS SHALL BE MANUFACTURED BY THE "SIMPSON MANUFACTURING COMPANY". ALL EXTERIOR CONNECTIONS ARE TO BE GALVANIZED.

5. FASTEN WOOD MEMBERS IN ACCORDANCE WITH MBC TABLE 2304.10.1.

SPECIAL INSPECTION

1. WORK CONSTRUCTED SHALL BE INSPECTED BY AN INDEPENDENT TESTING AGENCY TO ENSURE COMPLIANCE WITH THE REQUIREMENTS SHOWN ON THE DRAWINGS. INSPECTIONS REQUIRED BY CHAPTER 17 OF THE MICHIGAN BUILDING CODE; LOCAL BUILDING DEPARTMENTS AND THE CONTRACT DOCUMENTS SHALL BE PERFORMED BY AN INDEPENDENT TESTING AGENCY. SITE VISITS BY THE DESIGN ENGINEER DO NOT CONSTITUTE OR REPLACE INSPECTION

2. THE FOLLOWING ITEMS SHALL BE INSPECTED IN ACCORDANCE WITH MBC 2021 SEC. 1704 & 1705 BY A CERTIFIED SPECIAL INSPECTOR UNLESS NOTED OTHERWISE IN REMARKS COLUMN. ALL INSPECTION SHALL BE CONTINUOUS UNLESS OTHERWISE NOTED. ALL PRODUCTS WITH ICC APPROVALS SHALL BE INSTALLED PER THE APPROVAL AND PER MANUFACTURER'S RECOMMENDATIONS. FOR MATERIAL TESTING REQUIREMENTS, SEE SPECIFICATIONS AND/OR GENERAL NOTES. TESTING AGENCY SHALL SEND COPIES OF ALL STRUCTURAL TESTING AND INSPECTION REPORTS DIRECTLY TO THE ARCHITECT.

   INSPECTION OF FABRICATOR'S (SEC. 1704.2.5) *

   FABRICATION AND IMPLEMENTATION PROCEDURES 1704.2.5.1

   *SPECIAL INSPECTION IS NOT REQUIRED FOR FABRICATOR SHOP IF CERTIFICATE OF APPROVAL SUBMITTED BY FABRICATOR'S INSPECTION AGENCY PER EXCEPTION 1704.2.5.1

TABLE 1705.2.2
REQUIRED VERIFICATION AND
INSPECTION OF STEEL CONSTRUCTION OTHER THAN STRUCTURAL STEEL

VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC	NOT APPLICABLE	REFERENCED STANDARD
1. MATERIAL VERIFICATION OF COLD-FORMED STEEL DECK:				
a. IDENTIFICATION MARKINGS TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS.	-	X	-	APPLICABLE ASTM MATERIAL STANDARDS
b. MANUFACTURER'S CERTIFIED TEST REPORTS.	-	X	-	
2. INSPECTION OF WELDING:				
a. COLD-FORMED STEEL DECK:				
1) FLOOR AND ROOF DECK WELDS.	-	X	-	AWS D1.3
b. REINFORCING STEEL:				
1) VERIFICATION OF WELDABILITY OF REINFORCING STEEL OTHER THAN ASTM A 706.	-	X	-	AWS D1.4 ACI 318 SECTION 3.5.2
2) REINFORCING STEEL RESISTING FLEXURAL AND AXIAL FORCES IN INTERMEDIATE AND SPECIAL MOMENT FRAMES, AND BOUNDARY ELEMENTS OF SPECIAL STRUCTURAL WALLS OF CONCRETE AND SHEAR REINFORCEMENT.	X	-	-	
3) SHEAR REINFORCEMENT.	X	-	-	
4) OTHER REINFORCING STEEL.	-	X	-	

TABLE N5.4-1
INSPECTION TASKS PRIOR TO WELDING

INSPECTION TASKS PRIOR TO WELDING	QC	QA	NOT APPLICABLE
WELDING PROCEDURE SPECIFICATIONS (WPSs) AVAILABLE	P	P	-
MANUFACTURER CERTIFICATION FOR WELDING CONSUMABLES AVAILABLE	P	P	-
MATERIAL IDENTIFICATION (TYPE/GRADE)	O	O	-
WELDER IDENTIFICATION SYSTEM[1]	O	O	-
FIT-UP OF GROOVE WELDS (INCLUDING JOINT GEOMETRY) • JOINT PREPARATION • DIMENSIONS (ALIGNMENT, ROOT OPENING, ROOT FACE, BEVEL) • CLEANLINESS (CONDITION OF STEEL SURFACES) • TACKING (TACK WELD QUALITY AND LOCATION) • BACKING TYPE AND FIT (IF APPLICABLE)	O	O	-
CONFIGURATION AND FINISH OF ACCESS HOLES	O	O	-
FIT-UP OF FILLET WELDS • DIMENSIONS (ALIGNMENT, GAPS AT ROOT) • CLEANLINESS (CONDITION OF STEEL SURFACES) • TACKING (TACK WELD QUALITY AND LOCATION)	O	O	-
CHECK WELDING EQUIPMENT	O	-	-

[1]THE FABRICATOR OR ERECTOR, AS APPLICABLE, SHALL MAINTAIN A SYSTEM BY WHICH A WELDER WHO HAS WELDED A JOINT OR MEMBER CAN BE IDENTIFIED. STAMPS, IF USED, SHALL BE THE LOW-STRESS TYPE.

TABLE N5.4-2
INSPECTION TASKS DURING WELDING

INSPECTION TASKS DURING TO WELDING	QC	QA	NOT APPLICABLE
USE OF QUALIFIED WELDERS	O	O	-
CONTROL AND HANDLING OF WELDING CONSUMABLES • PACKAGING • EXPOSURE CONTROL	O	O	-
NO WELDING OVER CRACKED TACK WELDS	O	O	-
ENVIRONMENTAL CONDITIONS • WIND SPEED WITHIN LIMITS • PRECIPITATION AND TEMPERATURE	O	O	-
WPS FOLLOWED • SETTINGS ON WELDING EQUIPMENT • TRAVEL SPEED • SELECTED WELDING MATERIALS • SHIELDING GAS TYPE/FLOW RATE • PREHEAT APPLIED • INTERPASS TEMPERATURE MAINTAINED (MIN./MAX.) • PROPER POSITION (F, V, H, OH)	O	O	-
WELDING TECHNIQUES • INTERPASS AND FINAL CLEANING • EACH PASS WITHIN PROFILE LIMITATIONS • EACH PASS MEETS QUALITY REQUIREMENTS	O	O	-

O - OBSERVE THESE ITEMS ON A RANDOM BASIS. OPERATIONS NEED NOT BE DELAYED PENDING THESE INSPECTIONS.

P - PERFORM THESE TASKS FOR EACH WELDED JOINT OR MEMBER.

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KEY PLAN

OWNER

Charter Township of Canton - Western Wayne

PROJECT NAME

Growth Works

44582 Geddes Rd. Canton, MI 48188

PROJECT NO.

23-175

ISSUES / REVISIONS

BIDDING/CONSTRUCTION 03/05/2026

DRAWN BY

RC

CHECKED BY

TS

APPROVED BY

TS

SHEET NAME

GENERAL NOTES

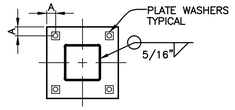
SHEET NO.

S4-00

TABLE 14-2
RECOMMMENDED MAXIMUM SIZES FOR ANCHOR-ROD HOLES IN BASE PLATES

ANCHOR ROD DIAMETER, in.	MAX. HOLE DIAMETER, in.	MIN. WASHER SIZE, in.	MIN. WASHER THICKNESS
3/4	1 5/16	2	1/4
7/8	1 9/16	2 1/2	5/16
1	1 13/16	3	3/8
1 1/4	2 1/16	3	1/2

NOTES:
1. CIRCULAR OR SQUARE WASHERS MEETING THE SIZE ARE ACCEPTIBLE.
2. CLEARANCE MUST BE CONSIDERED WHEN CHOOSING AN APPROPRIATE ANCHOR ROD HOLE LOCATION, NOTING EFFECTS SUCH AS THE POSITION OF THE ROD IN THE HOLE WITH RESPECT TO THE COLUMN, WELD SIZE, AND OTHER INTERFERENCES.
3. WHEN BASE PLATES ARE LESS THAN 1 1/4 in. THICK, PUNCHING OF HOLES MAY BE AN ECONOMICAL OPTION. IN THIS CASE, 3/4—in. ANCHOR RODS AND 1 1/16—in. — DIAMETER PUNCHED HOLES MAY BE USED WITH ASTM F844 (USS STANDARD) WASHERS IN PLACE OF FABRICATED PLATE WASHERS.

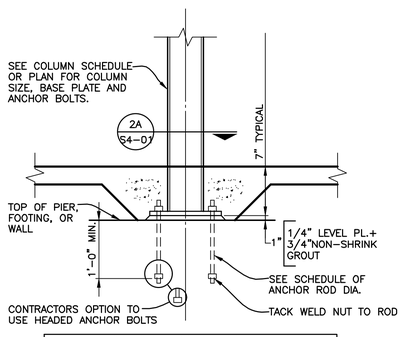


A = 1 1/2" @ 3/4"ø BOLTS
= 2 1/2" @ 1 1/4"ø BOLTS

2A / S4-01 TYPICAL BASE PLATE DETAIL WITH OVER SIZED HOLES FOR ANCHOR BOLTS

SCALE : NONE

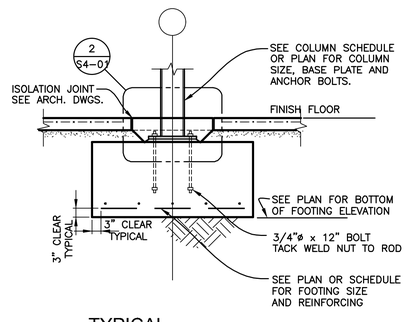
1. PROVIDE PLATE WASHERS PER TABLE 14—2 OF THE FOURTEENTH EDITION OF STEEL CONSTRUCTION MANUAL IF USING OVER SIZED HOLES ON THE BASE PLATES FOR ANCHOR RODS.
2. IF USING OVER SIZED HOLES AT MOMENT FRAMES OR BRACED BAYS, WELD THE PLATE WASHERS TO TOP OF BASE PLATE WITH 1/4" FILLET WELD ALL AROUND.



NOTE: ANCHOR RODS MUST BE INSTALLED WITHIN AISC TOLERANCES BEFORE PLACEMENT OF CONCRETE

2 / S4-01 TYPICAL COLUMN BASE DETAIL

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



1 / S4-01 TYPICAL COLUMN FOOTING

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

SPECIAL INSPECTION (CONT.)

TABLE N5.4-3
INSPECTION TASKS AFTER WELDING

INSPECTION TASKS AFTER WELDING	OC	QA	NOT APPLICABLE
WELDS CLEANED	O	O	-
SIZE, LENGTH AND LOCATION OF WELDS	P	P	-
WELDS MEET VISUAL ACCEPTANCE CRITERIA • CRACK PROHIBITION • WELD/BASE-METAL FUSION • CRATER CROSS SECTION • WELD PROFILES • WELD SIZE • UNDERCUT • POROSITY	P	P	-
ARC STRIKES	P	P	-
K-AREA[1]	P	P	-
BACKING REMOVED AND WELD TABS REMOVED (IF REQUIRED)	P	P	-
REPAIR ACTIVITIES	P	P	-
DOCUMENT ACCEPTANCE OR REJECTION OF WELDED JOINT OR MEMBER	P	P	-

[1]WHEN WELDING OF DOUBLER PLATES, CONTINUITY PLATES OR STIFFENERS HAS BEEN PERFORMED IN THE K-AREA, VISUALLY INSPECT THE WEB K-AREA FOR CRACKS WITHIN 3 IN. (75MM) OF THE WELD.

TABLE N5.6-1
INSPECTION TASKS PRIOR TO BOLTING

INSPECTION TASKS PRIOR TO BOLTING	OC	QA	NOT APPLICABLE
MANUFACTURER'S CERTIFICATIONS AVAILABLE FOR FASTENER MATERIALS	O	P	-
FASTENERS MARKED IN ACCORDANCE WITH ASTM REQUIREMENTS	O	O	-
PROPER FASTENERS SELECTED FOR THE JOINT DETAIL (GRADE, TYPE, BOLT LENGTH IF THREADS ARE TO BE EXCLUDED FROM SHEAR PLANE)	O	O	-
PROPER BOLTING PROCEDURE SELECTED FOR JOINT DETAIL	O	O	-
CONNECTING ELEMENTS, INCLUDING THE APPROPRIATE FAYING SURFACE CONDITION AND HOLE PREPARATION, IF SPECIFIED, MEET APPLICABLE REQUIREMENTS	O	O	-
PRE-INSTALLATION VERIFICATION TESTING BY INSTALLATION PERSONNEL OBSERVED AND DOCUMENTED FOR FASTENER ASSEMBLIES AND METHODS USED	P	O	-
PROPER STORAGE PROVIDED FOR BOLTS, NUTS, WASHERS AND OTHER FASTNER COMPONENTS	O	O	-

TABLE N5.6-2
INSPECTION TASKS DURING BOLTING

INSPECTION TASKS DURING BOLTING	OC	QA	NOT APPLICABLE
FASTENERS ASSEMBLIES, OF SUITABLE CONDITION, PLACED IN ALL HOLES AND WASHERS (IF REQUIRED) ARE POSITIONED AS REQUIRED	O	O	-
JOINT BROUGHT TO THE SNUG-TIGHT CONDITION PRIOR TO THE PRETENSIONING OPERATION	O	O	-
FASTENER COMPONENT NOT TURNED BY THE WRENCH PREVENTED FROM ROTATING	O	O	-
FASTENERS ARE PRETENSIONED IN ACCORDANCE WITH THE RCSC SPECIFICATION, PROGRESSING SYSTEMATICALLY FROM THE MOST RIGID POINT TOWARD THE FREE EDGES	O	O	-

TABLE N5.6-3
INSPECTION TASKS AFTER BOLTING

INSPECTION TASKS AFTER BOLTING	OC	QA	NOT APPLICABLE
FASTENER COMPONENT NOT TURNED BY THE WRENCH PREVENTED FROM ROTATING	O	O	-

O - OBSERVE THESE ITEMS ON A RANDOM BASIS. OPERATIONS NEED NOT BE DELAYED PENDING THESE INSPECTIONS.

P - PERFORM THESE TASKS FOR EACH WELDED JOINT OR MEMBER.

SPECIAL INSPECTION (CONT.)

TABLE 1705.3
REQUIRED SPECIAL INSPECTIONS AND TESTS OF CONCRETE CONSTRUCTION

TYPE	CONTINUOUS SPECIAL INSPECTION	PERIODIC SPECIAL INSPECTION	NOT APPLICABLE	REFERENCED STANDARD[a]	IBC REFERENCE
1. INSPECT REINFORCEMENT, INCLUDING PRESTRESSING TENDONS, AND VERIFY PLACEMENT.	-	X	-	ACI 318 CH. 20, 25.2, 25.3, 26.6.1-26.6.3	1908.4
2. REINFORCING BAR WELDING: a. VERIFY WELDABILITY OF REINFORCING BARS OTHER THAN ASTM A706;	-	-	X	AWS D1.4 ACI 318: 26.6.4	-
b. INSPECT SINGLE-PASS FILLET WELDS, MAXIMUM 5/16" AND	-	-	X		
c. INSPECT ALL OTHER WELDS.	-	-	X		
3. INSPECT ANCHORS CAST IN CONCRETE	-	X	-	ACI 318: 17.8.2	-
4. INSPECT ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS.[b] a. ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS.	X	-	-	ACI 318: 17.8.2.4	-
b. MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED IN 4.a.	-	X	-	ACI 318: 17.8.2	
5. VERIFY USE OF REQUIRED DESIGN MIX.	-	X	-	ACI 318: CH.19, 26.4.3, 26.4.4	1904.1, 1904.2, 1908.2, 1908.3
6. PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE	X	-	-	ASTM C172 ASTM C31 ACI 318: 26.4.26.12	1908.10
7. INSPECT CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES.	X	-	-	ACI 318: 26.5	1908.6, 1908.7, 2908.8
8. VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES.	-	X	-	ACI 318: 26.5.3-26.5.5	1908.9
9. INSPECT PRESTRESSED CONCRETE FOR: a. APPLICATION OF PRESTRESSING FORCES; AND	-	-	X	ACI 318: 26.10	-
b. GROUTING OF BONDED PRESTRESSING TENDONS.	-	-	X		
10. INSPECT ERECTION OF PRECAST CONCRETE MEMBERS.	-	-	X	ACI 318: CH. 26.8	-
11. VERIFY IN-SITU CONCRETE STRENGTH, PRIOR TO STRESSING OF TENDONS IN POST-TENSIONED CONCRETE AND PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS.	-	-	X	ACI 318: 26.11.2	-
12. INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED.	-	X	-	ACI 318: 26.11.1.2(b)	-

FOR SI: 1 INCH = 25.4 MM

a. WHERE APPLICABLE, SEE ALSO SECTION 1705.12, SPECIAL INSPECTIONS FOR SEISMIC RESISTANCE.

b. SPECIFIC REQUIREMENTS FOR SPECIAL INSPECTION SHALL BE INCLUDED IN THE RESEARCH REPORT FOR THE ANCHOR ISSUED BY AN APPROVED SOURCE IN ACCORDANCE WITH 17.8.2 IN ACI 318, OR OTHER QUALIFICATION PROCEDURES. WHERE SPECIFIC REQUIREMENTS ARE NOT PROVIDED, SPECIAL INSPECTION REQUIREMENTS SHALL BE SPECIFIED BY THE REGISTERED DESIGN PROFESSIONAL AND SHALL BE APPROVED BY THE BUILDING OFFICIAL PRIOR TO THE COMMENCEMENT OF THE WORK.

TABLE 1705.6
REQUIRED SPECIAL INSPECTIONS AND TESTS OF SOILS

VERIFICATION AND INSPECTION TASK	CONTINUOUS SPECIAL INSPECTION	PERIODIC SPECIAL INSPECTION	NOT APPLICABLE
1. VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY.	-	X	
2. VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL.	-	X	
3. PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS.		X	
4. VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL.	X	-	
5. PRIOR TO PLACEMENT OF COMPACTED FILL, OBSERVE SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY.	-	X	

SPECIAL INSPECTION (CONT.)

DESIGN CRITERIA		
CODE: MBC 2021 THE STRUCTURE IS DESIGNED FOR THE FOLLOWING LIVE LOADS, IN ADDITION TO THE LATERAL LOADS, SUPER-IMPOSED DEAD LOADS, & SELF WEIGHT OF THE STRUCTURE. WHERE APPLICABLE LIVE LOADS ARE REDUCED IN ACCORDANCE WITH THE PROVISIONS OF THE BUILDING CODE. A. AMERICAN CONCRETE INSTITUTE BUILDING CODE (ACI-318). B. MANUAL OF STEEL CONSTRUCTION BY AMERICAN INSTITUTE OF STEEL CONSTRUCTION (LATEST EDITION). C. LATEST MASONRY STANDARDS JOINT COMMITTEE (MSJC) BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES (TMS 402/ACI 530/ASCE 5) AND SPECIFICATIONS FOR MASONRY STRUCTURES (TMS 602/ACI 530.1/ASCE 6) D. AMERICAN INSTITUTE OF TIMBER CONSTRUCTION (AITC) STANDARDS AND SPECIFICATIONS. E. NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION (NDS) AS PUBLISHED BY AMERICAN FOREST AND PAPER ASSOCIATION.		
		CODE REFERENCE
BUILDING OCCUPANCY CATEGORY	IV	MBC-Table 1604.5 ASCE Table 1.5-1

SNOW LOADS/ROOF LIVE LOADS		
SNOW CRITERIA		CODE REFERENCE
GROUND SNOW LOAD	Pg = 20 PSF	MBC FIG. 1608.2 ASCE Fig. 7-1
FLAT ROOF SNOW LOAD	Pf = 20 PSF (MINIMUM)	ASCE Sec. 7.3
EXPOSURE FACTOR	Ce = 1.0	ASCE Table 7-2
IMPORTANCE FACTOR	I = 1.0	ASCE Table 1.5-2
THERMAL FACTOR	Ct = 1.1	ASCE Table 7-3
ROOF LIVE LOADS	Lr = 20 PSF	ASCE Table 4-1
NOTE: SNOW LOADS ADJACENT VERTICAL PROJECTIONS, ON LOWER ROOFS, ADJACENT TO HIGH ROOFS, ON SLOPED ROOFS ARE INCREASED FOR THE EFFECT OR DRIFTING		

WIND LOADS		
WIND CRITERIA		CODE REFERENCE
BASIC WIND SPEED (3 SEC. GUST)	V = 110 MPH	ASCE FIG. 26.5-1A, 26.5-1B, 26.5-1C
RISK FACTOR	II	ASCE Table 1.5-1
EXPOSURE CATEGORY	B	ASCE Sec. 26.7.3
INTERNAL PRESSURE COEFFICIENT	± 0.18 (ENCLOSED)	ASCE TABLE 26.11-1
MWFRS ANALYSIS PROCEDURE	DIRECTIONAL PROCEDURE	ASCE CHAP. 27
COMPONENTS AND CLADDING	± 33 PSF MINIMUM ULTIMATE AND PER CODE REQUIREMENTS BASED ON ABOVE INFORMATION	ASCE Sec. 30.2.2

SEISMIC LOADS		
SEISMIC CRITERIA		CODE REFERENCE
SEISMIC RISK CATEGORY	II	ASCE Table 1.5-1
SEISMIC IMPORTANCE FACTOR	I = 1.5	ASCE Table 1.5-2
0.2 SEC MAPPED SPECTRAL RESPONSE ACCELERATION (5% OF CRITICAL DAMPING) Ss	Ss = .091	ASCE Sec. 11.4
1.0 SEC MAPPED SPECTRAL RESPONSE ACCELERATION (5% OF CRITICAL DAMPING) S1	S1 = .046	ASCE Sec. 11.4
SOIL SITE CLASS	D	ASCE Sec. 11.4.2
SEISMIC DESIGN CATEGORY	B	ASCE Sec. 11.6
SEISMIC FORCE RESISTING SYSTEM RESPONSE MODIFICATION FACTOR DEFLECTION AMPLIFICATION FACTOR	BEARING WALL SYSTEM WITH INTERMEDIATE REINFORCED MASONRY SHEAR WALLS R = 3.5 Cd = 2.25	ASCE Table 12.2-1
SEISMIC FORCE RESISTING SYSTEM RESPONSE MODIFICATION FACTOR DEFLECTION AMPLIFICATION FACTOR	STEEL NOT SPECIFICALLY DETAILED FOR SEISMIC R = 3.0 Cd = 3.0	ASCE Table 12.2-1
ANALYSIS PROCEDURE	EQUIVALENT LATERAL FORCE	ASCE Sec. 12.8

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KEY PLAN

OWNER

Charter Township of Canton - Western Wayne

PROJECT NAME

Growth Works

44582 Geddes Rd. Canton, MI 48188

PROJECT NO.

23-175

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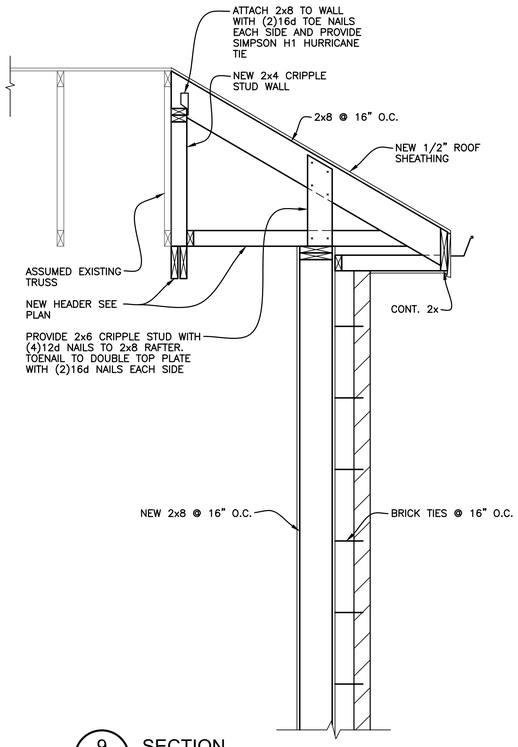
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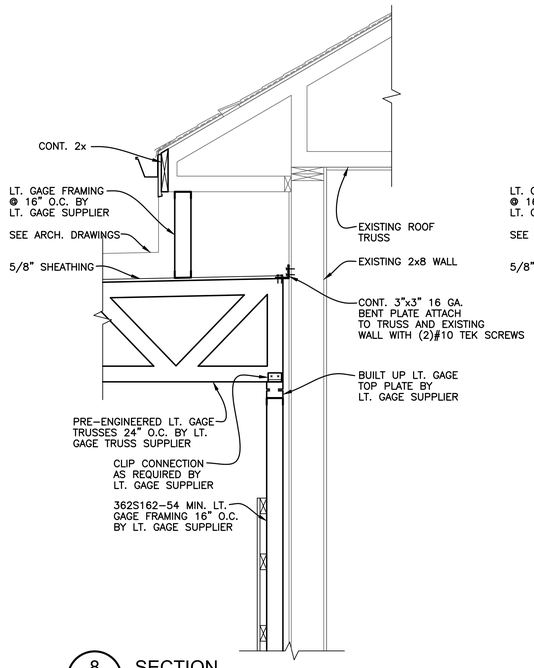
GENERAL NOTES

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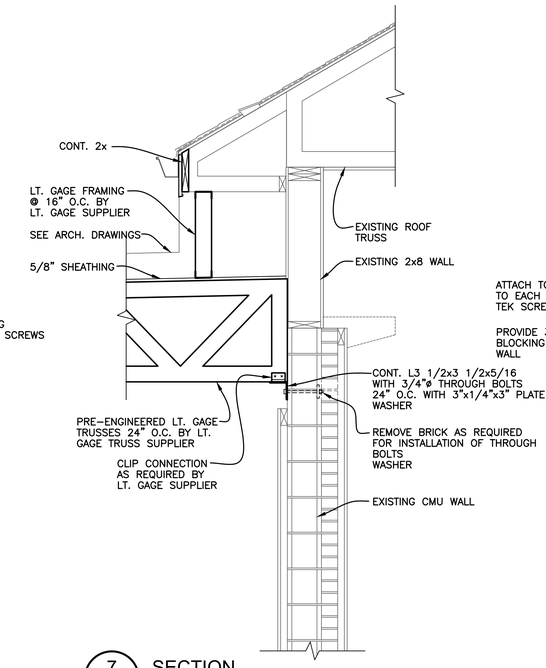
S4-01



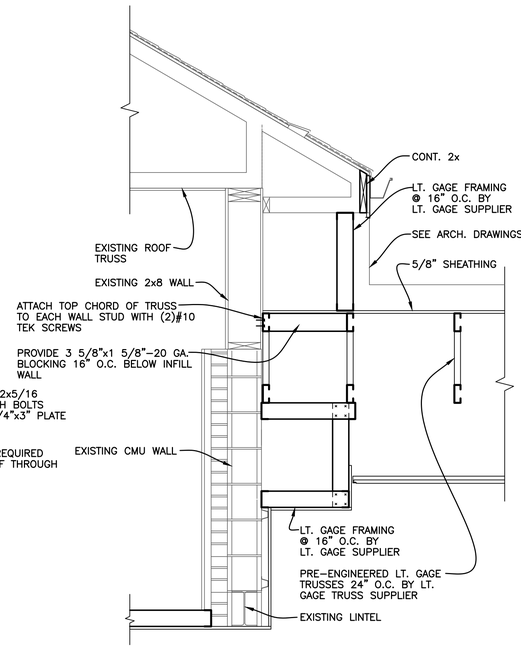
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SCALE : 3/4" = 1'-0"



8 SECTION S5-00
SCALE : 3/4" = 1'-0"

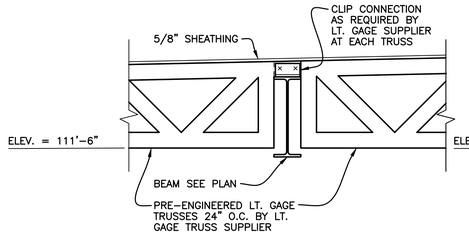


7 SECTION S5-00
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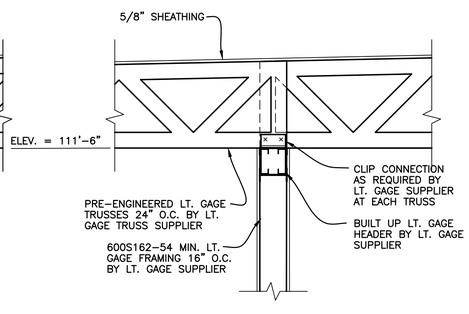


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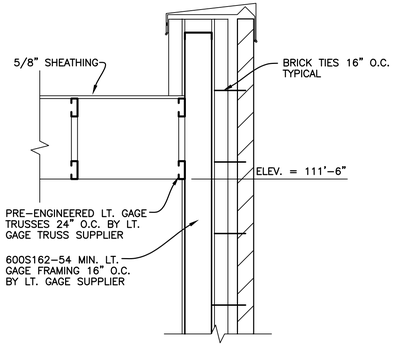
NOTE: LT. GAGE TRUSSES AT 111'-6" ROOF (DETAILS 2, 3, 4 & 5/S5-00) DO NOT HAVE CEILING SHEATHING AT TRUSS BOTTOM CHORD. TRUSS SUPPLIER TO PROVIDE BRIDGING AT TRUSS BOTTOM CHORD AS NECESSARY FOR TRUSS DESIGN.



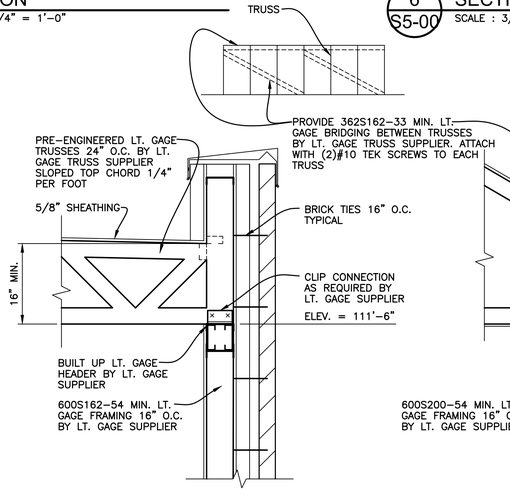
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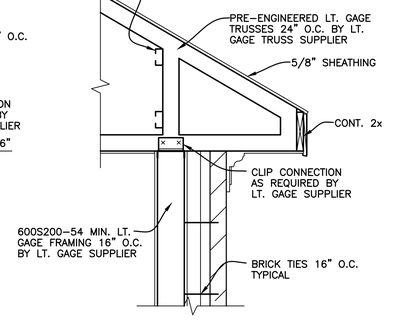
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SCALE : 3/4" = 1'-0"



3 SECTION S5-00
SCALE : 3/4" = 1'-0"



2 SECTION S5-00
SCALE : 3/4" = 1'-0"



1 SECTION S5-00
SCALE : 3/4" = 1'-0"

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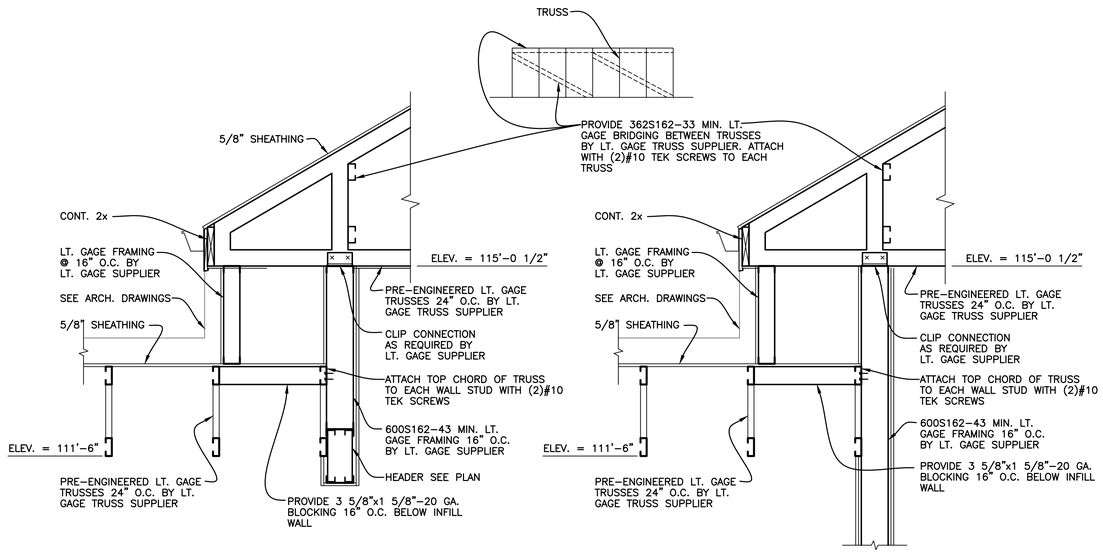
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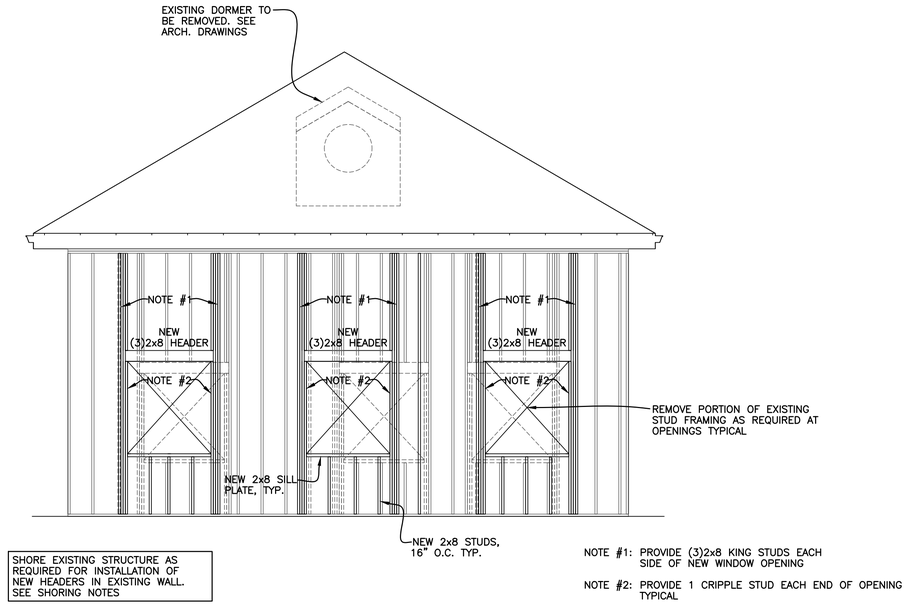
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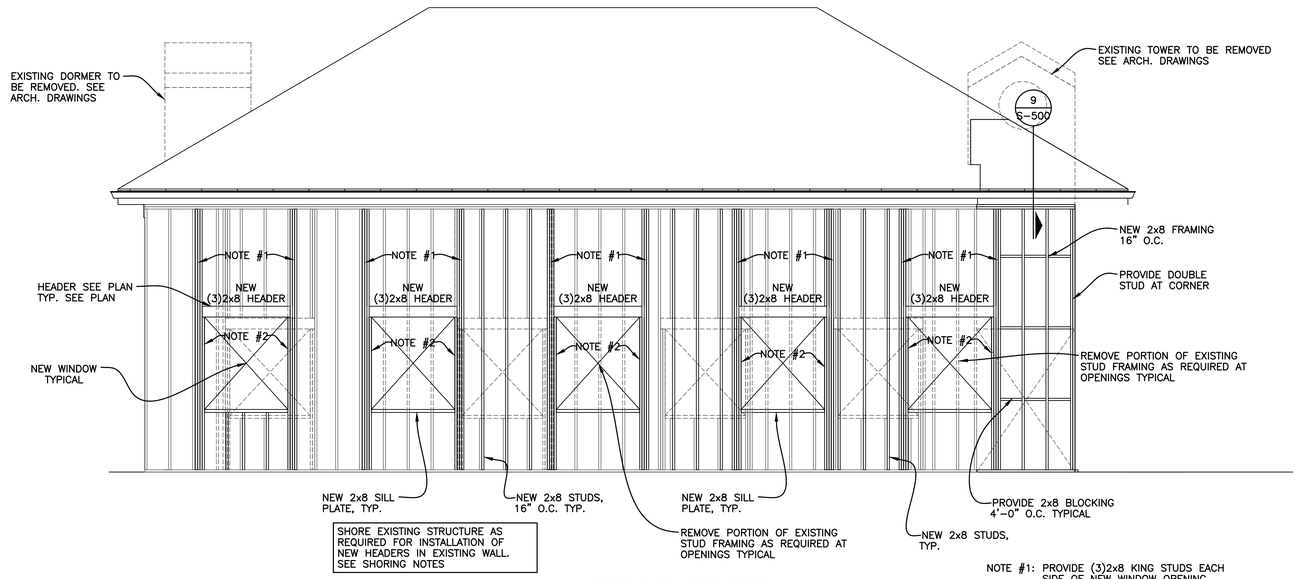


4 S6-00 SECTION
SCALE : 3/4" = 1'-0"

3 S6-00 SECTION
SCALE : 3/4" = 1'-0"



2 S6-00 SOUTH RE-FRAMING ELEVATION FOR NEW WINDOWS
SCALE : 1/4" = 1'-0"



1 S6-00 EAST RE-FRAMING ELEVATION FOR NEW WINDOWS
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SHEET NO.
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MECHANICAL ABBREVIATIONS

ABBREV.	DESCRIPTION
AAV	AUTOMATIC AIR VENT / AIR ADMITTANCE VALVE
AD	ACCESS DOOR
AE	AIR EXTRACTOR
AFF	ABOVE FINISHED FLOOR
APD	AIR PRESSURE DROP
ASR	AUTOMATIC SPRINKLER RISER
BFP	BACKFLOW PREVENTER
BHP	BRAKE HORSEPOWER
BOD	BOTTOM OF DUCT
BTU	BRITISH THERMAL UNIT
BTUH	BRITISH THERMAL UNITS PER HOUR
BWV	BACKWATER VALVE
CAP	CAPACITY
CAV	CONSTANT AIR VOLUME
CFH	CUBIC FEET PER HOUR
CFM	CUBIC FEET PER MINUTE
CIRC	CIRCULATING
CLG	COOLING
CO	CLEAN OUT
CONT	CONTINUATION OR CONTINUED
CONV	CONVECTOR
CUH	CABINET UNIT HEATER
CV	CONTROL VALVE
DB	DRY BULB TEMPERATURE
DEG	DEGREES
DDC	DIRECT DIGITAL CONTROL
DN	DOWN
DTC	DRAIN TILE CONNECTION
DWH	DOMESTIC WATER HEATER
(E)	EXISTING
EA/EXH	EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE
EDB	ENTERING DRY BULB TEMPERATURE
EF	EXHAUST FAN
EJ	EXPANSION JOINT
EL	ELEVATION
ELECT	ELECTRICAL
EMS	ENERGY MANAGEMENT SYSTEM
ESP	EXTERNAL STATIC PRESSURE
EWB	ENTERING WET BULB TEMPERATURE
EWC	ELECTRIC WATER COOLER
°F	DEGREES FAHRENHEIT
FA	FACE AREA (COIL) / FREE AREA (LOUVER)
FC	FLEXIBLE CONNECTION
FD	FLOOR DRAIN
FDC	FIRE DEPARTMENT CONNECTION
FH	FIRE HYDRANT
FHC	FIRE HOSE CABINET
FHR	FIRE HOSE RACK
FHV	FIRE HOSE VALVE
FLA	FULL LOAD AMPS
FLR	FLOOR
FPM	FEET PER MINUTE
FFD	FUNNEL FLOOR DRAIN
FFE	FINISHED FLOOR ELEVATION
FS	FLOOR SINK
FT	FEET
FURN	FURNISHED
FV	FACE VELOCITY
FVC	FIRE VALVE CABINET
GAL	GALLON
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
HB	HOSE BIBB
HO	HUB OUTLET
HP	HORSEPOWER

MECHANICAL ABBREVIATIONS

ABBREV.	DESCRIPTION
HR	HOUR
HTG	HEATING
HYD	HYDRANT
HZ	HERTZ
ID	INSIDE DIAMETER
IE	INVERT ELEVATION
IN	INCHES
INST	INSTALLED
INV	INVERT
ISP	INTERNAL STATIC PRESSURE
IW	INDIRECT WASTE
KW	KILOWATT
LAT	LEAVING AIR TEMPERATURE
LAV	LAVATORY
LBS/HR	POUNDS PER HOUR
LDB	LEAVING DRY BULB TEMPERATURE
LRA	LOCKED ROTOR AMPS
LWB	LEAVING WET BULB TEMPERATURE
MAV	MANUAL AIR VENT
MAX	MAXIMUM
MBH	1000 BRITISH THERMAL UNITS PER HOUR
MCA	MINIMUM CIRCUIT AMPACITY
MECH	MECHANICAL
MFR	MANUFACTURER
MH	MANHOLE
MIN	MINIMUM
MISC	MISCELLANEOUS
MOD	MOTOR OPERATED DAMPER (AUTOMATIC)
MOP	MAXIMUM OVER-CURRENT PROTECTION
N.C.	NOISE CRITERIA
NIC	NOT IN CONTRACT
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
NOM	NOMINAL
OA	OUTSIDE AIR
OBD	OPPOSED BLADE DAMPER
OC	ON CENTER / CENTER TO CENTER
OD	OUTSIDE DIAMETER
OED	OPEN ENDED DUCT
ORS	OVERFLOW ROOF SUMP
OS&Y	OUTSIDE SCREW AND YOKE
PD	PRESSURE DROP (FEET OF WATER)
PRV	PRESSURE REDUCING VALVE
PSIA	POUNDS PER SQUARE INCH – ABSOLUTE
PSIG	POUNDS PER SQUARE INCH – GAUGE
PT	PRESSURE / TEMPERATURE PORT
RA	RETURN AIR
RH	RELATIVE HUMIDITY
REQD	REQUIRED
REL.A	RELIEF AIR
RPM	REVOLUTIONS PER MINUTE
RPZ	REDUCED PRESSURE ZONE
RS	ROOF SUMP
SA	SUPPLY AIR
SH	SHOWER
SP	STATIC PRESSURE
SqFt / SF	SQUARE FOOT/SQUARE FEET
SS	SERVICE SINK
TC	TEMPERATURE CONTROL
T & P	TEMPERATURE AND PRESSURE
TSP	TOTAL STATIC PRESSURE
TYP	TYPICAL
UG	UNDERGROUND
UH	UNIT HEATER
UL	UNDERWRITERS LABORATORY
UNO	UNLESS NOTED OTHERWISE

MECHANICAL ABBREVIATIONS

ABBREV.	DESCRIPTION
UR	URINAL
VD	VOLUME DAMPER (MANUALLY ADJUSTABLE)
VTR	VENT THRU ROOF
W	WASTE
W&V	WASTE AND VENT
WB	WET BULB TEMPERATURE
WC	WATER CLOSET
WG	WATER GAUGE
WH	WALL HYDRANT

MECHANICAL PIPING SYMBOLS

ABBREV.	DESCRIPTION
	PIPE ELBOW UP
	PIPE ELBOW DOWN
	PIPE TEE DOWN
	DIRECTION OF FLOW
	UNION
	STRAINER
	CONCENTRIC REDUCER
	ECCENTRIC REDUCER
	EXPANSION JOINT
	FLEXIBLE CONNECTION
	PIPE ANCHOR
	PIPE GUIDE
	PIPE CAP OR PLUG
	ISOLATION VALVE
	CIRCULATING PUMP
	GLOBE VALVE
	BALL VALVE
	BUTTERFLY VALVE
	ANGLE VALVE
	CHECK VALVE (SWING)
	CHECK VALVE (SPRING)
	PLUG VALVE
	NEEDLE VALVE
	OUTSIDE SCREW AND YOKE VALVE (OS&Y)
	SOLENOID VALVE
	CONTROL VALVE (2-WAY / 3-WAY)
	CENTRIFUGAL FAN
	AUTOMATIC GAS SHUT-OFF VALVE
	TRAP (PLAN VIEW)
	FLOOR DRAIN / FUNNEL FLOOR DRAIN (PLAN VIEW)
	FLOOR DRAIN / FUNNEL FLOOR DRAIN (ELEVATION)
	ROOF SUMP
CO	CLEAN OUT (IN FLOOR)
CO	CLEAN OUT (IN LINE)
WCO	CLEAN OUT (WALL)
BFP	BACKFLOW PREVENTER
M	WATER METER ASSEMBLY
	HOSE BIBB, WALL HYDRANT
	DIRECTION OF PIPE PITCH
	SPRINKLER HEAD (UPRIGHT)
	SPRINKLER HEAD (SIDEWALL)
FS	FLOW SWITCH
	SIAMESE CONNECTION (YARD)
	SIAMESE CONNECTION (WALL MOUNTED)
	FIRE HYDRANT
	FLOW MEASURING DEVICE
	BALANCING VALVE
	COMBINATION FLOW MEASURING AND BALANCING DEVICE
AAV	AUTOMATIC AIR VALVE
MAV	MANUAL AIR VALVE

MECHANICAL SYMBOLS

ABBREV.	DESCRIPTION
	RECTANGULAR TAKE-OFF (SINGLE LINE)
	RECTANGULAR TAKE-OFF (DOUBLE LINE)
	ROUND TAKE-OFF (SINGLE LINE)
	ROUND TAKE-OFF (DOUBLE LINE)
	SPIN-IN FITTING (WITH VOLUME DAMPER)
	ELBOW (WITH TURNING VANES)
	RADIUS RECTANGULAR ELBOW
	RADIUS ROUND ELBOW
	RECTANGULAR ELBOW UP
	ROUND ELBOW UP
	RECTANGULAR ELBOW DOWN
	ROUND ELBOW DOWN
	CONCENTRIC TRANSITION (DOUBLE LINE)
	CONCENTRIC TRANSITION (SINGLE LINE)
	ECCENTRIC TRANSITION (DOUBLE LINE)
	ECCENTRIC TRANSITION (SINGLE LINE)
R	INCLINED RISE IN DIRECTION OF AIR FLOW (DOUBLE LINE)
R	INCLINED RISE IN DIRECTION OF AIR FLOW (SINGLE LINE)
D	INCLINED DROP IN DIRECTION OF AIR FLOW (DOUBLE LINE)
D	INCLINED DROP IN DIRECTION OF AIR FLOW (SINGLE LINE)
	FLEXIBLE CONNECTION
	FLEXIBLE DUCT CONNECTION TO SUPPLY DIFFUSER
	SUPPLY DIFFUSER
	LINEAR SLOT DIFFUSER
	RETURN OR EXHAUST GRILLE
	TRANSFER GRILLE
	CROSS SECTION OF SUPPLY AIR DUCT
	CROSS SECTION OF EXHAUST OR RETURN AIR DUCT
EXISTING NEW	FIRE DAMPER (HORIZONTAL)
EXISTING NEW	FIRE DAMPER (VERTICAL)
EXISTING NEW	SMOKE DAMPER
EXISTING NEW	COMBINATION FIRE/SMOKE DAMPER (VERTICAL)
EXISTING NEW	COMBINATION FIRE/SMOKE DAMPER (HORIZONTAL)
	VOLUME DAMPER (MANUALLY ADJUSTABLE)
M	MOTORIZED DAMPER
SD	SMOKE DETECTOR
CO2	CO2 SENSOR
T	THERMOSTAT OR TEMPERATURE SENSOR
H	HUMIDISTAT OR HUMIDITY SENSOR
	RETURN OR EXHAUST / SUPPLY AIR FLOW

PIPING LEGEND

ABBREV.	DESCRIPTION
CA	COMPRESSED AIR PIPING
CD	CONDENSATE DRAIN PIPING
DT	DRAIN TILE
F	FIRE PROTECTION PIPING
FOR	FUEL OIL RETURN PIPING
FOS	FUEL OIL SUPPLY PIPING
G	NATURAL GAS PIPING
BCW	BOOSTED-DOMESTIC COLD WATER PIPING
BHW	BOOSTED-DOMESTIC HOT WATER PIPING
CW	DOMESTIC COLD WATER PIPING
NPCW	NON POTABLE COLD WATER PIPING
TW	TEMPERED WATER PIPING
HW	DOMESTIC HOT WATER PIPING
HW(140°F)	DOMESTIC 140°F HOT WATER PIPING
HWR	DOMESTIC HOT WATER RETURN PIPING
SAN	SANITARY WASTE PIPING
PSAN	PUMPED SANITARY PIPING
V	VENT PIPING
ST	STORM SEWER PIPING
PST	PUMPED STORM PIPING
RC	RAIN CONDUCTOR PIPING
ORC	OVERFLOW RAIN CONDUCTOR PIPING
CHWR	CHILLED WATER RETURN PIPING
CHWS	CHILLED WATER SUPPLY PIPING
CWR	CONDENSER WATER RETURN PIPING
CWS	CONDENSER WATER SUPPLY PIPING
HHWR	HEATING HOT WATER RETURN PIPING
HHWS	HEATING HOT WATER SUPPLY PIPING
HPLR	HEAT PUMP LOOP RETURN PIPING
HPLS	HEAT PUMP LOOP SUPPLY PIPING
RL	REFRIGERANT LIQUID PIPING
RS	REFRIGERANT SUCTION PIPING
HGB	HOT GAS BY-PASS PIPING
GXHR	GEO HEAT EXCHANGE RETURN
GXHS	GEO HEAT EXCHANGE SUPPLY
STM	STEAM PIPING
HPS	HIGH PRESSURE STEAM PIPING
LPS	LOW PRESSURE STEAM PIPING
CR	STEAM CONDENSATE RETURN PIPING
PCR	PUMPED STEAM CONDENSATE RETURN PIPING
LPC	LOW PRESSURE CONDENSATE PIPING
HPC	HIGH PRESSURE CONDENSATE PIPING
MA	MEDICAL AIR PIPING
N	NITROGEN GAS PIPING
O2	OXYGEN GAS PIPING
VAC	VACUUM PIPING

DRAWING INDEX

SHT NO	DESCRIPTION
M0.00	MECHANICAL GENERAL INFORMATION
PD1.01	PLUMBING DEMOLITION PLAN
MD1.01	MECHANICAL DEMOLITION PLAN
P1.00	UNDERGROUND PLUMBING AND VENT NEW WORK PLAN
P1.01	ABOVE GROUND PLUMBING NEW WORK PLAN
M1.01	MECHANICAL NEW WORK PLAN
M1.02	MECHANICAL NEW WORK ROOF PLAN
M5.00	MECHANICAL DETAILS
M5.01	MECHANICAL DETAILS
M6.00	MECHANICAL SCHEDULES
M8.00	TEMPERATURE CONTROLS

DRAWING NOTATION

SYMBOL	DESCRIPTION
1	NEW WORK KEY NOTE NO. 1
1	DEMOLITION KEY NOTE NO. 1
AHU-1	EQUIPMENT TAG
S-1 12x12 150-2	AIR TERMINAL TAG: IE: DIFFUSER TYPE = S-1 NECK SIZE = 12x12 CFM = 150 (TYPICAL FOR 2)
	EXISTING DEVICES OR EQUIPMENT
	NEW OR MODIFIED DEVICES OR EQUIPMENT
	EXISTING SYSTEM COMPONENT TO BE REMOVED
	POINT OF NEW CONNECTION

S = SUPPLY
R = RETURN
E = EXHAUST
T = TRANSFER

APPLICABLE CODES AND REGULATIONS

YEAR	CODE
2021	MICHIGAN BUILDING CODE
2018	MICHIGAN REHABILITATION CODE FOR EXISTING BUILDINGS
2021	MICHIGAN PLUMBING CODE
2021	MICHIGAN MECHANICAL CODE
2019	MICHIGAN UNIFORM ENERGY CODE
2015	INTERNATIONAL FUEL GAS CODE
2012	NFPA 101 WITH BFS AMENDMENTS

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UBS PROJECT: 041.24.03

OWNER

Charter Township of Canton - Western Wayne

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23-175

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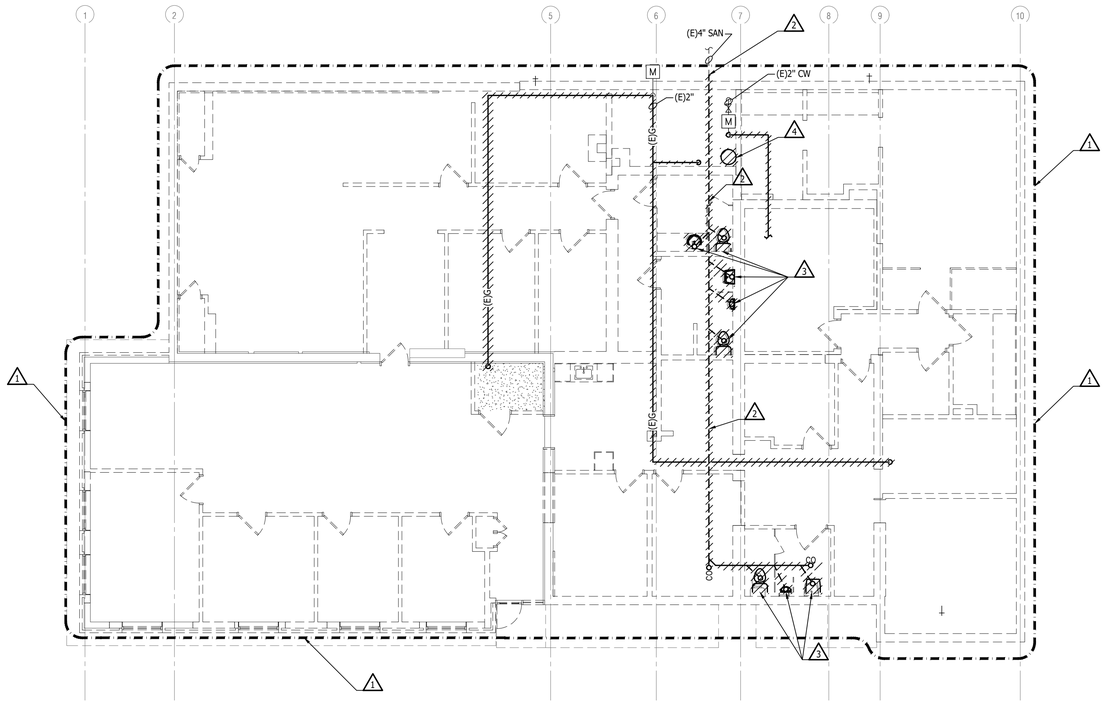
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SHEET NAME

MECHANICAL GENERAL INFORMATION

SHEET NO.

M0.00



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

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H	ALL EXISTING WORK TO REMAIN SHALL BE PROTECTED FROM DAMAGE. WHERE DUCT WORK PIPE INSULATION HAS BEEN DAMAGED DURING DEMOLITION, THE CONTRACTOR SHALL REPAIR INSULATION AS REQUIRED TO MATCH EXISTING.

⚠ DEMOLITION KEYED NOTES

1	IN AREA INDICATED, REMOVE ALL DOMESTIC COLD WATER BACK TO INCOMING COLD WATER SERVICE. DOMESTIC HOT WATER PIPING TO BE REMOVED COMPLETE. ALL VENT PIPING TO BE REMOVED COMPLETE. NATURAL GAS PIPING TO BE REMOVED BACK TO METER, TEMPORARILY CAP PIPING AT METERS. PREPARE COLD WATER AND GAS PIPING FOR NEW CONNECTION.
2	REMOVE ALL UNDERGROUND SANITARY PIPING TO POINT INDICATED. CAP AND ABANDON REMAINING SANITARY PIPING IN PLACE. SANITARY HAS BEEN SCOPED AND DETERMINED TO BE UNUSABLE.
3	REMOVE PLUMBING FIXTURES COMPLETE INCLUDING ALL ACCESSORIES AND PIPING.
4	REMOVE DOMESTIC WATER HEATER COMPLETE INCLUDING ALL ACCESSORIES AND PIPING.

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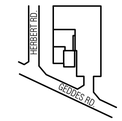
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KEY PLAN



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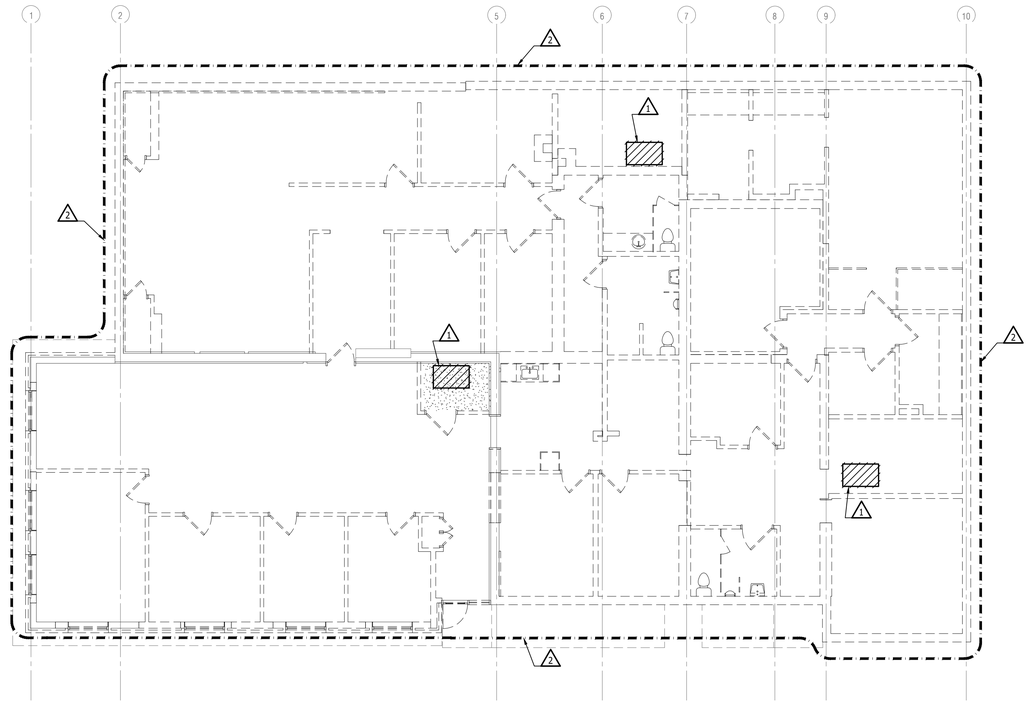
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SHEET NAME

PLUMBING DEMOLITION PLAN

SHEET NO.

PD1.01



MECHANICAL DEMOLITION PLAN
SCALE: 1/8" = 1'-0"

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DEMOLITION KEYED NOTES

1	REMOVE FURNACE COMPLETE INCLUDING ALL ACCESSORIES.
2	REMOVE ALL DUCTWORK COMPLETE INCLUDING ALL HANGERS AND ACCESSORIES.

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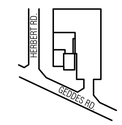
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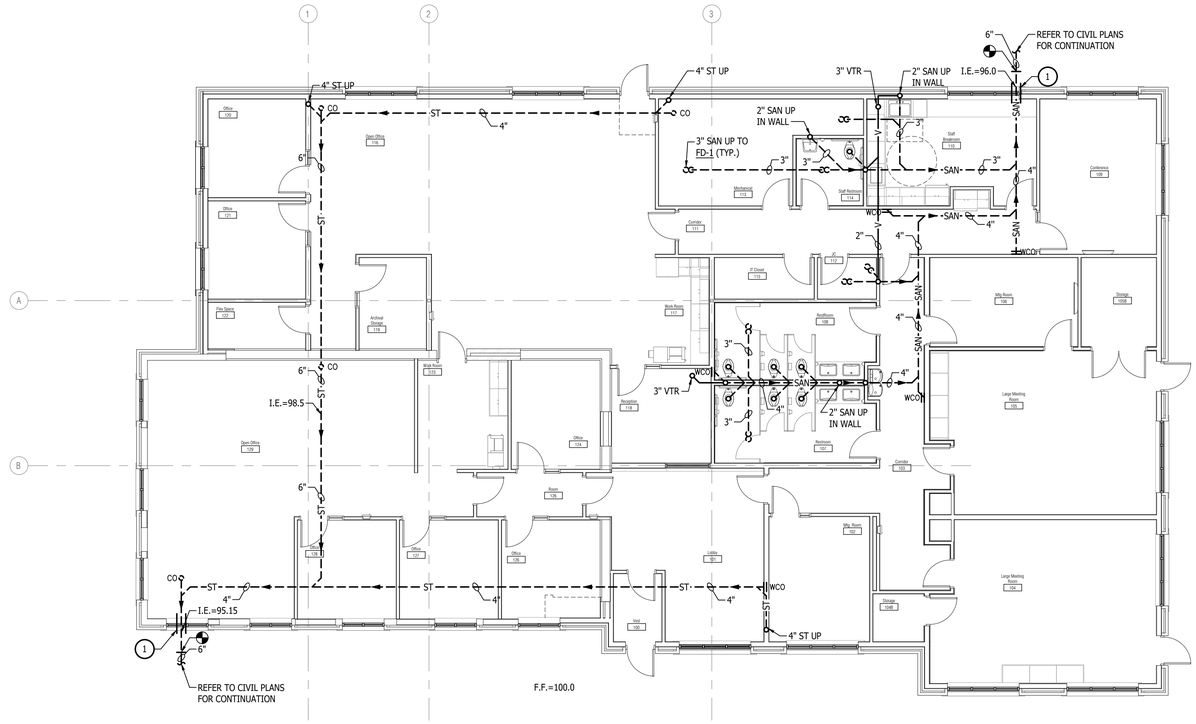
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SHEET NAME

MECHANICAL DEMOLITION PLAN

SHEET NO.

MD1.01



UNDERGROUND PLUMBING AND VENT NEW WORK PLAN

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J	INSTALL ALL SANITARY AND STORM PIPING 2 1/2" OR LESS AT 1/4" PER FOOT AND 3" AND LARGER PIPING AT 1/8" PER FOOT MINIMUM UNLESS NOTED OTHERWISE. MINIMUM UNDERGROUND PIPE SIZE SHALL BE 3".
K	PROVIDE "INLINE" WATERLESS PRIMER TRAP SEAL PROTECTION ON ALL FLOOR DRAINS AND TRAPS SUBJECT TO EVAPORATION.
L	AT EACH CONNECTION OF GAS SUPPLY TO EQUIPMENT, PROVIDE A PIPE UNION, GAS SHUT OFF VALVE, TEE, AND 6" LONG DIRT LEG WITH CAP.
M	THE CEILING SPACE IS USED AS A RETURN AIR PLENUM. NO PLASTIC MATERIALS INCLUDING PVC PIPING, CONDUIT WIRING, ETC. SHALL BE USED. ALL MATERIALS TO BE USED ARE TO BE PLENUM-RATED.

(X) NEW WORK KEYED NOTES

1	PROVIDE SCHEDULE 40 BLACK STEEL SLEEVE FOR PIPING PENETRATING FOOTINGS/FOUNDATION WALLS.

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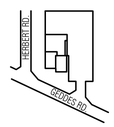
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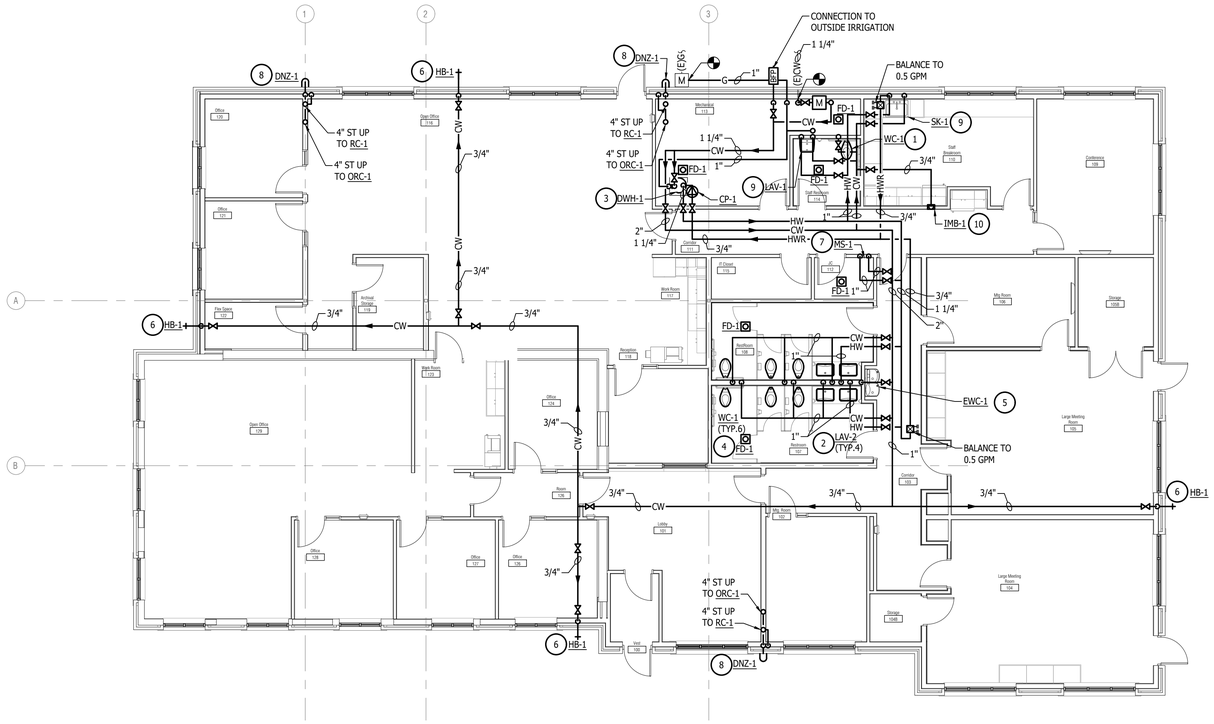
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SHEET NAME

UNDERGROUND PLUMBING AND VENT NEW WORK PLAN

SHEET NO.

P1.00



ABOVE GROUND PLUMBING NEW WORK PLAN

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F	VERIFY DEPTH, SIZE, LOCATIONS, AND CONDITIONS OF EXISTING UTILITIES IN THE FIELD, INCLUDING POINTS OF CONNECTION PRIOR TO STARTING WORK.
G	ALL ITEMS ON DEMOLITION PLAN SHALL BE CONSIDERED EXISTING UNLESS OTHERWISE NOTED. ALL WORK INDICATED ON PLANS HAS BEEN LOCATED PER EXISTING DRAWINGS AND/OR FIELD OBSERVATION AND REQUIRES FIELD VERIFICATION.
H	ALL EXISTING WORK TO REMAIN SHALL BE PROTECTED FROM DAMAGE. WHERE DUCT WORK PIPE INSULATION HAS BEEN DAMAGED DURING DEMOLITION, THE CONTRACTOR SHALL REPAIR INSULATION AS REQUIRED TO MATCH EXISTING.
J	INSTALL ALL SANITARY AND STORM PIPING 2 1/2" OR LESS AT 1/4" PER FOOT AND 3" AND LARGER PIPING AT 1/8" PER FOOT MINIMUM UNLESS NOTED OTHERWISE. MINIMUM UNDERGROUND PIPE SIZE SHALL BE 3".
K	PROVIDE "INLINE" WATERLESS PRIMER TRAP SEAL PROTECTION ON ALL FLOOR DRAINS AND TRAPS SUBJECT TO EVAPORATION.
L	AT EACH CONNECTION OF GAS SUPPLY TO EQUIPMENT, PROVIDE A PIPE UNION, GAS SHUT OFF VALVE, TEE, AND 6" LONG DIRT LEG WITH CAP.
M	THE CEILING SPACE IS USED AS A RETURN AIR PLENUM. NO PLASTIC MATERIALS INCLUDING PVC PIPING, CONDUIT WIRING, ETC. SHALL BE USED. ALL MATERIALS TO BE USED ARE TO BE PLENUM-RATED.

NEW WORK KEYED NOTES

X	
1	ROUTE 1/2" CW DOWN IN WALL AND CONNECT TO WATER CLOSET. EXTEND 4" SAN UP FROM BELOW AND CONNECT TO MAIN.
2	ROUTE 3/4" CW AND 3/4" HW, AND 3/4" HWR DOWN IN WALL AND 1 1/2" VENT UP. EXTEND AND CONNECT 1/2" CW AND 1/2" HW TO EACH LAVATORY/ SINK ON EITHER SIDE OF WALL. TERMINATE WITH ASSE 1070 COMPLIANT MIXING VALVES AND STOPS.
3	INSTALL DOMESTIC WATER HEATER ON 4" CONCRETE PAD. ROUTE CONDENSATE PIPING TO NEW FLOOR DRAIN. COORDINATE FINAL LOCATION PRIOR TO CONSTRUCTION. ROUTE 4"ø FLUE AND COMBUSTION AIR UP THROUGH ROOF. TERMINATE WITH CONCENTRIC FITTING A MINIMUM OF 18" ABOVE ROOF LINE.
4	ROUTE 3/4" CW DOWN IN WALL. EXTEND 3/4" CW AND CONNECT TO EACH WATER CLOSET ON EITHER SIDE OF WALL. TERMINATE WITH NEW STOPS.
5	EXTEND 1/2" CW, 1 1/2" SAN THRU WALL AND CONNECT TO ELECTRIC WATER COOLER. TERMINATE WITH NEW STOPS.
6	ROUTE 3/4" CW DOWN IN WALL AND CONNECT TO HOSE BIB. ALL PIPING IN EXTERIOR WALL SHALL BE INSULATED.
7	ROUTE 3/4" CW, 3/4" HW DOWN IN WALL. 3" SAN UP FROM BELOW AND CONNECT TO SERVICE SINK.
8	ROUTE 4" ORC DOWN IN ARCHITECTURAL CHASE. TERMINATE 18" ABOVE GRADE AND TERMINATE WITH DOWNSPOUT NOZZLE DNZ-1.
9	ROUTE 3/4" CW AND 3/4" HW, AND 3/4" HWR DOWN IN WALL AND 1 1/2" VENT UP. EXTEND AND CONNECT 1/2" CW AND 1/2" HW TO EACH LAVATORY/ SINK. TERMINATE WITH ASSE 1070 COMPLIANT MIXING VALVES AND STOPS.
10	ROUTE 1/2" CW DOWN IN WALL AND CONNECT TO ICE MAKER BOX WITH HAMMER ARRESTOR DEVICE.

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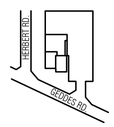
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UNIFIED BUILDING SYSTEMS ENGINEERING
69 S. GRATIOT AVE.
MT. CLEMENS, MI 48043
UBS PROJECT: 041.24.03

KEY PLAN



OWNER

Charter Township of Canton - Western Wayne

PROJECT NAME

Growth Works
44582 Geddes Rd, Canton, MI 48188

PROJECT NO.

23-175

ISSUES / REVISIONS

BIDDING/CONSTRUCTION	03/05/2026

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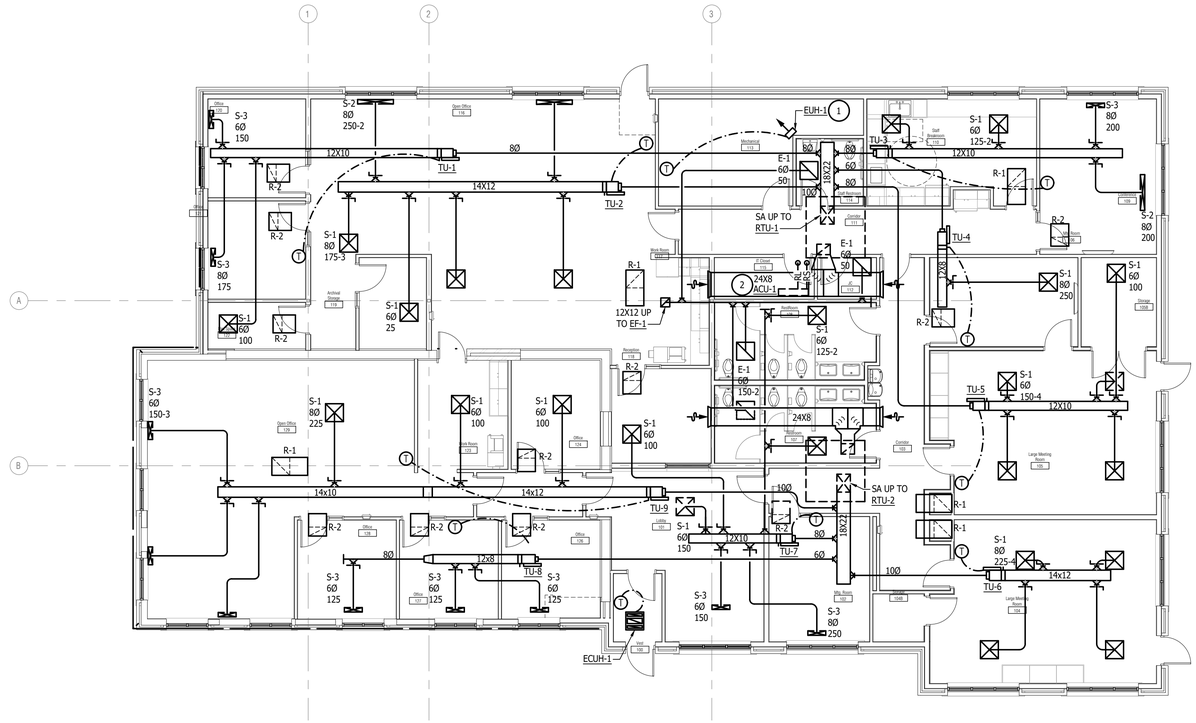
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SHEET NAME

ABOVE GROUND PLUMBING NEW WORK PLAN

SHEET NO.

P1.01



MECHANICAL NEW WORK PLAN
SCALE: 1/8" = 1'-0"

HVAC GENERAL NOTES

A	THESE DRAWINGS ARE DIAGRAMMATIC AND REPRESENT THE GENERAL EXTENT OF THE WORK TO BE PERFORMED. PROVIDE AND EXECUTE ALL HVAC SYSTEMS PER ENGINEER'S SPECIFICATION, AND LOCAL APPLICABLE CODES INCLUDING AMENDMENTS, BULLETINS, ETC. AS WELL AS THE STANDARDS OF INSTALLATION AND EQUIPMENT ESTABLISHED FOR THE BUILDINGS, AND REQUIREMENTS OF THE OWNER.
B	EXCEPT FOR CHANGES AS MAY BE SPECIFICALLY APPROVED BY THE ENGINEER OF RECORD, IN ACCORDANCE WITH ALTERNATES OF OPTIONS AS STATED HEREINAFTER, ALL WORK MUST BE IN FULL ACCORDANCE WITH THE INTENT OF THE PLANS AND SPECIFICATIONS. SYSTEMS ARE TO BE COMPLETE, EFFICIENT, AND SATISFACTORY OPERATION WHEN PROJECT IS DELIVERED TO THE OWNER.
C	THE CONTRACTOR AND EACH SUBCONTRACTOR COVENANTS AND AGREES TO INDEMNIFY, DEFEND, AND HOLD HARMLESS THE CONSULTING ENGINEER, ARCHITECT, AND OWNER FROM AND AGAINST ANY LIABILITY, LOSS, DAMAGE, OR EXPENSE INCLUDING ATTORNEYS ARISING FROM A FAILURE OR ALLEGED FAILURE ON THE PART OF THE CONTRACTOR, SUBCONTRACTORS, AND THEIR AGENTS/EMPLOYEES PROPERLY TO DISCHARGE THE OBLIGATIONS ASSUMED BY HIM/HER IN THE PERFORMANCE OF THE WORK, INCLUDING ANY ACT OR OMISSION ALLEGEDLY RESULTING IN DEATH, PERSONAL INJURY, PROPERTY DAMAGE, OR IMPROPER CONSTRUCTION PROTOCOL.
D	CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND APPROVAL FROM GOVERNING AUTHORITIES AND FILE NECESSARY FORMS, PAY ALL INSPECTION FEES.
E	CONTRACTOR TO EXAMINE ALL ADJOINING WORK BEFORE COMMENCEMENT OF HIS/HER SCOPE OF WORK. REPORT ANY DISCREPANCIES TO THE CONSTRUCTION MANAGER FOR REVIEW AND APPROVAL. COORDINATE ALL WORK WITH OTHER TRADES TO ENSURE THAT INSTALLATION IS MADE IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
F	PROVIDE REQUIRED CLEARANCE IN FRONT OF ELECTRICAL EQUIPMENT; DUCTWORK/PIPING SHALL NOT INTERFERE WITH ELECTRICAL EQUIPMENT CLEARANCE.
G	CONNECTION TO EQUIPMENT SHALL BE VERIFIED WITH MANUFACTURER'S CERTIFIED DRAWINGS. ALL PIPING CONNECTIONS SHALL BE MINIMUM 3/4" UNLESS NOTED OTHERWISE.
H	FURNISH ADEQUATE LIABILITY INSURANCE AND BONDING DOCUMENTS AS REQUIRED BY THE OWNER.
J	SUPPORT ALL ANCHORS SECURED TO THE BOTTOM OF FLOOR SLABS SHALL BE DROP-IN OR SLEEVE ANCHOR TYPE. ALL SUPPORTING STEEL SHALL BE PROVIDED BY THE CONTRACTOR.
K	DUCTWORK/PIPING SHALL NOT BE INSTALLED IN A LOCATION THAT RESTRICTS THE ACCESS TO MECHANICAL DEVICES REQUIRING ACCESS.
L	THE CONTRACTOR SHALL PROVIDE ALL MISCELLANEOUS SUPPORTING STEEL FOR THE PROPER INSTALLATION OF MECHANICAL SYSTEMS.
M	BRANCH DUCTWORK TO GRILLES, REGISTERS, AND DIFFUSERS SHALL BE THE SAME SIZE AS THE TERMINAL DEVICE NECK SIZE WHERE NO DUCT SIZE IS INDICATED.

(X) NEW WORK KEYED NOTES

1	INSTALL ELECTRIC UNIT HEATER UNIT ON BRACKET ATTACHED TO WALL.
2	INSTALL AIR CONDITIONING UNIT AND ALL ACCESSORIES COMPLETE. ROUTE REFRIGERANT PIPING TO ASSOCIATED OUTDOOR UNIT. LINESETS TO BE SIZED BASE ON MANUFACTURER'S RECOMMENDATIONS.

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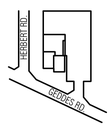
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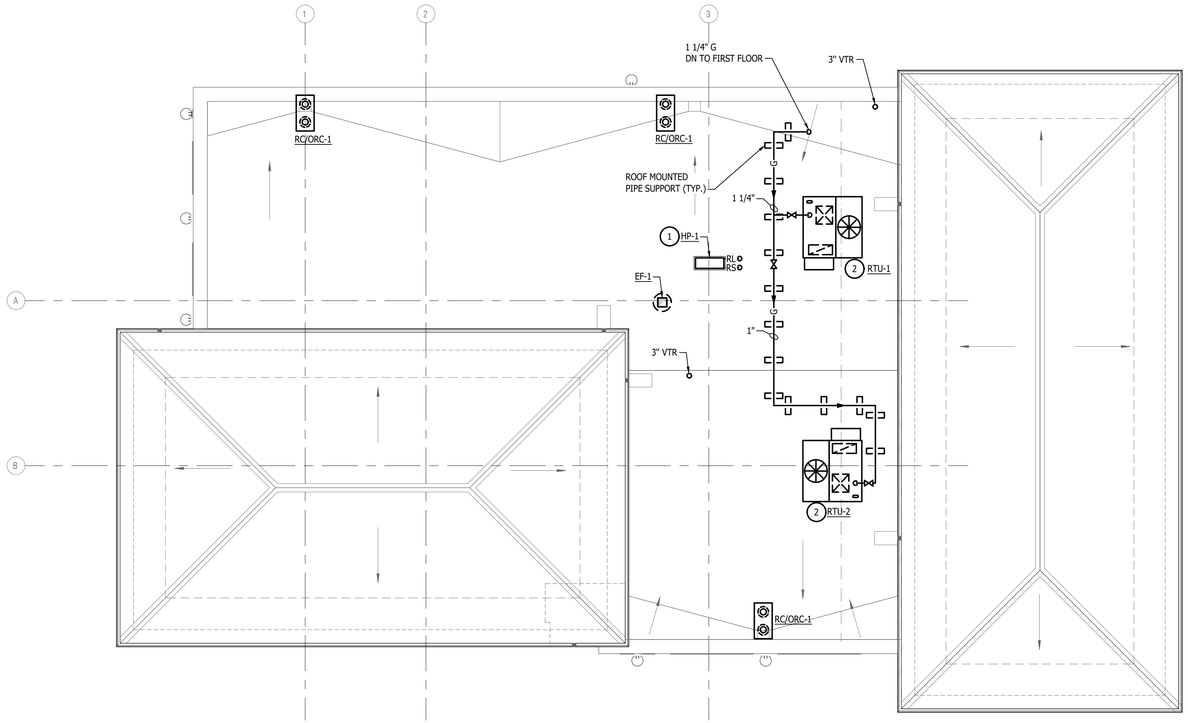
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SHEET NAME

MECHANICAL NEW WORK PLAN

SHEET NO.

M1.01



MECHANICAL NEW WORK ROOF PLAN

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

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M	BRANCH DUCTWORK TO GRILLES, REGISTERS, AND DIFFUSERS SHALL BE THE SAME SIZE AS TERMINAL DEVICE NECK SIZE WHERE NO DUCT SIZE IS INDICATED.

(X) NEW WORK KEYED NOTES

1	INSTALL OUTDOOR UNIT ON EQUIPMENT RAILS MIN. 18" ABOVE ROOF. ROUTE REFRIGERANT PIPING THRU PIPE CURB TO ASSOCIATED INDOOR UNIT. LINESETS TO BE SIZED BASED ON MANUFACTURER'S RECOMMENDATIONS.
2	INSTALL ROOF TOP UNIT AND SEAL WEATHER TIGHT. CONNECT TO EXISTING MAIN GAS LINE AND PROVIDE NEW ISOLATION VALVE.

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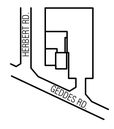
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MT. CLEMENS, MI 48043
UBS PROJECT: 041.24.03

KEY PLAN

NORTH



OWNER

Charter Township of Canton - Western Wayne

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Growth Works
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PROJECT NO.

23-175

ISSUES / REVISIONS

BIDDING/CONSTRUCTION 03/05/2026

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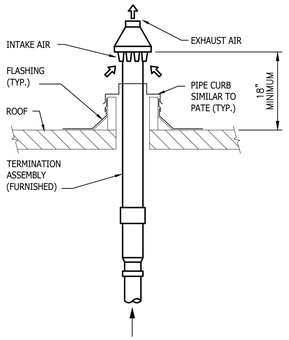
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SHEET NAME

MECHANICAL NEW WORK ROOF PLAN

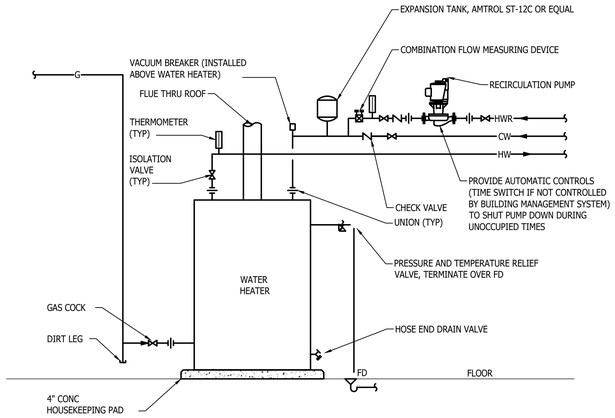
SHEET NO.

M1.02



CONCENTRIC VENT TERMINATION DETAIL

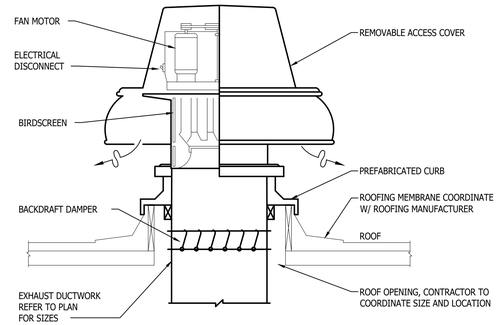
NO SCALE



GAS FIRED DOMESTIC WATER HEATER PIPING DIAGRAM

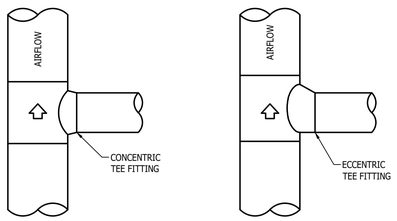
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W/ HW RECIRCULATING PUMP AND EXPANSION TANK



ROOF EXHAUST FAN MOUNTING DETAIL

NO SCALE



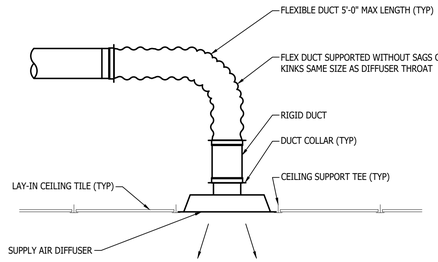
SUPPLY DUCT

RETURN OR EXHAUST DUCT

FLAT OVAL DUCT BRANCH
TAKE-OFF SIMILAR

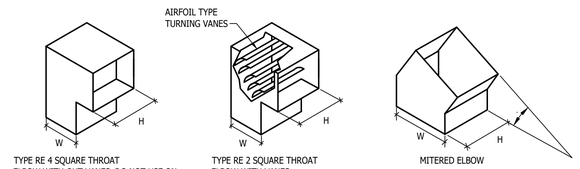
ROUND DUCT BRANCH TAKE-OFF DETAILS

NO SCALE



SUPPLY AIR DIFFUSER DETAIL

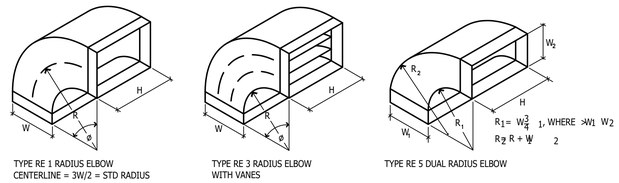
NO SCALE



TYPE RE 4 SQUARE THROAT
ELBOW WITH OUT VANES. DO NOT USE ON
EXCEPT FOR RETURN BOOTS.

TYPE RE 2 SQUARE THROAT
ELBOW WITH VANES

MITERED ELBOW



TYPE RE 1 RADIUS ELBOW
CENTERLINE = 3W/2 = STD RADIUS

TYPE RE 3 RADIUS ELBOW
WITH VANES

TYPE RE 5 DUAL RADIUS ELBOW

RECTANGULAR SHEET-METAL ELBOWS

NO SCALE

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UNIFIED BUILDING
SYSTEMS ENGINEERING
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OWNER

Charter Township of Canton - Western Wayne

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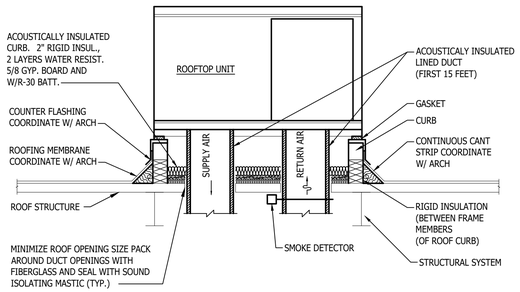
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SHEET NAME

MECHANICAL DETAILS

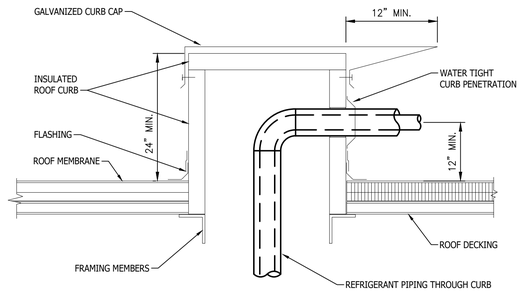
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M5.00



ROOFTOP UNIT - CURB MOUNTING DETAIL

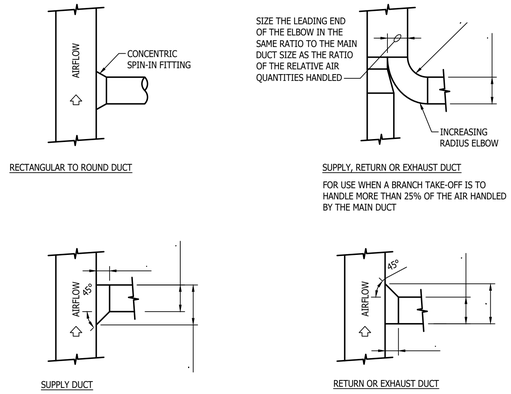
NO SCALE



NOTE:
MECHANICAL AND ARCHITECTURAL TRADES SHALL COORDINATE ALL REQUIREMENTS TO ASSURE PROPER WATERTIGHT INSTALLATION.

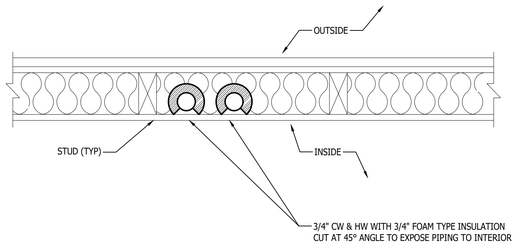
TYPICAL MECHANICAL PIPE CURB

NO SCALE



RECTANGULAR DUCT BRANCH TAKE-OFF DETAILS

NO SCALE



PIPING IN OUTSIDE WALL

NO SCALE

STATE OF MICHIGAN
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DRAWN BY KWA

CHECKED BY MPH

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MECHANICAL DETAILS

SHEET NO.

M5.01

PLUMBING FIXTURE SCHEDULE

TAG	BARRIER FREE	ITEM	PIPE CONNECTION SIZES				MANUFACTURER & MODEL NO.	ACCESSORIES
			WASTE	VENT	CW	HW		
WC-1	Y	TANK TYPE FLOOR MOUNTED WATER CLOSET	4"	2"	1/2"	-	KOHLER: HIGHLINE CLASSIC ADA HEIGHT K-3493 W/ SLOAN FLUSHMATE VALVE M-101526-F3-A	
LAV-1	Y	WALL MOUNTED LAVATORY	1 1/2"	1 1/2"	1/2"	1/2"	KOHLER: LUCERNE WALL MOUNTED 3 HOLE 4" CENTERS	FAUCET: SLOAN ETF-880 SMT HARD WIRED W/GRID STRAINER DRAIN, CHROME PLATED P-TRAP, AND ASSE 1070 MIXING VALVE
LAV-2	Y	UNDER MOUNTED LAVATORY	1 1/2"	1 1/2"	1/2"	1/2"	KOHLER: CAXTON K-20000 UNDER MOUNTED RECTANGLE	FAUCET: SLOAN ETF-880 SMT HARD WIRED W/GRID STRAINER DRAIN, CHROME PLATED P-TRAP, AND ASSE 1070 MIXING VALVE
EWC-1	Y	FILTERED BI-LEVEL ELECTRIC WATER COOLER WITH BOTTLE FILLER	2"	1 1/2	1/2"	-	ELKAY: LZSTL8WSLK EZH20	PROVIDE CANE APROL ACCESSORY: ELKAY MODEL: LKAPREZL
FD-1	-	FLOOR DRAIN	3"	-	-	-	ZURN: Z415S-6SS	
MS-1	-	FLOOR MOUNTED MOP SINK	3"	-	1/2"	1/2"	ZURN: Z5850	FURNISH VACUUM BREAKER, HOSE AND BRACKET, MOP HANGER, AND DRAIN KIT WITH FAUCET LISTED.
SK-1	Y	UNDERMOUNT SINK W/DISPOSAL	2"	2"	1/2"	1/2"	ELKAY QUARTZ CLASSIC ELKAY MODEL: ELGRU13022	FAUCET: DELTA ANTONI - MODEL: 18803-BL-DST-R MATTE BLACK FINISH. PROVIDE WITH GARBAGE DISPOSAL IN-SINK-ERATOR BAGDER 5 1/2 HP
DNZ-1	-	DOWNSPOUT NOZZLE	4"	-	-	-	ZURN: Z199	FLUSH WALL MOUNTED. COORDINATE FINISH WITH ARCHITECTRUAL TRADES.
RC/ORC-1	-	ROOF SUMP & OVERFLOW COMBINATION	4"	-	-	-	ZURN: Z163	
IMB-1	-	ICE MAKER BOX	-	-	1/2"	-	OATEY: 12K ICE MAKE BOX	PROVIDE WITH ASSE 1010 WATER HAMMER ARRESTOR
HB-1	-	FREEZELESS HOSE BIB	-	-	3/4"	-	WOODFORD: MODEL 25	ANTI-SIPHON VACUUM BREAKER & SELF DRAINING DESIGN

NOTES:
1. PROVIDE ALL ACCESSORIES NECESSARY FOR COMPLETE AND OPERABLE INSTALLATION.
2. ALL FIXTURES SHALL MEET MICHIGAN DEPT. OF PUBLIC HEALTH REQUIREMENTS, AND SHALL BE SUITABLE FOR FOOD PREPARATION AREAS.

EXHAUST FAN SCHEDULE

UNIT ID	SERVING	TYPE	CFM	ESP. (IN WG)	FAN RPM	MOTOR				ELECTRICAL			CURB HEIGHT (IN.)	MODEL NO.	REMARKS
						BHP	HP	RPM	DRIVE TYPE	VOLTS	PHASE	MOCP			
EF-1	SEE PLANS	ROOF	500	0.25	1,160	0.05	1/6	1800	DIRECT	115	1	15.0	18	G-095-VG	

NOTES:
1. MODEL NUMBERS ARE GREENHECK UNLESS OTHERWISE NOTED.
2. PROVIDE WITH GRAVITY BACKDRAFT DAMPER.
3. PROVIDE BACNET MSTP INTERFACE

GRILLE, REGISTER AND DIFFUSER SCHEDULE

UNIT ID	FACE SIZE	NECK SIZE	MOUNTING	FINISH	MATERIAL	PRICE/ MODEL NO.	REMARKS
S-1	24"x24"	SEE PLANS	CEILING	WHITE	STEEL	SPD	
S-2	48"x6"	SEE PLANS	CEILING	WHITE	STEEL	TBD7	2 SLOT 2 WAY 1/2" SLOT WIDTH MUST INCLUDE SDB PLENUM
S-3	24"X6"	SEE PLANS	CEILING	WHITE	STEEL	RBD7	2 SLOT 2 WAY 1/2" SLOT WIDTH MUST INCLUDE SDB PLENUM
R-1	24"x24"	SEE PLANS	CEILING	WHITE	STEEL	PDDR	PROVIDE WITH SOUND ATTEN. BOOT IF NOT DUCTED.
R-2	24"X12"	SEE PLANS	CEILING	WHITE	STEEL	PDDR	PROVIDE WITH SOUND ATTEN. BOOT IF NOT DUCTED.
E-1	24"x24"	SEE PLANS	CEILING	WHITE	STEEL	PDDR	

NOTES:
1. COORDINATE WITH LIGHTING AND FRAME TYPE ACCORDINGLY WITH ARCHITECTURAL CEILING LAYOUT.

PLUMBING PUMP SCHEDULE

UNIT ID	SERVICE	TYPE	GPM	HEAD (FT)	MIN % EFF	MOTOR BHP	HP	RPM	VOLTS	PHASE	MODEL NO.	REMARKS
CP-1	DOMESTIC HOT WATER RE-CIRCULATION	INLINE	5.0	20.0	14.1	-	1/12	3400	120	1	ECOCIRC XL 20-35	INTERNAL AQUASTAT SMART TECHNOLOGY

NOTES:
1. MODEL NUMBERS ARE BELL & GOSSET UNLESS NOTED OTHERWISE.
2. PERFORMANCE BASED ON WATER, UNLESS OTHERWISE INDICATED.
3. PUMPS SHALL BE NON-OVERLOADING.

MINI-SPLIT INDOOR UNIT SCHEDULE

UNIT ID	UNIT TYPE	ASSOCIATED OUTDOOR UNIT ID	AREA SERVED	SUPPLY (WET COIL) (CFM)	OA (CFM)	TOTAL CAPACITY (MBH)	SENSIBLE CAPACITY (MBH)	DIMENSIONS			ELECTRICAL				DISCONNECT			MANUFACTURER/ MODEL NO.	REMARKS
								LENGTH (IN)	WIDTH (IN)	HEIGHT (IN)	MOCP	MCA	VOLTS	PHASE	FURN. BY	INST. BY	TYPE		
ACU-1	WALL MOUNTED	HP-1	IT CLOSET	700	150	24	18	9	40	14	FED FROM OUTDOOR UNIT				-	-	-	LG / KNUAB181A	

NOTES:
1. WIRING AND DISCONNECT BY DIVISION 26.
2. PROVIDE INDOOR AND OUTDOOR COMPONENTS FULLY CHARGED WITH R-454B OR R-32 REFRIGERANT AND INTERCONNECTING REFRIGERANT PIPING FOR FIELD INSTALLATION.
3. PROVIDE WITH WALL MOUNTED LOW VOLTAGE THERMOSTAT.
4. PROVIDE CONDENSATE PUMP PER UNIT.
5. 5.PROVIDE BACNET MSTP INTERFACE

MINI-SPLIT OUTDOOR UNIT SCHEDULE

UNIT ID	ASSOCIATED INDOOR UNIT ID	COOLING				HEATING		FAN	COMPRESSOR		ELECTRICAL				DISCONNECT			MANUFACTURER/ MODEL NO.	REMARKS
		NOMINAL TONNAGE	MINIMUM SEER	DESIGN AMBIENT (°F)	NO. OF FANS	CAPACITY (MBH)	DESIGN AMBIENT (°F)	CFM	NO.	TYPE	MOCP	MCA	VOLTS	PHASE	FURN. BY	INST. BY	TYPE		
HP-1	ACU-1	1.5	23.0	95	1	24.0	5	700	1	SCROLL	30.0	19.0	208	1	EC	EC	SWITCH	LG / KUSAB181A	

NOTES:
1. UNIT/SYSTEM EFFICIENCY MUST MEET OR EXCEED ASHRAE 90.1. PROVIDE INDOOR AND OUTDOOR COMPONENTS FULLY CHARGED WITH R-454B OR R-32 REFRIGERANT AND INTERCONNECTING REFRIGERANT PIPING FOR FIELD INSTALLATION.
2. PROVIDE WITH LOW AMBIENT CONTROLS DOWN TO ZERO DEGREES.
3. PROVIDE WITH WIND BAFFLE.
4. INSTALL ON NEW 18" EQUIPMENT RAILS.

ELECTRIC CABINET UNIT HEATER SCHEDULE

UNIT ID	MBH	kW	CFM	ELECTRICAL			PHYSICAL SIZE (IN)			MOUNTING	MANUFACTURER/MODEL NO.	REMARKS
				VOLTS	PHASE	AMPS	DEPTH	HEIGHT	WIDTH			
ECUH-1	6.8	2	300	208	1	9.6	24	24	7	CIELING RECESSED	QMARK / CDF548RE	
EUH-1	10.3	3	350	208	1	14.5	16	14	8	WALL MOUNTED BRACKET	QMARK / MUH0381-PRO	

DOMESTIC WATER HEATER SCHEDULE (GAS TANK TYPE)

UNIT ID	STORAGE CAPACITY (GAL)	FUEL TYPE	GAS PRESS MIN - MAX (IN WG)	INPUT (MBH)	RECOVERY AT 100°F (GPH)	MODEL NO.	REMARKS
WH-1	40	NAT. GAS	4-14	40	43	RG240T6N	

NOTES:
1. ALL MODEL NUMBERS ARE BRADFORD WHITE UNLESS NOTED OTHERWISE.
2. 150 PSI WORKING PRESSURE.
3. SPARK IGNITION, POWER DIRECT VENTING.

VAV TERMINAL UNIT SCHEDULE WITH TEMPERING COIL - (ELECT)

UNIT ID	AIRFLOW RANGE		INLET SP (IN WG)	DUCT CONNECTIONS		MAX NC LEVEL	ELECTRIC TEMPERING COIL (MANUFACTURER)								MANUFACTURER/ MODEL NO.	REMARKS
	MIN (CFM)	MAX (CFM)		INLET SIZE (IN)	OUTLET SIZE (IN)		HTG (CFM)	APD (IN WG)	EAT (°F)	LAT (°F)	KW	VOLTS	PHASE	STAGES OF HEAT		
TU-1	90	425	1.5	8Ø	12X10	35	425	<0.1	55	90	6.0	208	3	SCR	PRICE / SDV	
TU-2	240	1200	1.5	10Ø	14X12	35	1200	<0.1	55	90	17.0	208	3	SCR	PRICE / SDV	
TU-3	130	650	1.5	8ø	12x10	35	650	<0.1	55	90	9.5	208	3	SCR	PRICE / SDV	
TU-4	50	250	1.5	6Ø	12X8	35	250	<0.1	55	90	3.5	208	3	SCR	PRICE / SDV	
TU-5	140	700	1.5	8Ø	12X10	35	700	<0.1	55	90	10.0	208	3	SCR	PRICE / SDV	
TU-6	160	800	1.5	10Ø	14X12	35	800	<0.1	55	90	11.0	208	3	SCR	PRICE / SDV	
TU-7	140	700	1.5	8Ø	12X10	35	650	<0.1	55	90	9.5	208	3	SCR	PRICE / SDV	
TU-8	75	375	1.5	6Ø	12X8	35	375	<0.1	55	90	5.5	208	3	SCR	PRICE / SDV	
TU-9	180	900	1.5	10Ø	14X12	35	900	<0.1	55	90	13.0	208	3	SCR	PRICE / SDV	

NOTES:
1. MINIMUM AND MAXIMUM AIRFLOW SHALL BE SET TO THE CFM INDICATED ON FLOOR PLANS. MAXIMUM N.C. LEVEL BASED ON 3" PRESSURE DROP WITH NO ALLOWANCE FOR EXTERNAL ATTENUATION. MAXIMUM RADIATED NC LEVEL SHALL NOT EXCEED 35.
2. SINGLE POINT POWER CONNECTION WITH FACTORY MOUNTED DISCONNECT SWITCH.
3. FIELD MOUNTED CONTROLS/CONTROLLER BY TEMPERATURE CONTROLS CONTRACTOR.

PACKAGED COMMERCIAL ROOFTOP UNIT SCHEDULE - (DX - GAS - HGR)

UNIT ID	TOTAL SUPPLY (CFM)	MINIMUM OA (CFM)	SUPPLY FAN					DX COOLING COIL								NATURAL GAS HEATING SECTION							HOT GAS RE-HEAT COIL			POWER EXHAUST OR BAROMETRIC RELIEF	FILTER TYPE	ELECTRICAL					DISCONNECT		CURB HEIGHT (IN)	MANUFACTURER/ MODEL NO.	REMARKS
			ESP (IN WG)	FAN TYPE	DRIVE TYPE	BHP	HP	TOTAL CAPACITY (MBH)	SENSIBLE CAPACITY (MBH)	AIR					MIN. EFFICIENCY (EER)	REFRIGERANT TYPE	INPUT (MBH)	OUTPUT (MBH)	GAS PRESS. MIN.- MAX. (IN WG)	STAGES OR MODULATION TURNDOWN	BURNER TYPE	EAT (°F)	LAT (°F)	RE-HEAT (MBH)	AIR														
										EDB (°F)	EWB (°F)	LDB (°F)	LWB (°F)	APD (IN WG)										EDB (°F)	LDB (°F)				MOCP	MCA	FLA	VOLTS	PHASE	FURN. BY	INST. BY			
RTU-1	3,100	450	0.50	SWSI	DIRECT	1.48	2.0	90.0	71.6	77.1	64.1	56.7	54.6	0.26	12.25	R-454B	90.0	72.9	4-14	10.0:1	INDIRECT	58.3	80.1	64.7	55.0	75.0	POWER EXHAUST	2" MERV 8 + 4" MERV 13	80	54	48	208	3	MC	MC	20	AAON / RNA-008	
RTU-2	3,050	490	0.50	SWSI	DIRECT	1.48	2.0	90.2	71.8	77.3	64.3	56.9	54.7	0.26	12.25	R-454B	90.0	72.9	4-14	10.0:1	INDIRECT	57.3	79.1	64.0	55.0	75.0	POWER EXHAUST	2" MERV 8 + 4" MERV 13	80	54	48	208	3	MC	MC	20	AAON / RNA-008	

NOTES:
1. DUAL INPUT ENTHALPY CONTROL ECONOMIZER.
2. PROVIDE WITH FACTORY CONTROLS AND BACNET MSTP INTERFACE.
3. 2" PLEATED MEDIA FILTERS.
4. PROVIDE WITH FACTORY MOUNTED DISCONNECT SWITCH.
5. REFRIGERATION COMPRESSORS SHALL BE VARIABLE SPEED SCROLL.

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CONSULTANT

UNIFIED BUILDING SYSTEMS ENGINEERING
69 S. GRATIOT AVE.
MT. CLEMENS, MI 48043
UBS PROJECT: 041.24.03

OWNER

Charter Township of Canton - Western Wayne

PROJECT NAME

Growth Works
44582 Geddes Rd, Canton, MI 48188

PROJECT NO.

23-175

ISSUES / REVISIONS

BIDDING/CONSTRUCTION 03/05/2026

DRAWN BY KWA

CHECKED BY MPH

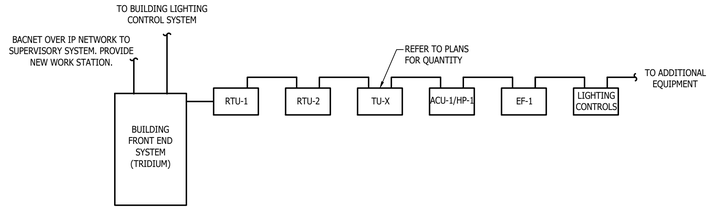
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SHEET NAME

MECHANICAL SCHEDULES

SHEET NO.

M6.00



BUILDING AUTOMATION SYSTEM RISER DIAGRAM

NO SCALE

BUILDING AUTOMATION SYSTEM NOTES:

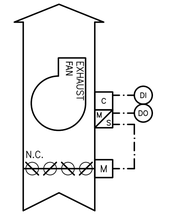
1. CONFIGURATION AND ORDER OF CONTROLLER CONNECTION IS FOR REPRESENTATION PURPOSES ONLY. UPDATE CONTROL SYSTEM DRAWINGS TO REFLECT ACTUAL AS-BUILT CONDITIONS, INCLUDING ORDER IN WHICH CONTROLLERS ARE CONNECTED WITHIN THE NETWORK.

2. PROVIDE NEW SOFTWARE FOR THE DISTRICT'S BUILDING AUTOMATION SYSTEM (AKA ENERGY MANAGEMENT SYSTEM) FRONT END SYSTEM (TRIDIUM NIAGARA SUPERVISOR VERSION 4.0) AND BUILDING LEVEL JACE 8000 UNITS. PROVIDE FOR BACNET OVER IP LICENSING.

BUILDING AUTOMATION SYSTEM FRONT END SYSTEM REQUIREMENTS

1. INTEGRATE MECHANICAL EQUIPMENT INTO THE NEW DISTRICT SUPERVISORY SYSTEM, INCLUDING GRAPHICS. EACH UNIT SHALL DISPLAY PERTINENT INFORMATION FOR CONTROL AND TROUBLE SHOOTING, INCLUDING:

   A) SPACE TEMPERATURE
   B) SPACE TEMPERATURE SETPOINT
   C) UNIT STATUS
   D) HIGH AND LOW REFRIGERANT PRESSURE ALARMS
   E) HEATING HOT WATER VALVE COMMAND
   F) OCCUPIED/UNOCCUPIED COMMAND
   G) MODE OF OPERATION

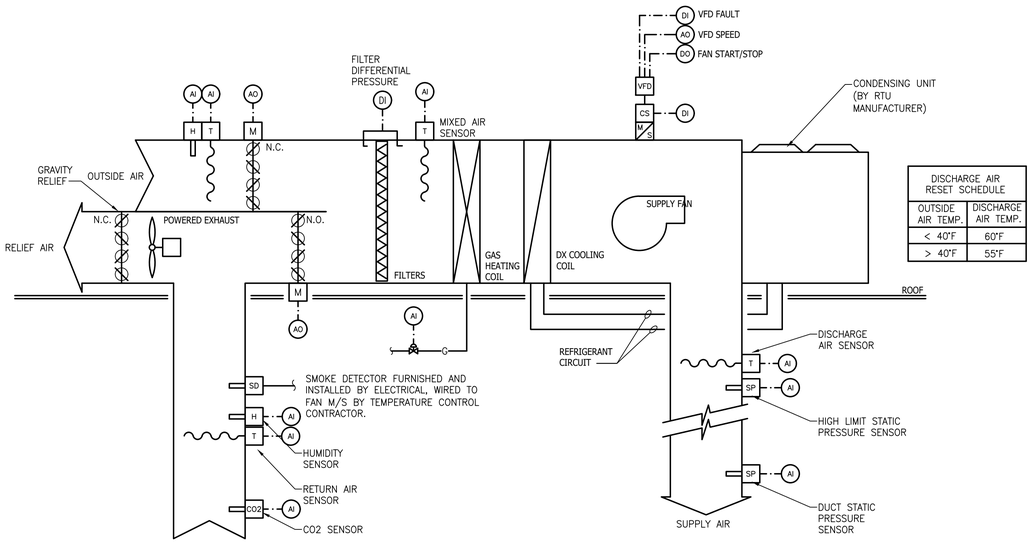


TYPICAL GENERAL EXHAUST FAN CONTROL DIAGRAM

NO SCALE

GENERAL EXHAUST FAN SEQUENCE OF OPERATIONS:
NOTE: ALL SETPOINTS AND TIME INTERVALS SHALL BE ADJUSTABLE BY THE SYSTEM OPERATOR. TEMPERATURE CONTROLS CONTRACTOR SHALL INTEGRATE ALL EQUIPMENT INTO THE EXISTING JCI FX6 DDC SYSTEM.

1. WITH THE EXHAUST FAN'S HAND/OFF/AUTO SWITCH IN THE "AUTO" POSITION, THE SUPPLY FAN SHALL BE AUTOMATICALLY STARTED AND STOPPED WITH THE DDC SYSTEM OCCUPANCY SCHEDULE.
2. THE BUILDING DDC SYSTEM SHALL MONITOR AND GRAPHICALLY SHOW THE FOLLOWING POINTS: EXHAUST FAN STATUS.



DISCHARGE AIR RESET SCHEDULE	
OUTSIDE AIR TEMP.	DISCHARGE AIR TEMP.
< 40°F	60°F
> 40°F	55°F

SINGLE ZONE VAV RTU WITH GAS HEAT CONTROL DIAGRAM

NO SCALE (RTU-1)

VARIABLE VOLUME RTU WITH GAS HEAT SEQUENCE OF OPERATIONS:
NOTE: ALL SETPOINTS AND TIME INTERVALS SHALL BE ADJUSTABLE BY THE SYSTEM OPERATOR.

1. THE FACTORY UNIT CONTROLLER WILL INTERFACE WITH THE BADNET MSTP BAS SYSTEM. COMMUNICATION CARD PROVIDED BY MANUFACTURER.

2. HEAD PRESSURE CONTROL: THE CONDENSER HEAD PRESSURE WILL BE MONITORED BY THE UNIT CONTROLLER TO MAINTAIN HEAD PRESSURE AND THE COMPRESSOR OPERATING ENVELOPE AT ALL TIMES TO AVOID HIGH PRESSURE TRIPS ON HIGH LOAD DAYS. CONDENSER FANS WITH ECM MOTORS SHALL BE PROVIDED AS WELL AS FACTORY SENSORS TO PROVIDE THIS PROTECTION.

3. COMPRESSOR ENVELOPE CONTROL: THE UNIT CONTROLLER WILL CONTINUALLY MONITOR THE SUCTION AND DISCHARGE PRESSURE AND TEMPERATURE CONDITIONS DURING COMPRESSOR OPERATION. THE UNIT WILL MODULATE THE COMPRESSOR, CONDENSER HEAD PRESSURE, AND ELECTRONIC EXPANSION VALVE TO MAINTAIN A SAFE COMPRESSOR OPERATING CONDITION AND LIMIT SHUT DOWN.

5. FAN CONTROL: THE SUPPLY FAN SHALL BE MODULATED BY THE REMOTE SUPPLY DUCT STATIC PRESSURE SENSOR TO MAINTAIN A CONSTANT STATIC PRESSURE SETPOINT THAT IS DETERMINED BY THE TEST AND BALANCE AGENCY. IF A CONTROL SIGNAL IS LOST, THE FAN'S VFD WILL OPERATE AT 50% AND AN ALARM WILL BE SENT TO THE DDC SYSTEM.

6. CO2 CONTROL: THE SPACE C02 SENSOR WILL SUPPLY A PPM READING TO THE UNIT CONTROLLER. THE UNIT CONTROLLER WILL OPEN THE OA DAMPER TO PROVIDE MORE VENTILATION AIR AS REQUIRED TO MAINTAIN A DEADBAND OF 700 PPM(ADJ.).

7. COOLING: THE UNIT CAPACITY WILL MODULATE THE VARIABLE SPEED COMPRESSOR TO MAINTAIN THE UNIT COOLING DISCHARGE AIR SET POINT. THE COOLING DAT SET POINT WILL BE ADJUSTABLE AT THE UNIT CONTROLLER. UNIT CAPACITY WILL BE MODULATED BY THE VARIABLE SPEED COMPRESSOR OPERATION.

8. ECONOMIZER: THE COMPARATIVE ENTHALPY ECONOMIZER SHALL BE ENGAGED WHENVER THE OUTDOOR ENTHALPY IS LESS THAN THE RETURN AIR ENTHALPY TO UTILIZE OUTSIDE AIR FOR COOLING. OUTSIDE AIR AND RETURN AIR DAMPERS SHALL MODULATE THE SUPPLY AIR TEMPERATURE SETPOINT. THE SPACE TEMPERATURE SETPOINT SHALL BE 75°F (ADJUSTABLE).

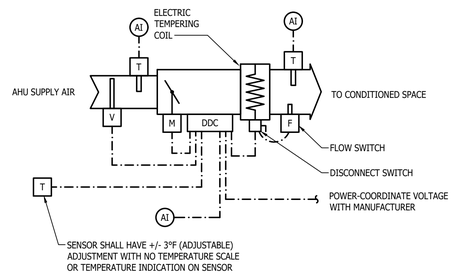
9. EXHAUST FAN CONTROL: THE EXHAUST FAN SHALL ACTIVATE WHEN THE OUTSIDE AIR DAMPER POSITION IS GREATER THAN 50% OPEN AND SHALL MODULATE TO MAINTAIN PROVIDE RELIEF.

10. UNOCCUPIED MODE: IF THE SPACE TEMPERATURE SENSORS DROPS BELOW 60°F, THE SUPPLY FAN SHALL BE ENERGIZED, THE OUTSIDE AND RELIEF DAMPERS SHALL REMAIN CLOSED, THE RETURN DAMPER SHALL BE FULLY OPENED AND THE GAS BURNER SHALL FIRE. AFTER ALL OF THE SPACES HAVE REACHED 63°F (ADJ), THE UNIT SHALL BE DE-ENERGIZED.

11. IF THE FREEZE-STAT SETPOINT IS REACHED (35°F OR BELOW), THEN THE SUPPLY FAN SHALL BE DE-ENERGIZED. IF THE DUCT MOUNTED SMOKE DETECTORS DETECT SMOKE, THEN THE SUPPLY FAN SHALL BE DE-ENERGIZED.

12. WHEN THE SUPPLY FAN IS DE-ENERGIZED, THE OUTSIDE AND RELIEF DAMPERS SHALL BE CLOSED. THE RETURN AIR DAMPER SHALL BE OPEN.

13. MODULATING GAS HEAT: THE MODULATING GAS HEAT SHALL BE MODULATED BY THE UNIT CONTROLLER TO MAINTAIN THE HEATING DAT SETPOINT. TEMPERATURE SETPOINT SHALL BE 55°F (ADJUSTABLE).



SEQUENCE OF OPERATION:
INDIVIDUAL SPACE TEMPERATURES ARE MAINTAINED BY THE MODULATION OF THE PRIMARY AIR DAMPER. THE ELECTRIC REHEAT IS NORMALLY OFF.

IF SPACE TEMPERATURE RISES ABOVE SETPOINT, THE DAMPER OPENS. IF SPACE TEMPERATURE DECREASES, THE DAMPER CLOSES TO A PRESET MINIMUM AIRFLOW. ON A FURTHER DECREASE IN SPACE TEMPERATURE, THE DAMPER SHALL OPEN TO ACHIEVE THE HEATING AIRFLOW SETPOINT AND THE FIRST STAGE OF REHEAT SHALL BE ENABLED. IF REQUIRED THE SECOND STAGE OF REHEAT SHALL BE ENABLED (IF AVAILABLE).

DURING UNOCCUPIED HOURS THE ELECTRIC REHEAT STAGES SHALL BE ENABLED TO MAINTAIN NIGHT SETBACK TEMPERATURE.

ELECTRIC HEATING COILS SHALL NOT OPERATE WHEN SUFFICIENT AIRFLOW IS NOT PRESENT.

ALL TERMINAL UNITS SHALL BE MONITORED BY THR EXISTING BUILDING ENERGY MANAGEMENT SYSTEM (EMS). EMS SHALL BE ABLE TO READ AIRFLOW AND DISCHARGE AIR TEMPERATURE COORDINATE EXISTING SYSTEM REQUIREMENTS WITH OWNER.

VAV BOX WITH ELECTRIC REHEAT

NO SCALE



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DRAWN BY KWA

CHECKED BY MPH

APPROVED BY MPH

SHEET NAME

TEMPERATURE CONTROLS

SHEET NO.

M8.00

LUMINAIRE SCHEDULE

FIXTURE SYMBOL	FIXTURE TAG	DESCRIPTION	MANUFACTURER(S)	LAMP SOURCE	WATTS
	A	2'x4' LOW PROFILE TROFFER BACK LIT FLAT PANEL LED LUMINAIRE. A FULLY LUMINOUS APPEARANCE GLARE FREE. SUITABLE FOR RECESS MOUNTING IN LAY-IN TYPE GRID CEILING, ALUMINUM FRAME WITH SATIN WHITE LENS, 5000 LUMENS, ELECTRONIC DRIVER, 4000K. 0-10V DIMMING CAPABLE, UNIVERSAL VOLTAGE.	1. LITHONIA CPX LED FLAT PANEL 2. COOPER LIGHTING 3. COLUMBIA LIGHTING	LED 80CRI 5000 LUMENS	39.2
	A1	2'x2' LOW PROFILE BACK LIT FLAT PANEL LED LUMINAIRE. A FULLY LUMINOUS APPEARANCE GLARE FREE. SUITABLE FOR RECESS MOUNTING IN LAY-IN TYPE GRID CEILING, ALUMINUM FRAME WITH SATIN WHITE LENS, 5000 LUMENS, ELECTRONIC DRIVER, 4000K. 0-10V 10% DIMMING, UNIVERSAL VOLTAGE.	1. LITHONIA CPX LED FLAT PANEL 2. COOPER LIGHTING 3. COLUMBIA LIGHTING	LP840 80CRI 5000 LUMENS	37.0
	B	4.0" WIDE X 4.75" HIGH PENDANT MOUNTED DIRECT/INDIRECT LED FIXTURE, SQUARE SHAPE CONTINUOUS RUN, WITH LIGHTED CORNERS. LENGTH AS SHOWN ON PLANS. EXTRUDED ALUMINUM BODY. FLUSH DOWNLIGHT DIFFUSER. USING HIGH LUMEN OUTPUT PACKAGE UP AND DOWN INDEPENDENTLY CONTROLLED UP LIGHTING AND DOWN LIGHTING. 4000K, 80 CRI, MVOLT, 0-10V 10% DIMMING. CUSTOM COLOR TO BE SELECTED BY ARCHITECTURAL.	1. FINELITE HP-4 2. COOPER LIGHTING 3. COLUMBIA LIGHTING	LP840 80CRI 813 LM/FT UP 721 LM/FT DOWN	14.2 W/FT
	C	6" DIAMETER HIGH BRIGHTNESS LED RECESS MOUNTED DOWNLIGHT. WIDE DISTRIBUTION, MATTE DIFFUSE ALUMINUM REFLECTOR WITH CLEAR APERTURE/TRIM, CONSTANT CURRENT LED DRIVER, 0-10V DIMMING DOWN TO 1%. MVOLT. 2500 LUMEN OUTPUT.	1. GOTHAM EVO 2. HALO COMMERCIAL 3. COLUMBIA LIGHTING	LED 85CRI 2500 LUMENS	19.7
	D	4'L X 3.4"W X 2.7"D LED LINEAR STRIP FIXTURE. ROLLED STEEL HOUSING, END CAPS, WHITE FINISH, FLAT DIFFUSED LENS. LED ELECTRONIC DRIVER, 0-10V DIMMING TO 10%. 4000 LUMENS, 4000K, 80CRI, MVOLT. CABLE HUNG.	1. LITHONIA CLX L48 2. COOPER LIGHTING 3. COLUMBIA LIGHTING	LED 80CRI 4000 LUMENS	27.6
	F	13.75"W X 10"D X 6-3/8"H WALL MOUNTED STYLISH LED LUMINAIR. DIE CAST ALUMINUM HOUSING, POWDER COAT FINISH, ACRYLIC LENS, TYPE III DISTRIBUTION. 4000K, 80CRI, 5454 LUMENS. 20C, MVOLT. WITH EMBEDDED SENSOR AND CONTROLS. COLOR TO BE SELECTED BY ARCHITECTURAL.	1. LITHONIA DSXW1 2. COOPER LIGHTING 3. COLUMBIA LIGHTING	LED 70CRI 5454 LUMENS	46.0
	G	LED PENDANT LIGHT WITH THICK FORMED ACRYLIC DOME. 39"W X 10.2"H. MATTE ACRYLIC LENS, CUSTOM COLOR TO BE SELECTED BY ARCHITECTURAL. 4000K, 90+ HE. 12149 LUMENS, 4000K, 80CRI. LED ELECTRONIC DRIVER, 0-10V DIMMING.	1. SPI LIGHTING CAMBRIDGE 2. G LIGHTING CUMBERLAND 3. COLUMBIA LIGHTING	LED 80CRI 12149 LUMENS	172.0
	H	9.5"W X 12.3"D CONE FARMHOUSE STYLE WALL SCONCE. STEEL BASE AND GLASS SHADE HOUSE. DIMMABLE WHEN USED WITH DIMMABLE BULBS AND COMPATIBLE DIMMER. 120V, 60W BULB MAX.	1. BOLTA AL10015WS 2. ENGINEER APPROVED EQUAL PRIOR TO RECEPTION OF BIDS	LED 80CRI 4000 LUMENS	60.0
	I	MONUMENT SIGN FLOODLIGHT. 3.52"DEEP, 8.86"WIDE, 7.84"HIGH. COLOR TO BE SELECTED BY ARCHITECT, WIDE FLOOD RECTANGULAR DISTRIBUTION, 3089 LUMENS, ELECTRONIC DRIVER, 4000K. 70CRI, MVOLT.	1. LITHONIA LIGHTING CAT#: DSXF1 LED P2 40K WFR MVOLT 2. COOPER LIGHTING 3. COLUMBIA LIGHTING	LED 70CRI 3089 LUMENS	42
	P1	PARKING LOT LED LIGHT FIXTURE. 32.7" LONG, 14.3" WIDE, 7.8" HIGH. SINGLE HEAD WITH 4" SQUARE 18FT LONG ALUMINUM. CAST ALLOY ALUMINUM HOUSING, POLE MOUNTED FIXTURE, 16885 LUMENS PER LAMP, ELECTRONIC DRIVER, 4000K. 70CRI, MVOLT. WITH EMBEDDED SENSOR AND CONTROLS. COLOR TO BE SELECTED BY ARCHITECTURAL. 14M FORWARD THROW DISTRIBUTION.	1. LITHONIA DSX1 2. COOPER LIGHTING 3. ENGINEER APPROVED EQUAL PRIOR TO RECEPTION OF BIDS	LP840 70CRI 16885 LUMENS	184
	P2	PARKING LOT LED LIGHT FIXTURE. 32.7" LONG, 14.3" WIDE, 7.8" HIGH. SINGLE HEAD WITH 4" SQUARE 18FT LONG ALUMINUM. CAST ALLOY ALUMINUM HOUSING, POLE MOUNTED FIXTURE, 16885 LUMENS PER LAMP, ELECTRONIC DRIVER, 4000K. 70CRI, MVOLT. WITH EMBEDDED SENSOR AND CONTROLS. COLOR TO BE SELECTED BY ARCHITECTURAL. LCCO LEFT CORNER CUT OFF DISTRIBUTION	1. LITHONIA DSX1 2. COOPER LIGHTING 3. ENGINEER APPROVED EQUAL PRIOR TO RECEPTION OF BIDS	LP840 70CRI 16885 LUMENS	184
	P3	PARKING LOT LED LIGHT FIXTURE. 32.7" LONG, 14.3" WIDE, 7.8" HIGH. SINGLE HEAD WITH 4" SQUARE 18FT LONG ALUMINUM. CAST ALLOY ALUMINUM HOUSING, POLE MOUNTED FIXTURE, 16885 LUMENS PER LAMP, ELECTRONIC DRIVER, 4000K. 70CRI, MVOLT. WITH EMBEDDED SENSOR AND CONTROLS. COLOR TO BE SELECTED BY ARCHITECTURAL. RCCO RIGHT CORNER CUT OFF DISTRIBUTION.	1. LITHONIA DSX1 2. COOPER LIGHTING 3. ENGINEER APPROVED EQUAL PRIOR TO RECEPTION OF BIDS	LP840 70CRI 16885 LUMENS	184
	X1	EXIT LIGHT EMERGENCY LIGHT SHALL BE UNIVERSAL MOUNT, DIECAST ALUMINUM, HIGH OUTPUT LED DIFFUSE LIGHT PANEL, RED LETTERS WITH MAINTENANCE-FREE NICKEL CADMIUM BATTERY CAPABLE OF PROVIDING 90 MINUTE FULL LIGHT OPERATION.	1. LITEALARMS GALAXY XDPC 2. SURE-LITES CX SERIES	120-277V	2.3
	X2	EMERGENCY LIGHT REMOTE HEAD TO BE CONNECTED TO EXIT SIGN WITH HIGH OUTPUT BATTERY.	1. LITEALARMS CAT # SAF2 LD1 B 6 2. SURE-LITES SRP	120-277V	2.3
	#E	SAME AS TYPE # EXCEPT THIS FIXTURE WILL BE CONNECTED THROUGH BUILT-IN BATTERY PACK, WIRE SUCH THAT IT OPERATES NORMAL WITH SWITCH AND ACT AS EMERGENCY FIXTURE UPON LOSS OF NORMAL POWER.			

LIGHTING SYMBOL LIST

SYMBOL	DESCRIPTION
	LIGHT FIXTURE – CEILING/GRID MOUNT
	LIGHT FIXTURE – INTERIOR WALL MOUNT LINEAR
	LIGHT FIXTURE – DOWNLIGHT WITH WALLWASH DIST.
	LIGHT FIXTURE – INTERIOR WALL SCONCE
	LIGHT FIXTURE – INTERIOR SURFACE MOUNT
	LIGHT FIXTURE – INTERIOR WALL MOUNTED
	LIGHT FIXTURE – INTERIOR PENDANT MOUNT
	LIGHT FIXTURE – INTERIOR PENDANT MOUNT CYLINDER
	TRACK AND TRACK MOUNTED LIGHT FIXTURES
	EXIT LIGHT – CEILING MOUNTED – ARROWS AS INDICATED ON PLAN (SHADED AREA INDICATES FACE(S) OF FIXTURE)
	EXIT LIGHT – WALL MOUNTED – ARROWS AS INDICATED ON PLAN (SHADED AREA INDICATES FACE(S) OF FIXTURE)
	EMERGENCY LIGHT FIXTURE – EMERGENCY BATTERY UNIT
	EMERGENCY LIGHT FIXTURE – BATTERY UNIT/EXIT SIGN
	LIGHT FIXTURE – EXTERIOR POLE MOUNT TYPE
	LIGHT FIXTURE – EXTERIOR WALL MOUNT TYPE
	LIGHT FIXTURE – EXTERIOR POST TOP TYPE
	LIGHT FIXTURE – EXTERIOR BOLLARD TYPE

NOTES:
1. LIGHTING SYMBOLS AS INDICATED ON PLANS ARE NOT DRAWN TO SCALE UNLESS NOTED OTHERWISE.

LIGHTING CONTROLS LEGEND

SYMBOL	DESCRIPTION
$	SWITCH SINGLE POLE
$O	OCCUPANCY SENSOR SWITCH
$V	VACANCY SENSOR SWITCH
$D	LOW VOLTAGE DIMMER SWITCH
$VD	VACANCY DIMMER SENSOR SWITCH
OS	CEILING MOUNTED OCCUPANCY SENSOR
VS	CEILING MOUNTED VACANCY SENSOR
$3	SWITCH THREE-WAY
$K	SINGLE POLE KEY SWITCH

POWER SYMBOL LIST

SYMBOL	DESCRIPTION
	CONDUIT DOWN
	CONDUIT UP
C	CONTACTOR
	DISCONNECT SWITCH – NON FUSED
	DISCONNECT SWITCH – FUSED
	DISCONNECT SWITCH – COMB. MOTOR STARTER
	ELECTRICAL PANEL – 208/240 VOLTS
	ELECTRICAL PANEL – 480 VOLTS
	GROUNDING ROD
	GROUND
	GROUNDING BAR
J	JUNCTION BOX
J	JUNCTION BOX WITH HARDWIRED CONNECTION
M	METER
	MOTOR – SINGLE PHASE
	MOTOR – THREE PHASE
$M	MOTOR RATED SWITCH
	POWER RECEPTACLE – SIMPLEX TYPE
	POWER RECEPTACLE – DUPLEX TYPE
	POWER RECEPTACLE – DUPLEX 6" ABOVE COUNTER
USB	POWER RECEPTACLE – USB/DUPLEX COMBO. DEVICE
	POWER RECEPTACLE – CONTROLLED DUPLEX TYPE
	POWER RECEPTACLE – QUADRUPLEX TYPE
	POWER RECEPTACLE – CONTROLLED QUADRUPLEX TYPE
	POWER RECEPTACLE – RECESSED FLOOR TYPE
	POWER RECEPTACLE – SPECIALTY TYPE
SPD	SURGE PROTECTION DEVICE
TC	TIME CLOCK
T	TRANSFORMER (REFER TO SCHEDULES FOR INFO)
VSD	VARIABLE SPEED DRIVE
	IT SLEEVE 1 1/4" TYPICAL UNLESS NOTED OTHEWISE

NOTES:
1. ALL DEVICE RATINGS/SIZES SHALL BE COORDINATED WITH PLANS AND SCHEDULES.

AUXILIARY SYST. SYMBOL LIST

SYMBOL	DESCRIPTION
	CAMERA
CR	CARD READER
	COMMUNICATIONS DEVICE – 6" ABOVE COUNTER
	COMMUNICATIONS DEVICE – FLOOR
	COMMUNICATIONS DEVICE – WALL
DH	MAGNETIC DOOR HOLDER
	PUSH BUTTON
S	SPEAKER
	WALL CLOCK – SINGLE FACE
	WALL CLOCK – DOUBLE FACE
CS	WALL CLOCK AND SPEAKER UNIT

NOTES:
1. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR BOX AND CONDUIT FOR ALL DEVICES INDICATED.
2. LOW VOLTAGE CONTRACTOR SHALL PROVIDE EXACT SPECIFICATIONS AND LOCATIONS OF ALL DEVICES.

FIRE ALARM SYMBOL LIST

SYMBOL	DESCRIPTION
S	DETECTION DEVICE
S	DETECTION DEVICE – DUCT MOUNTED
FS	DETECTION DEVICE – FLOW SWITCH
TS	DETECTION DEVICE – TAMPER SWITCH
FAA	FIRE ALARM ANNUNCIATOR PANEL
FACP	FIRE ALARM CONTROL PANEL
FD	FIRE DEPARTMENT COMMUNICATION OUTLET
F	MANUAL DEVICE – PULL STATION
F	NOTIFICATION DEVICE – WALL MOUNTED
F	NOTIFICATION DEVICE – CEILING MOUNTED

NOTES:
1. DRAWINGS INDICATE DESIGN INTENT ONLY, FINAL LOCATIONS AND DEVICE SPECIFICATIONS SHALL BE PROVIDED BY FIRE ALARM MANUFACTURER. REFER TO PROJECT SPECIFICATIONS FOR APPROVED MANUFACTURERS.

ELECTRICAL ABBREVIATIONS

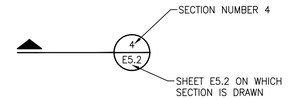
ABBREV.	DESCRIPTION
AFF	ABOVE FINISHED FLOOR
A	AMPERE
AF	AMPERE FUSE/AMPERE FRAME
AWG	AMERICAN WIRE GAUGE
AT	AMPERE TRIP
ATS	AUTOMATIC TRANSFER SWITCH
AIC	AVAILABLE INTERRUPTING CURRENT (AMPS)
C	CONDUIT OR CEILING MOUNTED
CB	CIRCUIT BREAKER
CU	COPPER
CT	CURRENT TRANSFORMER
DIA	DIAMETER
DISC	DISCONNECT
EMT	ELECTRICAL METALLIC TUBING
EWC	ELECTRIC WATER COOLER
EPO	EMERGENCY POWER OFF
(E)	EXISTING ELECTRICAL EQUIPMENT OR WORK
FA	FIRE ALARM
FACP	FIRE ALARM CONTROL PANEL
FLA	FULL LOAD AMPS
F	FUSE
G/GRD	GROUND
GFCI/GFI	GROUND FAULT CIRCUIT INTERRUPTER
HOA	HAND–OFF–AUTO
HP	HORSEPOWER
IG	ISOLATED GROUND
KV	KILOVOLT
KVA	KILOVOLT AMPERE
KW	KILOWATT
KWH	KILOWATT HOUR
LP	LIGHTING PANEL
MCB	MAIN CIRCUIT BREAKER
MDP	MAIN DISTRIBUTION PANEL
MLO	MAIN LUG ONLY
MAX	MAXIMUM
MIN	MINIMUM
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
N/NEU	NEUTRAL
NF	NON–FUSIBLE
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
NIC	NOT IN CONTRACT
OF/CI	OWNER FURNISHED / CONTRACTOR INSTALLED
OF/OI	OWNER FURNISHED / OWNER INSTALLED
PH. OR ø	PHASE
P	POLE
PF	POWER FACTOR
PVC	POLYVINYL CHOLRIDE (PLASTIC)
(R)	RELOCATED EXISTING ELECTRICAL EQUIPMENT
(RR)	REMOVE AND REINSTALL
RMC	RIGID METALLIC CONDUIT
RP	RECEPTACLE PANEL
SPEC/SPECS	SPECIFICATIONS
TBB	TELEPHONE BACKBOARD
TYP.	TYPICAL
UC	UNDER COUNTER
UL	UNDERWRITERS LABORATORIES
UPS	UNINTERRUPTIBLE POWER SUPPLY
USB	UNIVERSAL SERIAL BUS
V	VOLT
VA	VOLT AMPERE
W	WATT
WG	WIRE GUARD
WP	WEATHERPROOF
XFMR	TRANSFORMER

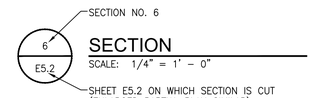
DRAWING INDEX

SHT NO	DESCRIPTION
E0.00	ELECTRICAL GENERAL INFORMATION AND LIGHTING SCHEDULE
EPS1.01	ELECTRICAL POWER NEW WORK SITE PLAN
EPD1.01	ELECTRICAL POWER DEMOLITION PLAN
ELD1.01	ELECTRICAL LIGHTING DEMOLITION PLAN
EP1.01	ELECTRICAL POWER NEW WORK PLAN
EL1.01	ELECTRICAL LIGHTING NEW WORK PLAN
EP1.02	ELECTRICAL POWER NEW WORK ROOF PLAN
E5.00	ELECTRICAL DETAILS
E5.01	ELECTRICAL DETAILS
E6.00	ELECTRICAL PANEL SCHEDULES
E7.00	ELECTRICAL ONE-LINE RISER DIAGRAMS

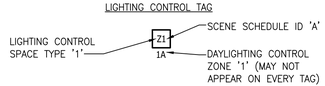
DRAWING NOTATION

SYMBOL	DESCRIPTION
LA	LIGHTING FIXTURE TAG
1	CONSTRUCTION KEY NOTE NUMBER 1
1	DEMOLITION KEY NOTE NUMBER 1
1	FEEDER SIZE TAG (REFER TO FEEDER SCHEDULE ON THIS SHEET)
EF–1	EQUIPMENT DESIGNATION, (I.E. EXHAUST FAN NUMBER 1)
	EXISTING DEVICES OR EQUIPMENT
	NEW OR MODIFIED DEVICES OR EQUIPMENT
	NEW OR MODIFIED UNDERGROUND WIRING
	EXISTING SYSTEM COMPONENT TO BE REMOVED





LIGHTING CONTROL TAG



APPLICABLE CODES AND REGULATIONS

YEAR	CODE
2021	MICHIGAN BUILDING CODE
2019	MICHIGAN ENERGY CODE
2023	MICHIGAN ELECTRICAL CODE RULES, PART 8
2023	NATIONAL ELECTRICAL CODE (NFPA 70)
2013	NFPA 20
2013	NFPA 72
2012	NFPA 101
2013	NFPA 110
2009	ICC A117.1 ACCESSIBLE AND USABLE BUILDINGS & FACILITIES



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CONSULTANT

UNIFIED BUILDING SYSTEMS ENGINEERING
69 S. GRATIOT AVE.
MT. CLEMENS, MI 48043
UBS PROJECT: 041.24.03

OWNER

Charter Township of Canton - Western Wayne

PROJECT NAME

Growth Works
44582 Geddes Rd, Canton, MI 48188

PROJECT NO.

23-175

ISSUES / REVISIONS

BIDDING/CONSTRUCTION	03/05/2026

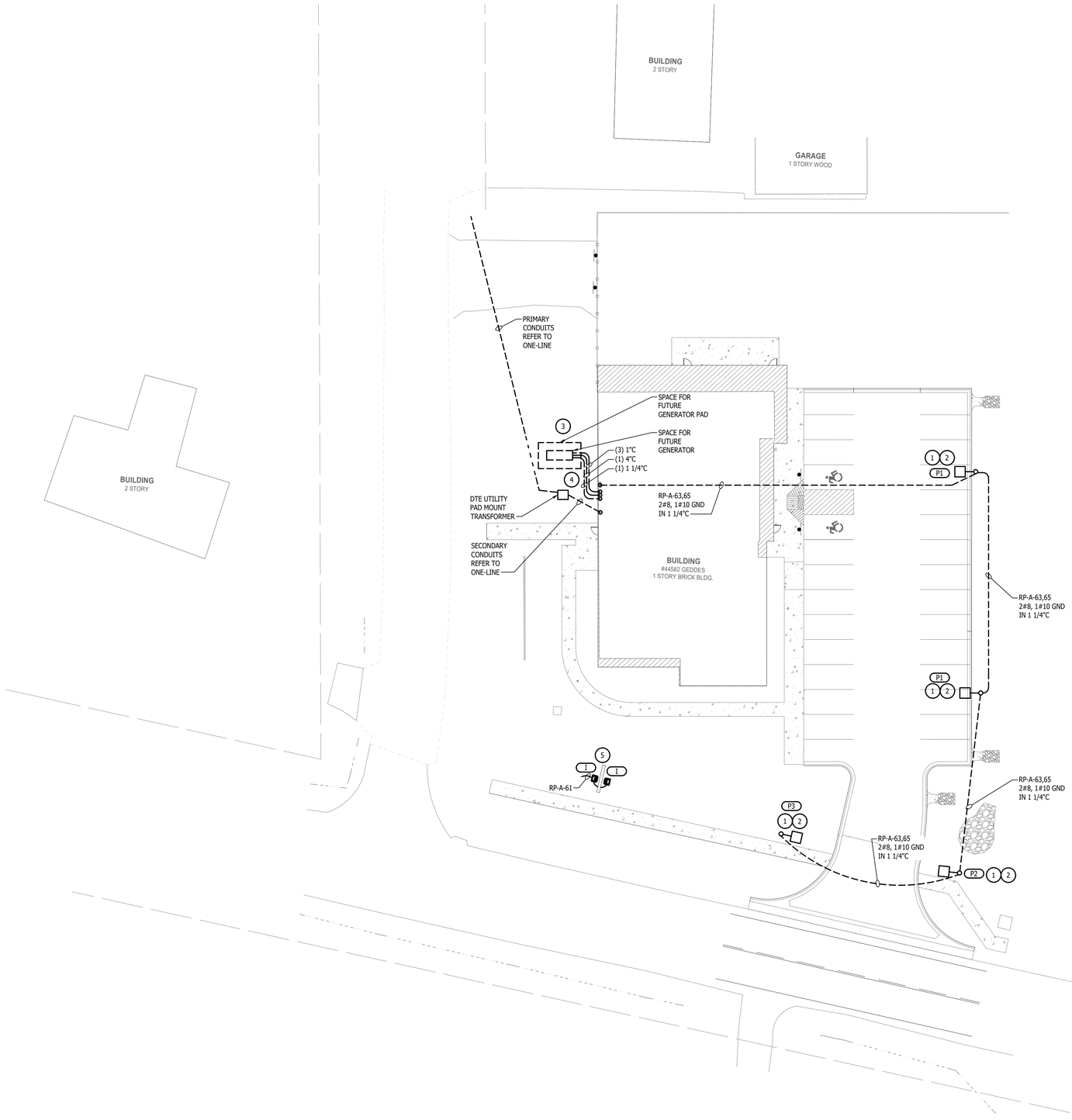
DRAWN BY	ERS
CHECKED BY	TJO
APPROVED BY	MPH

SHEET NAME

ELECTRICAL GENERAL INFORMATION AND LIGHTING SCHEDULE

SHEET NO.

E0.00



ELECTRICAL POWER NEW WORK SITE PLAN

SCALE: 1" = 20'-0"

SITE PLAN GENERAL NOTES

A	FIELD VERIFY LOCATIONS OF EXISTING UNDERGROUND SERVICES TO COORDINATE ALL POLE BASE LOCATIONS AND UNDERGROUND SERVICES BEING INSTALLED UNDER THIS CONTRACT WITH CIVIL DRAWINGS PRIOR TO INSTALLATION OF POLE BASES AND CONDUIT.
B	ALL THREE PHASE WIRES, NEUTRAL, AND GROUND SHALL BE RUN TO LAST LIGHTING FIXTURE AND CAPPED FOR FUTURE EXPANSION.
D	ANY 120 VOLT BRANCH CIRCUIT FEEDER LONGER THAN 75'-0" TO LAST DEVICE SHALL BE SIZED TO THE NEXT LARGER STANDARD AWG SIZE. E.C. SHALL FIELD VERIFY ALL LENGTHS OF FEEDERS.
E	ALL ELECTRICAL DEVICES ON THIS SHEET SHALL BE NEW UNLESS OTHERWISE NOTED.

POWER GENERAL NOTES

A	THESE DRAWINGS ARE DIAGRAMMATIC AND REPRESENT THE GENERAL EXTENT OF THE WORK TO BE PERFORMED. PROVIDE AND EXECUTE ALL HVAC SYSTEMS PER ENGINEER'S SPECIFICATION, AND LOCAL APPLICABLE CODES INCLUDING AMENDMENTS, BULLETINS, ETC. AS WELL AS THE STANDARDS OF INSTALLATION AND EQUIPMENT ESTABLISHED FOR THE BUILDINGS, AND REQUIREMENTS OF THE OWNER.
B	EXCEPT FOR CHANGES AS MAY BE SPECIFICALLY APPROVED BY THE ENGINEER OF RECORD. IN ACCORDANCE WITH ALTERNATES OF OPTIONS AS STATED HEREINAFTER, ALL WORK MUST BE IN FULL ACCORDANCE WITH THE INTENT OF THE PLANS AND SPECIFICATIONS. SYSTEMS ARE TO BE COMPLETE, EFFICIENT, AND SATISFACTORY OPERATION WHEN PROJECT IS DELIVERED TO THE OWNER.
D	CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND APPROVAL FROM GOVERNING AUTHORITIES AND FILE NECESSARY FORMS, PAY ALL INSPECTION FEES.
E	ELECTRICAL CONTRACTOR SHALL COMPLY WITH THE LATEST NATIONAL ELECTRICAL CODE, LIFE SAFETY CODE AND APPLICABLE STATE AND LOCAL CODES AND ORDINANCES.
F	ELECTRICAL EQUIPMENT AND WIRING SHALL BE NEW AND SHALL BE FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR, UNLESS OTHERWISE NOTED.
G	WIRING SHALL BE IN CONDUIT. CONDUIT SHALL BE 3/4" CONDUIT MINIMUM. CONDUITS IN FINISHED AREAS SHALL BE CONCEALED
H	NEW WIRES SHALL BE TYPE THHN. MINIMUM SIZE SHALL BE #12 AWG, UNLESS OTHERWISE NOTED. FINAL CONNECTIONS TO EQUIPMENT, FURNISHED AND INSTALLED BY OTHERS, SHALL BE PROVIDED BY THIS CONTRACTOR.

LIGHTING GENERAL NOTES

A	REFER TO ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT LOCATION OF ALL LIGHTING FIXTURES UNLESS OTHERWISE NOTED.
B	ANY 120 VOLT BRANCH CIRCUIT FEEDER LONGER THAN 120'-0" TO LAST DEVICE SHALL BE SIZED TO THE NEXT LARGER STANDARD AWG SIZE. E.C. SHALL FIELD VERIFY ALL LENGTHS OF FEEDERS
C	SEE LIGHT FIXTURE SCHEDULE SHEET E00. ALL ELECTRICAL DEVICES ON THIS SHEET SHALL BE NEW UNLESS OTHERWISE NOTED.
D	WHERE MORE THEN ONE LIGHT SWITCH IS INDICATED TO BE INSTALLED AT THE SAME LOCATION, THEY SHALL BE GROUPED UNDER ONE COMMON FACEPLATE.
E	ELECTRICAL CONTRACTOR SHALL COMPLY WITH THE LATEST NATIONAL ELECTRICAL CODE, LIFE SAFETY CODE AND APPLICABLE STATE AND LOCAL CODES AND ORDINANCES.
F	ELECTRICAL EQUIPMENT AND WIRING SHALL BE NEW AND SHALL BE FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR, UNLESS OTHERWISE NOTED.
G	WIRING SHALL BE IN CONDUIT. CONDUIT SHALL BE 3/4" C ONDUIT MINIMUM. CONDUITS IN FINISHED AREAS SHALL BE CONCEALED

(X) NEW WORK KEYED NOTES

1	REFER TO ELECTRICAL GENERAL INFORMATION FOR LIGHT FIXTURE INFORMATION AND POLE HEIGHT. REFER TO ELECTRICAL DETAILS FOR POLE BASE HEIGHT REQUIREMENTS.
2	NEW WIRELESS LIGHTING CONTROL SYSTEM. PROVIDE ALL PROGRAMMING NECESSARY FOR A COMPLETE SYSTEM. COORDINATE EXACT TIMING WITH OWNER. TIE NEW LIGHTING CONTROLLER INTO BUILDING MANAGEMENT SYSTEM. REFER TO TEMPERATURE CONTROLS IN MECHANICAL SERIES OF DRAWINGS AND ELECTRICAL DETAILS FOR FURTHER INFORMATION.
3	SPACE FOR FUTURE GENERATOR. CONDUITS FOR FUTURE GENERATOR TO BE PUT IN PLACE IN PREPARATION. TERMINATE CONDUITS OUTSIDE IN 24" X 24" QUAZITE BOX. TERMINATE CONDUITS IN ELECTRICAL ROOM IN LOCATION ALLOCATED FOR FUTURE ATS. REFER TO EP1.01 FOR LOCATION FOR FUTURE ATS.
4	CONTRACTOR TO DO UNDERGROUND RADAR BEFORE EXCAVATION. EXTREME CAUTION SHALL BE TAKEN, SEVERAL OTHER UTILITIES IN THE AREA OF WORK BEING PERFORMED.
5	GROUND MOUNTED LIGHT FOR SIGN. REFER TO LUMINAIRE SCHEDULE FOR FIXTURE TYPE. REFER TO ELECTRICAL DETAILS FOR FURTHER INFORMATION ON INSTALLATION AND MOUNTING. (FLOOD LIGHTING BASE DETAIL) INSTALL LIGHTS CENTERED IN SIGN, 60" AWAY FROM THE FACE OF THE SIGN. TIE SIGN LIGHTING INTO LIGHTING CONTROL SYSTEM. COORDINATE EXACT TIMING WITH THE OWNER.

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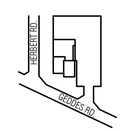
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KEY PLAN



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CHECKED BY TJO

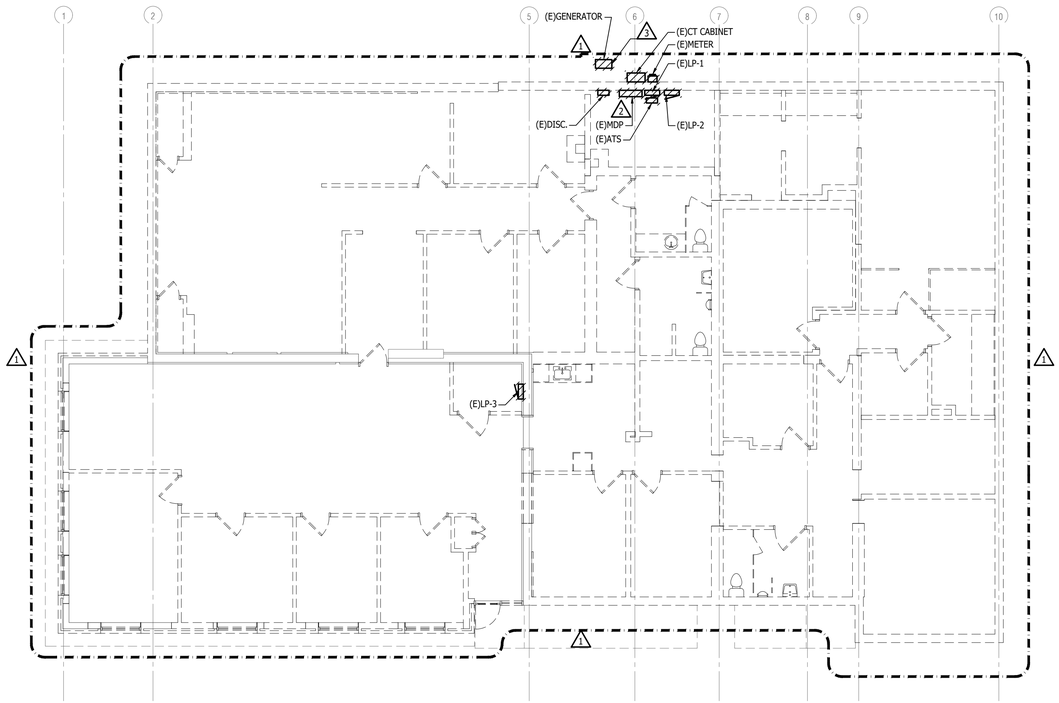
APPROVED BY MPH

SHEET NAME

ELECTRICAL POWER NEW WORK SITE PLAN

SHEET NO.

EPS1.01



ELECTRICAL POWER DEMOLITION PLAN

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

GENERAL DEMOLITION NOTES

A	THESE DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL EXTENT OF WORK TO BE PERFORMED. THE EXACT EXTENT OF DEMOLITION SHALL BE DETERMINED BY THE NEW WORK.
B	ANY INTERRUPTIONS OF EXISTING SERVICES AND/OR EQUIPMENT SHALL BE PERFORMED AT A TIME APPROVED IN ADVANCE BY THE OWNER'S REPRESENTATIVE SO AS NOT TO INTERFERE WITH THE PRESENT BUILDING'S OPERATION.
C	PRIOR TO COMMENCEMENT OF WORK, CONTRACTOR SHALL VISIT THE SITE AND BECOME FAMILIAR WITH EXISTING SITE CONDITIONS, SYSTEMS, AND UTILITIES. NOTIFY DESIGN PROFESSIONAL OF ANY INTERFERENCES OR DISCREPANCIES.
D	ALL ITEMS INDICATED WITH CROSS-HATCHING SHALL BE REMOVED COMPLETELY WITH ALL RELATED ITEMS INCLUDING HANGERS, SUPPORTS, INSULATION, CONTROLS, ETC. CAP ALL OPEN-ENDED PIPES AND DUCTS.
E	THE OWNER SHALL HAVE FIRST RIGHT OF REFUSAL ON ALL EQUIPMENT BEING REMOVED. ALL ITEMS REMOVED SHALL BE LEGALLY DISPOSED OF. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL EXISTING RELOCATED AND OWNER-PROVIDED EQUIPMENT.
F	VERIFY DEPTH, SIZE, LOCATIONS, AND CONDITIONS OF EXISTING UTILITIES IN THE FIELD. INCLUDING POINTS OF CONNECTION PRIOR TO STARTING ANY WORK.
G	ALL ITEMS ON DEMOLITION PLAN SHALL BE CONSIDERED EXISTING UNLESS OTHERWISE NOTED. ALL WORK INDICATED ON PLANS HAS BEEN LOCATED PER EXISTING DRAWINGS AND/OR FIELD OBSERVATION AND REQUIRES FIELD VERIFICATION.
H	ALL EXISTING WORK TO REMAIN SHALL BE PROTECTED FROM DAMAGE. WHERE DUCT WORK PIPE INSULATION HAS BEEN DAMAGED DURING DEMOLITION, THE CONTRACTOR SHALL REPAIR INSULATION AS REQUIRED TO MATCH EXISTING.

⚠ DEMOLITION KEYED NOTES

1	IN AREA INDICATED, REMOVE ALL UNUSED ELECTRICAL EQUIPMENT: PANELBOARDS, TRANSFORMERS, DISCONNECTS, RECEPTACLES, CONDUIT, WIRING, FIRE ALARM DEVICES, ETC. COMPLETE.
2	MDP TO BE REMOVED COMPLETE. DEMO CONDUIT AND WIRING COMPLETE. REFER TO ONE-LINE DIAGRAM FOR FURTHER INFORMATION.
3	GENERATOR TO BE REMOVED COMPLETE. DEMO CONDUIT, WIRING, ATS, AND ANY ASSOCIATED CONTROLS COMPLETE.

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MICHAEL PAUL HARRIS, II
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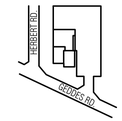
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CONSULTANT

UNIFIED BUILDING SYSTEMS ENGINEERING
69 S. GRATIOT AVE.
MT. CLEMENS, MI 48043
UBS PROJECT: 041.24.03

KEY PLAN



OWNER

Charter Township of Canton - Western Wayne

PROJECT NAME

Growth Works
44582 Geddes Rd, Canton, MI 48188

PROJECT NO.

23-175

ISSUES / REVISIONS

BIDDING/CONSTRUCTION	03/05/2026

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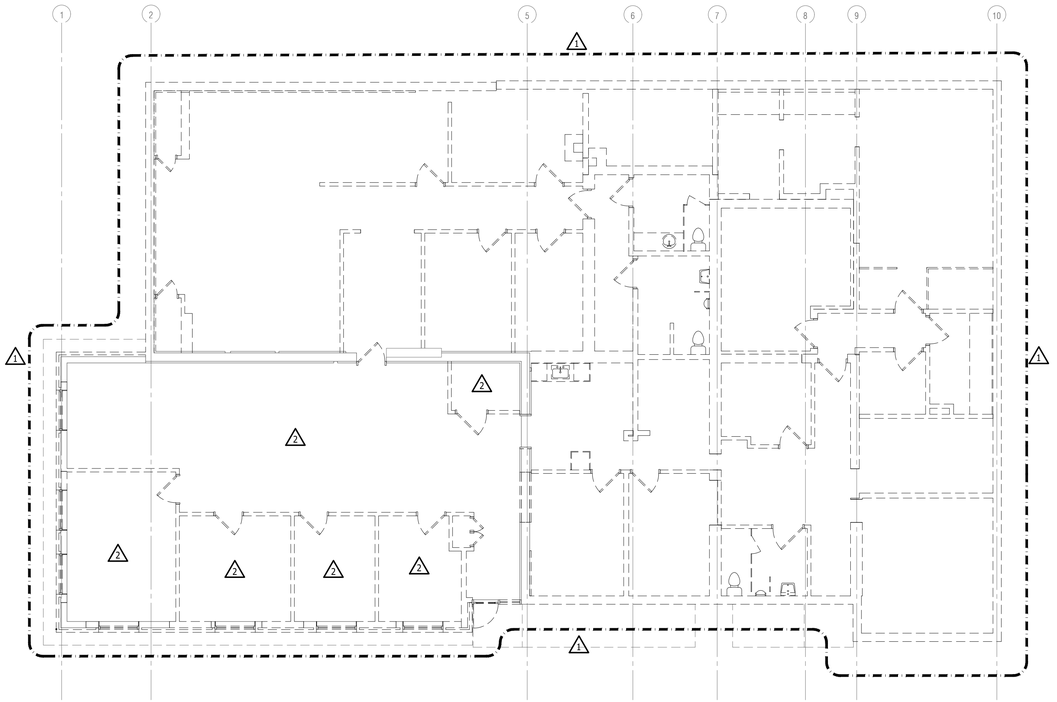
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SHEET NAME

ELECTRICAL POWER DEMOLITION PLAN

SHEET NO.

EPD1.01



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

GENERAL DEMOLITION NOTES

A	THESE DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL EXTENT OF WORK TO BE PERFORMED. THE EXACT EXTENT OF DEMOLITION SHALL BE DETERMINED BY THE NEW WORK.
B	ANY INTERRUPTIONS OF EXISTING SERVICES AND/OR EQUIPMENT SHALL BE PERFORMED AT A TIME APPROVED IN ADVANCE BY THE OWNER'S REPRESENTATIVE SO AS NOT TO INTERFERE WITH THE PRESENT BUILDING'S OPERATION.
C	PRIOR TO COMMENCEMENT OF WORK, CONTRACTOR SHALL VISIT THE SITE AND BECOME FAMILIAR WITH EXISTING SITE CONDITIONS, SYSTEMS, AND UTILITIES. NOTIFY DESIGN PROFESSIONAL OF ANY INTERFERENCES OR DISCREPANCIES.
D	ALL ITEMS INDICATED WITH CROSS-HATCHING SHALL BE REMOVED COMPLETELY WITH ALL RELATED ITEMS INCLUDING HANGERS, SUPPORTS, INSULATION, CONTROLS, ETC. CAP ALL OPEN-ENDED PIPES AND DUCTS.
E	THE OWNER SHALL HAVE FIRST RIGHT OF REFUSAL ON ALL EQUIPMENT BEING REMOVED. ALL ITEMS REMOVED SHALL BE LEGALLY DISPOSED OF. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL EXISTING RELOCATED AND OWNER-PROVIDED EQUIPMENT.
F	VERIFY DEPTH, SIZE, LOCATIONS, AND CONDITIONS OF EXISTING UTILITIES IN THE FIELD. INCLUDING POINTS OF CONNECTION PRIOR TO STARTING ANY WORK.
G	ALL ITEMS ON DEMOLITION PLAN SHALL BE CONSIDERED EXISTING UNLESS OTHERWISE NOTED. ALL WORK INDICATED ON PLANS HAS BEEN LOCATED PER EXISTING DRAWINGS AND/OR FIELD OBSERVATION AND REQUIRES FIELD VERIFICATION.
H	ALL EXISTING WORK TO REMAIN SHALL BE PROTECTED FROM DAMAGE. WHERE DUCT WORK PIPE INSULATION HAS BEEN DAMAGED DURING DEMOLITION, THE CONTRACTOR SHALL REPAIR INSULATION AS REQUIRED TO MATCH EXISTING.

DEMOLITION KEYED NOTES

1	IN AREA INDICATED, LIGHTING, LIGHTING CONTROLS, AND SWITCHING SHALL BE REMOVED COMPLETE. REMOVE ALL CONDUIT AND WIRING COMPLETE.
2	AFTER REMOVAL OF EXISTING CEILING IN THIS AREA, CONTRACTOR SHALL REMOVE ALL CONDUIT AND LOOSE WIRING NOT BEING USED COMPLETE. ANY EXISTING CONDUIT, LIVE CIRCUITS, AND LOW VOLTAGE WIRING TO REMAIN SHALL BE SUPPORTED TO MEET CODE.

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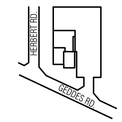
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UBS PROJECT: 041.24.03

KEY PLAN



OWNER

Charter Township of Canton - Western Wayne

PROJECT NAME

Growth Works
44582 Geddes Rd, Canton, MI 48188

PROJECT NO.

23-175

ISSUES / REVISIONS

BIDDING/CONSTRUCTION	03/05/2026

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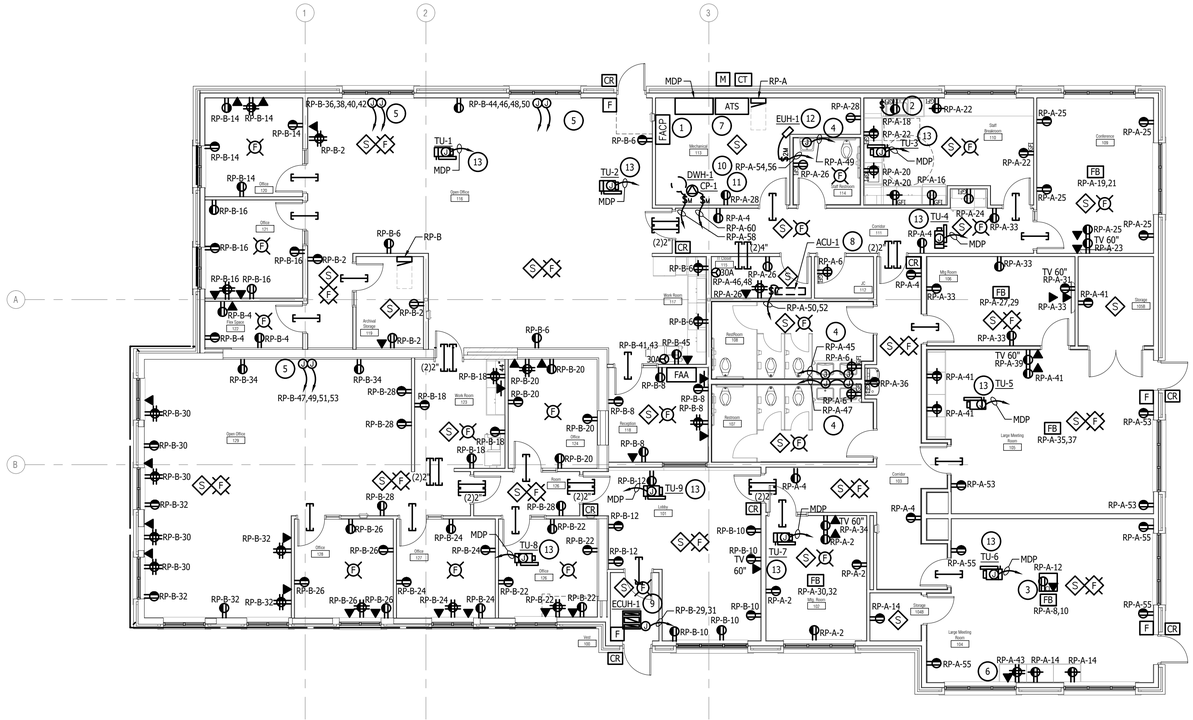
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SHEET NAME

ELECTRICAL LIGHTING DEMOLITION PLAN

SHEET NO.

ELD1.01



ELECTRICAL POWER NEW WORK PLAN

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

POWER GENERAL NOTES

A	THESE DRAWINGS ARE DIAGRAMMATIC AND REPRESENT THE GENERAL EXTENT OF THE WORK TO BE PERFORMED. PROVIDE AND EXECUTE ALL HVAC SYSTEMS PER ENGINEER'S SPECIFICATION, AND LOCAL APPLICABLE CODES INCLUDING AMENDMENTS, BULLETINS, ETC. AS WELL AS THE STANDARDS OF INSTALLATION AND EQUIPMENT ESTABLISHED FOR THE BUILDINGS, AND REQUIREMENTS OF THE OWNER.
B	EXCEPT FOR CHANGES AS MAY BE SPECIFICALLY APPROVED BY THE ENGINEER OF RECORD IN ACCORDANCE WITH ALTERNATES OF OPTIONS AS STATED HEREINAFTER, ALL WORK MUST BE IN FULL ACCORDANCE WITH THE INTENT OF THE PLANS AND SPECIFICATIONS. SYSTEMS ARE TO BE COMPLETE, EFFICIENT, AND SATISFACTORY OPERATION WHEN PROJECT IS DELIVERED TO THE OWNER.
D	CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND APPROVAL FROM GOVERNING AUTHORITIES AND FILE NECESSARY FORMS, PAY ALL INSPECTION FEES.
E	ELECTRICAL CONTRACTOR SHALL COMPLY WITH THE LATEST NATIONAL ELECTRICAL CODE, LIFE SAFETY CODE AND APPLICABLE STATE AND LOCAL CODES AND ORDINANCES.
F	ELECTRICAL EQUIPMENT AND WIRING SHALL BE NEW AND SHALL BE FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR, UNLESS OTHERWISE NOTED.
G	WIRING SHALL BE IN CONDUIT. CONDUIT SHALL BE 3/4" CONDUIT MINIMUM. CONDUITS IN FINISHED AREAS SHALL BE CONCEALED.
H	NEW WIRES SHALL BE TYPE THHN. MINIMUM SIZE SHALL BE #12 AWG, UNLESS OTHERWISE NOTED. FINAL CONNECTIONS TO EQUIPMENT, FURNISHED AND INSTALLED BY OTHERS, SHALL BE PROVIDED BY THIS CONTRACTOR.
J	ALL PA AND SPEAKER SCOPE BY OTHERS. REFER TO TECH DRAWINGS FOR FURTHER INFORMATION.

(X) NEW WORK KEYED NOTES

1	NEW FIRE ALARM CONTROL PANEL. FIRE ALARM CONTRACTOR IS RESPONSIBLE FOR ALL REQUIRED UPGRADES, RE-CERTIFICATION, AND SUBMITTALS TO PROPER AUTHORITIES.
2	SWITCHED RECEPTACLE FOR GARBAGE DISPOSAL.
3	CEILING MOUNTED SHORT THROW PROJECTOR PROVIDED BY OTHERS. PROVIDE DOUBLE DATA AND RECEPTACLE. COORDINATE EXACT LOCATION OF NEW DATA OUTLET AND NEW RECEPTACLE IN THE FIELD PRIOR TO INSTALLATION. REFER TO ELECTRICAL DETAILS SHEET FOR FURTHER INFORMATION.
4	PROVIDE COMPLETE CONNECTION TO AUTO VALVE. ONE CONTROLLER/ TRANSFORMER PER TOILET ROOM. TRANSFORMER AND SENSORS ARE PROVIDED BY PLUMBING CONTRACTOR. COORDINATE WITH PLUMBING CONTRACTOR.
5	MODULAR FURNITURE POWER AND DATA. ELECTRICAL CONTRACTOR SHALL COORDINATE EXACT LOCATION AND STYLE OF FURNITURE CONNECTION IN THE FIELD PRIOR TO ROUGH IN. MODULAR FURNITURE POWER SHALL BE TIED INTO AUTOMATIC RECEPTACLES CONTROL.
6	QUAD RECEPTACLE FOR COMPUTER TOWER ACCESSIBLE FROM CABINET. COORDINATE EXACT LOCATION IN FIELD WITH CARPENTER CONTRACTOR.
7	PREPARATION FOR FUTURE GENERATOR. SPACE RESERVED ON MECH 113 WEST WALL FOR FUTURE AUTOMATIC TRANSFER SWITCH. REFER TO SITE PLAN FOR MORE INFORMATION.
8	NEW AIR CONDITIONING UNIT INSTALLED BY MECHANICAL TRADES. AIR CONDITIONING UNIT IS POWERED FROM OUTDOOR HEAT PUMP. ELECTRICAL CONTRACTOR SHALL PROVIDE DISCONNECT SWITCH AND FINAL ELECTRICAL CONNECTIONS BETWEEN THE TWO UNITS USING NEW CONDUIT AND WIRING.
9	NEW ELECTRIC CABINET UNIT HEATER BEING INSTALLED BY MECHANICAL TRADES. ELECTRICAL CONTRACTOR SHALL PROVIDE FINAL ELECTRICAL CONNECTIONS USING NEW CONDUIT AND WIRING.
10	NEW WATER HEATER BEING INSTALLED BY MECHANICAL TRADES. ELECTRICAL CONTRACTOR SHALL PROVIDE DISCONNECT SWITCH AND FINAL ELECTRICAL CONNECTIONS USING NEW CONDUIT AND WIRING.
11	NEW CIRCULATION PUMP BEING INSTALLED BY MECHANICAL TRADES. ELECTRICAL CONTRACTOR SHALL PROVIDE DISCONNECT SWITCH FINAL ELECTRICAL CONNECTIONS USING NEW CONDUIT AND WIRING.
12	NEW ELECTRIC UNIT HEATER BEING INSTALLED BY MECHANICAL TRADES. ELECTRICAL CONTRACTOR SHALL PROVIDE DISCONNECT AND FINAL ELECTRICAL CONNECTIONS USING NEW CONDUIT AND WIRING.
13	NEW TERMINAL UNIT HEATER BEING INSTALLED BY MECHANICAL TRADES. ELECTRICAL CONTRACTOR SHALL PROVIDE FINAL ELECTRICAL CONNECTIONS USING NEW CONDUIT AND WIRING.

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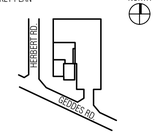
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UNIFIED BUILDING SYSTEMS ENGINEERING
69 S. GRATIOT AVE.
MT. CLEMENS, MI 48043
UBS PROJECT: 041.24.03

KEY PLAN



OWNER

Charter Township of Canton - Western Wayne

PROJECT NAME

Growth Works
44582 Geddes Rd, Canton, MI 48188

PROJECT NO.

23-175

ISSUES / REVISIONS

BIDDING/CONSTRUCTION	03/05/2026

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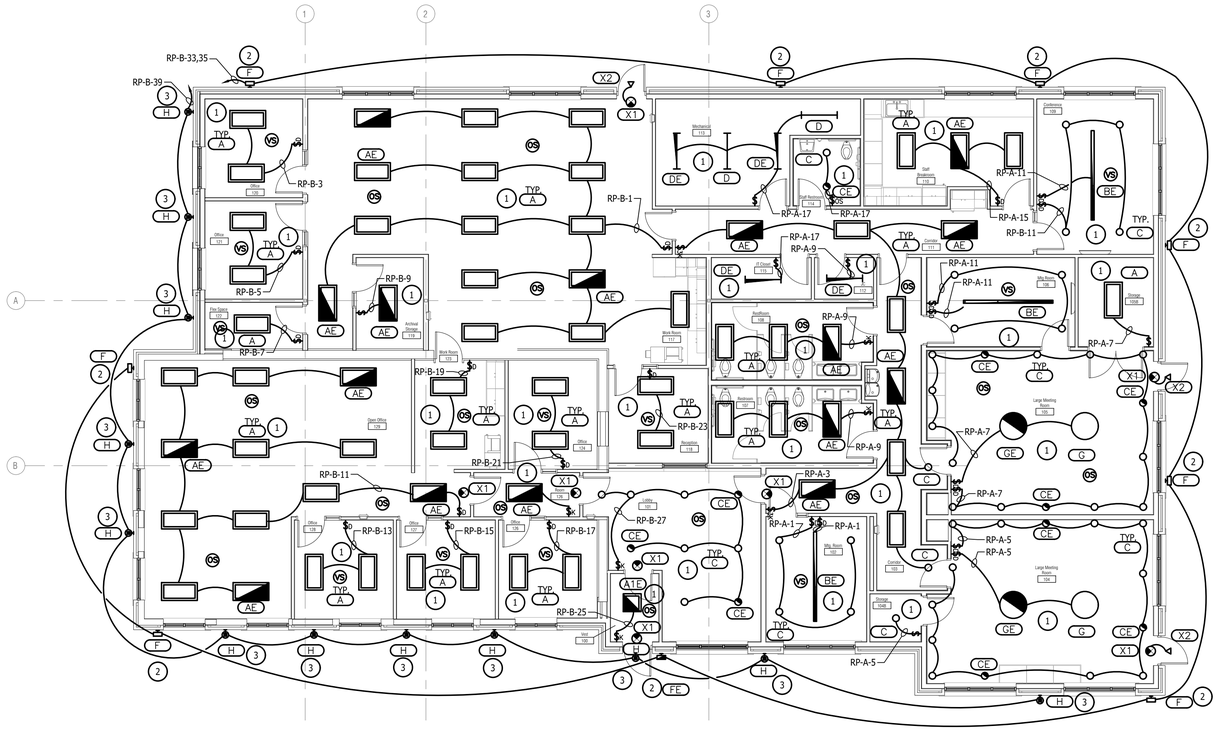
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SHEET NAME

ELECTRICAL POWER NEW WORK PLAN

SHEET NO.

EP1.01



ELECTRICAL LIGHTING NEW WORK PLAN

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

LIGHTING GENERAL NOTES

A	THESE DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL EXTENT OF WORK TO BE PERFORMED. THE EXACT EXTENT OF DEMOLITION SHALL BE DETERMINED BY THE NEW WORK.
B	ANY INTERRUPTIONS OF EXISTING SERVICES AND/OR EQUIPMENT SHALL BE PERFORMED AT A TIME APPROVED IN ADVANCE BY THE OWNER'S REPRESENTATIVE SO AS NOT TO INTERFERE WITH THE PRESENT BUILDING'S OPERATION.
C	PRIOR TO COMMENCEMENT OF WORK, CONTRACTOR SHALL VISIT THE SITE AND BECOME FAMILIAR WITH EXISTING SITE CONDITIONS, SYSTEMS, AND UTILITIES. NOTIFY DESIGN PROFESSIONAL OF ANY INTERFERENCES OR DISCREPANCIES.
D	ALL ITEMS INDICATED WITH CROSS-HATCHING SHALL BE REMOVED COMPLETELY WITH ALL RELATED ITEMS INCLUDING HANGERS, SUPPORTS, INSULATION, CONTROLS, ETC. CAP ALL OPEN-ENDED PIPES AND DUCTS.
E	THE OWNER SHALL HAVE FIRST RIGHT OF REFUSAL ON ALL EQUIPMENT BEING REMOVED. ALL ITEMS REMOVED SHALL BE LEGALLY DISPOSED OF. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL EXISTING RELOCATED AND OWNER-PROVIDED EQUIPMENT.
F	VERIFY DEPTH, SIZE, LOCATIONS, AND CONDITIONS OF EXISTING UTILITIES IN THE FIELD, INCLUDING POINTS OF CONNECTION PRIOR TO STARTING ANY WORK.
G	ALL ITEMS ON DEMOLITION PLAN SHALL BE CONSIDERED EXISTING UNLESS OTHERWISE NOTED. ALL WORK INDICATED ON PLANS HAS BEEN LOCATED PER EXISTING DRAWINGS AND/OR FIELD OBSERVATION AND REQUIRES FIELD VERIFICATION.
H	ALL EXISTING WORK TO REMAIN SHALL BE PROTECTED FROM DAMAGE. WHERE DUCT WORK PIPE INSULATION HAS BEEN DAMAGED DURING DEMOLITION, THE CONTRACTOR SHALL REPAIR INSULATION AS REQUIRED TO MATCH EXISTING.
J	ALL SWITCHES SHALL BE WHITE WITH BRUSHED SILVER COVERPLATE.

NEW WORK KEYED NOTES

1	NEW LED LIGHTING FIXTURES, CONNECT TO CIRCUIT SHOWN. PROVIDE NEW LIGHTING CONTROLS AND SWITCHING AS SHOWN ON PLAN. PROVIDE ALL PROGRAMMING AS REQUIRED FOR COMPLETE SYSTEM.
2	NEW WALLPACK LIGHTING. CONNECT TO WIRELESS CONTROL SYSTEM. PROVIDE ALL PROGRAMMING NECESSARY FOR A COMPLETE SYSTEM. COORDINATE EXACT TIMING WITH OWNER. MOUNT 10'4" AFG TO BOTTOM OF LAMP. JBOX AT 10'8" AFG.
3	BASE BID: OUTDOOR DECORATIVE SCONCE. CONNECT TO WIRELESS CONTROL SYSTEM. PROVIDE ALL PROGRAMMING AS REQUIRED FOR A COMPLETE SYSTEM. COORDINATE EXACT TIMING WITH OWNER. MOUNT 10'4" AFG TO BOTTOM OF LAMP. JBOX AT 10'8" AFG. ALTERNATE 3: OUTDOOR DECORATIVE SCONCE TO BE REMOVED FROM SCOPE OF WORK.

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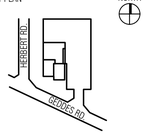
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69 S. GRATIOT AVE.
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UBS PROJECT: 041.24.03

KEY PLAN



OWNER

Charter Township of Canton - Western Wayne

PROJECT NAME

Growth Works
44582 Geddes Rd, Canton, MI 48188

PROJECT NO.

23-175

ISSUES / REVISIONS

BIDDING/CONSTRUCTION	03/05/2026

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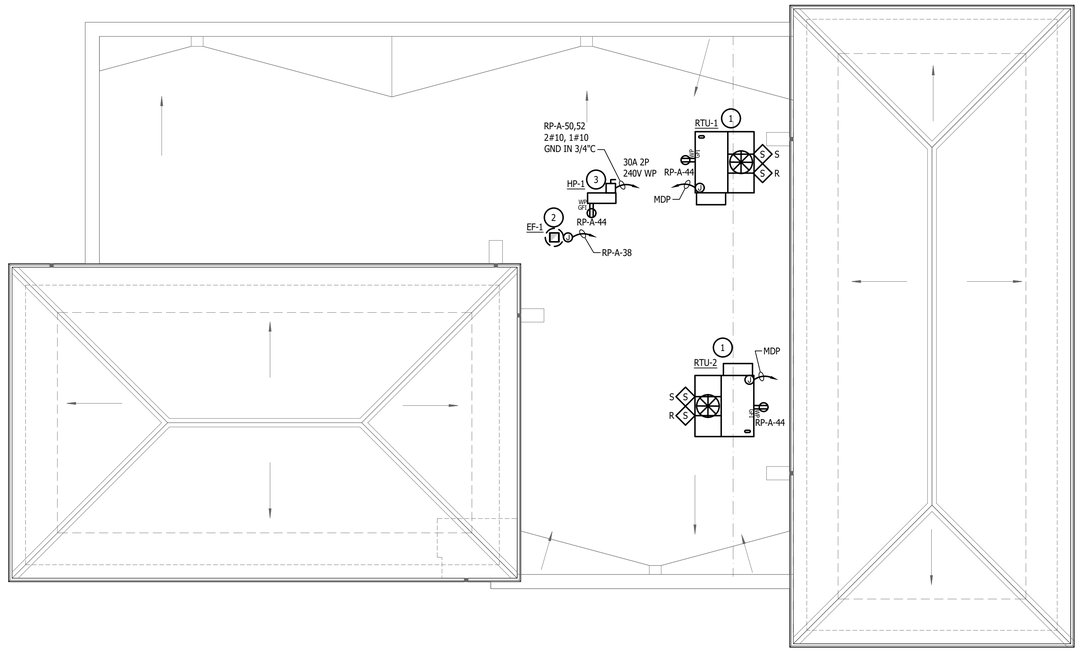
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SHEET NAME

ELECTRICAL LIGHTING NEW WORK PLAN

SHEET NO.

EL1.01



ELECTRICAL POWER NEW WORK ROOF PLAN

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

POWER GENERAL NOTES

A	THESE DRAWINGS ARE DIAGRAMMATIC AND REPRESENT THE GENERAL EXTENT OF THE WORK TO BE PERFORMED. PROVIDE AND EXECUTE ALL HVAC SYSTEMS PER ENGINEER'S SPECIFICATION, AND LOCAL APPLICABLE CODES INCLUDING AMENDMENTS, BULLETINS, ETC; AS WELL AS THE STANDARDS OF INSTALLATION AND EQUIPMENT ESTABLISHED FOR THE BUILDINGS, AND REQUIREMENTS OF THE OWNER.
B	EXCEPT FOR CHANGES AS MAY BE SPECIFICALLY APPROVED BY THE ENGINEER OF RECORD IN ACCORDANCE WITH ALTERNATES OF OPTIONS AS STATED HEREINAFTER, ALL WORK MUST BE IN FULL ACCORDANCE WITH THE INTENT OF THE PLANS AND SPECIFICATIONS. SYSTEMS ARE TO BE COMPLETE, EFFICIENT, AND SATISFACTORY OPERATION WHEN PROJECT IS DELIVERED TO THE OWNER.
D	CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND APPROVAL FROM GOVERNING AUTHORITIES, FILE NECESSARY FORMS, PAY ALL INSPECTION FEES.
E	ELECTRICAL CONTRACTOR SHALL COMPLY WITH THE LATEST NATIONAL ELECTRICAL CODE, LIFE SAFETY CODE AND APPLICABLE STATE AND LOCAL CODES AND ORDINANCES.
F	ELECTRICAL EQUIPMENT AND WIRING SHALL BE NEW AND SHALL BE FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR, UNLESS OTHERWISE NOTED.
G	WIRING SHALL BE IN CONDUIT. CONDUIT SHALL BE 3/4" CONDUIT MINIMUM. CONDUITS IN FINISHED AREAS SHALL BE CONCEALED.
H	NEW WIRES SHALL BE TYPE THHN. MINIMUM SIZE SHALL BE #12 AWG, UNLESS OTHERWISE NOTED. FINAL CONNECTIONS TO EQUIPMENT, FURNISHED AND INSTALLED BY OTHERS, SHALL BE PROVIDED BY THIS CONTRACTOR.
J	ALL P.A. AND SPEAKER SCOPE BY OTHERS. REFER TO TECH DRAWINGS FOR FURTHER INFORMATION.

(X) NEW WORK KEYED NOTES

1	NEW ROOF TOP UNIT BEING INSTALLED BY MECHANICAL TRADES. ELECTRICAL CONTRACTOR SHALL PROVIDE FINAL ELECTRICAL CONNECTIONS USING NEW CONDUIT AND WIRING. PROVIDE GFCI WITH WEATHERPROOF WHILE IN USE COVER.
2	NEW EXHAUST FAN BEING INSTALLED BY MECHANICAL TRADES. ELECTRICAL CONTRACTOR SHALL PROVIDE FINAL ELECTRICAL CONNECTIONS USING NEW CONDUIT AND WIRING.
3	NEW HEAT PUMP INSTALLED BY MECHANICAL TRADES. ELECTRICAL CONTRACTOR SHALL PROVIDE DISCONNECT, GFCI CONVENIENCE RECEPTACLE WITH WHILE IN USE COVER AND FINAL ELECTRICAL CONNECTIONS USING NEW CONDUIT AND WIRING TO HEAT PUMP. AIR CONDITIONING UNIT IS POWERED FROM OUTDOOR HEAT PUMP. ELECTRICAL CONTRACTOR SHALL PROVIDE DISCONNECT SWITCH AND FINAL ELECTRICAL CONNECTIONS BETWEEN THE TWO UNITS USING NEW CONDUIT AND WIRING. REFER TO ELECTRICAL POWER NEW WORK FOR FURTHER INFORMATION ON AIR CONDITIONING UNIT.

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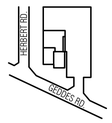
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KEY PLAN

NORTH



OWNER

Charter Township of Canton - Western Wayne

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PROJECT NO.

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ISSUES / REVISIONS

BIDDING/CONSTRUCTION	03/05/2026

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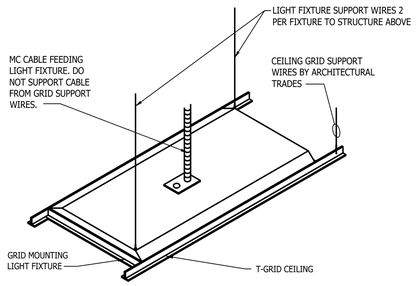
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SHEET NAME

ELECTRICAL POWER NEW WORK ROOF PLAN

SHEET NO.

EP1.02

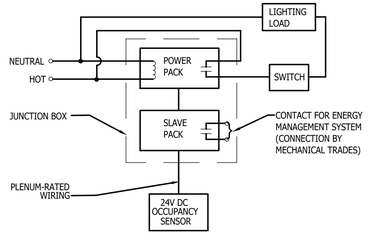


T-GRID FIXTURE MOUNTING DETAIL

NO SCALE

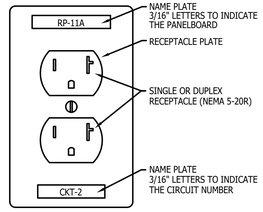
ELECTRICAL FIXTURES

1. PENDANT MOUNTED FIXTURES SHALL BE DIRECTLY SUPPORTED FROM THE STRUCTURE ABOVE USING A 9 GAUGE WIRE OR AN APPROVED ALTERNATE SUPPORT WITHOUT USING THE CEILING SUSPENSION SYSTEM FOR DIRECT SUPPORT.
2. TANDEM FIXTURES MAY UTILIZE COMMON WIRES.



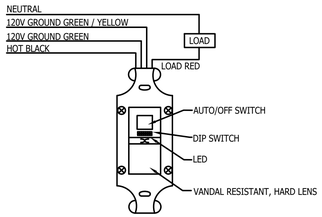
CEILING MOUNTED OCCUPANCY SENSOR DETAIL

NO SCALE OS



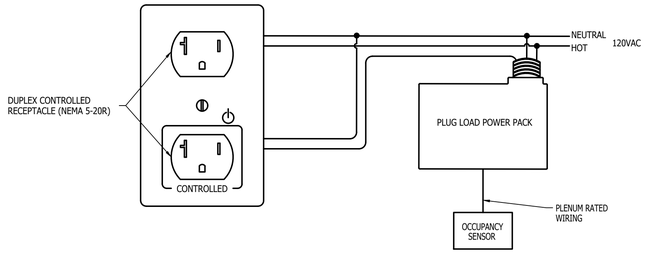
DETAIL OF BRANCH CIRCUIT NUMBER ON RECEPTACLE PLATE

NO SCALE



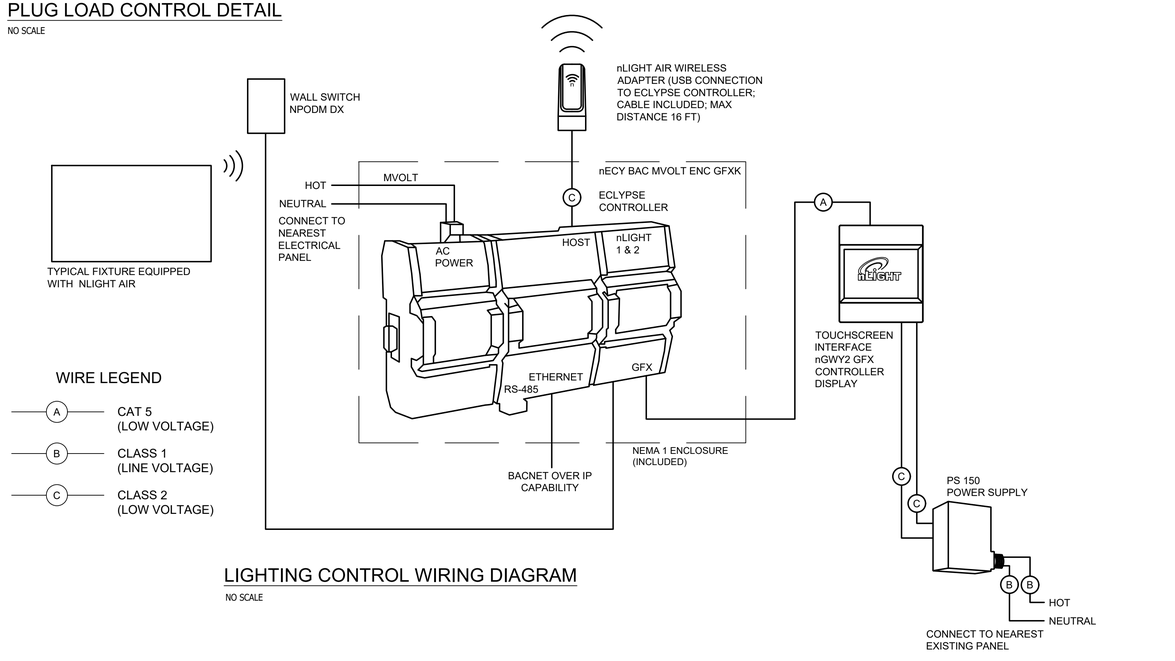
OFFICE VACANCY SENSOR SCHEMATIC

NO SCALE



PLUG LOAD CONTROL DETAIL

NO SCALE

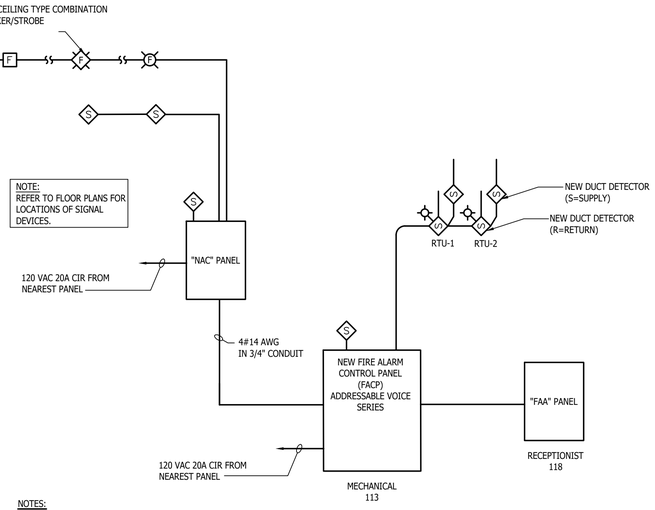


WIRE LEGEND

- A — CAT 5 (LOW VOLTAGE)
- B — CLASS 1 (LINE VOLTAGE)
- C — CLASS 2 (LOW VOLTAGE)

LIGHTING CONTROL WIRING DIAGRAM

NO SCALE



NOTES:

1. FOR FIRE ALARM EQUIPMENT SPECIFICATION AND ADDITIONAL REQUIREMENTS, SEE SPECIFICATIONS.
2. ALL DUCT DETECTORS SHALL BE WIRED TO ACTIVATE ALARM SYSTEM AND SHUT DOWN FAN. PROVIDE INDICATOR LIGHT WHERE SMOKE DETECTORS ARE INSTALLED IN CONCEALED LOCATIONS OR ARE MORE THAN 10FT. ABOVE THE FINISHED FLOOR.
3. CANDELA RATING ARE INTENDED TO BE 15cd UNLESS NOTED OTHERWISE. ALL AUDIO AND VISUAL RATINGS SHALL MEET OR EXCEED NFPA REQUIREMENTS. MINOR DEVIATIONS SUCH AS STROBE RATING, MISSING OF AUDIO/VISUAL UNITS, SMOKE DETECTORS UNITS, PULL STATION, ETC. (MAX OF 10) SHALL BE INCLUDED AS PART OF THIS BID.
4. PROVIDE REMOTE POWER SUPPLIES AS REQUIRED FOR NOTIFICATION APPLIANCE CIRCUITS, NOT TO EXCEED 80% OF CAPACITY.
5. PROVIDE SMOKE DETECTOR ABOVE EACH REMOTE POWER SUPPLY PANEL.
6. PROVIDE BATTERY, CURRENT LOAD AND VOLTAGE DROP CALCULATIONS PER SPECIFICATIONS.
7. SEAL AROUND ALL PIPES & CONDUITS IN MASONRY AND DRYWALL WALLS.
8. ALL FIRE ALARM WIRING SHALL BE MINIMUM #14 AWG AND IN CONDUIT MIN 3/4" IN EXPOSED CEILING AREAS, CABLE IS ACCEPTABLE ABOVE LAY-IN CEILINGS IN J-HOOKS.
9. FIRE ALARM CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CHARGES INVOLVED IN OBTAINING APPROVAL AND CERTIFICATION FROM STATE ELECTRICAL INSPECTOR FOR A COMPLETE SYSTEM. CERTIFIED CONTRACTOR TO PAY ALL FEES REQUIRED.
10. THE ELEVATION DIAGRAM IS FOR REFERENCE PURPOSES. EXACT QUANTITIES OF DEVICES AND LOCATIONS SHALL COMPLY WITH NFPA GUIDELINES AND MEET APPROVAL OF THE STATE ELECTRICAL INSPECTOR. FIRE ALARM CONTRACTOR SHALL HAVE SHOP DRAWINGS APPROVED BY THE STATE ELECTRICAL INSPECTOR PRIOR TO COMMENCEMENT OF WORK.
11. FOR FIRE ALARM SYMBOL LEGEND SEE DRAWING E100.
12. PROVIDE COVER WITH SIREN FEATURE TO ALL FIRE ALARM MANUAL PULL STATION.
13. FIRE ALARM VENDOR TO PROVIDE INSTALLATION DRAWINGS AS PART OF SUBMITTALS.
14. THE FIRE ALARM SYSTEM SHOWN ON THE DRAWINGS AND SPECIFICATIONS ARE A PERFORMANCE SPECIFICATION SYSTEM WITH DEVICE LOCATIONS. FIRE ALARM VENDOR AND CONTRACTOR MUST PROVIDE A COMPLETE SYSTEM PER CODE.
15. ALL STROBES EXISTING AND NEW SHALL BE SYNCHRONIZED.

FIRE ALARM RISER

NO SCALE

PARTNERS

PARTNERS in Architecture, PLC
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MOUNT CLEMENS, MI 48043
P 586.469.3600

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CONSULTANT

UNIFIED BUILDING SYSTEMS ENGINEERING
69 S. GRATIOT AVE.
MT. CLEMENS, MI 48043
UBS PROJECT: 041.24.03

OWNER

Charter Township of Canton - Western Wayne

PROJECT NAME

Growth Works
44582 Geddes Rd, Canton, MI 48188

PROJECT NO.

23-175

ISSUES / REVISIONS

BIDDING/CONSTRUCTION	03/05/2026

DRAWN BY ERS

CHECKED BY TJO

APPROVED BY MPH

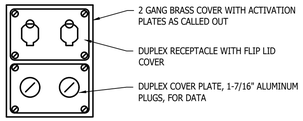
SHEET NAME

ELECTRICAL DETAILS

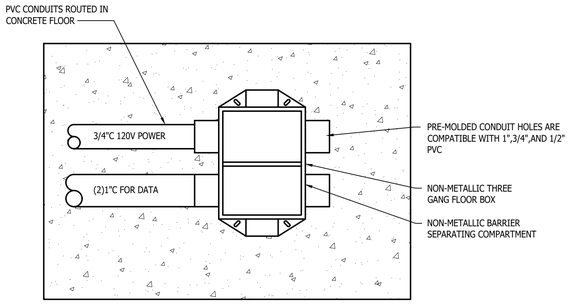
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E5.00

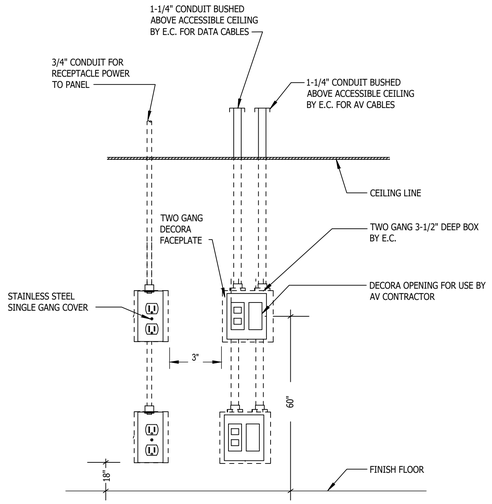
STATE OF MICHIGAN
MICHAEL PAUL HARRIS, II
ENGINEER
No. 6201067299
LICENSED PROFESSIONAL ENGINEER



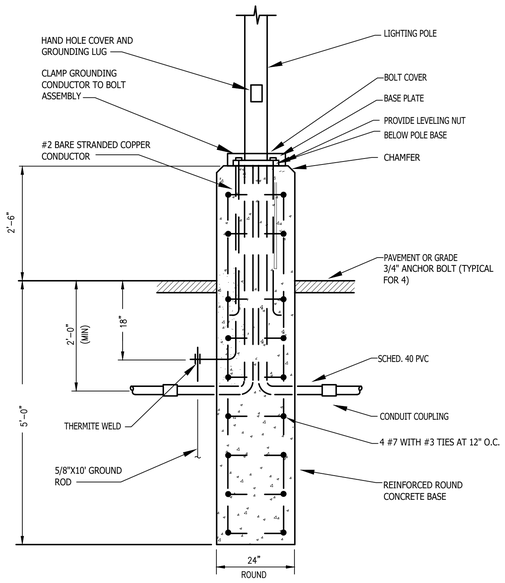
FLOOR BOX-LID DETAIL
NO SCALE



2 GANG FLOOR BOX DETAIL
NO SCALE

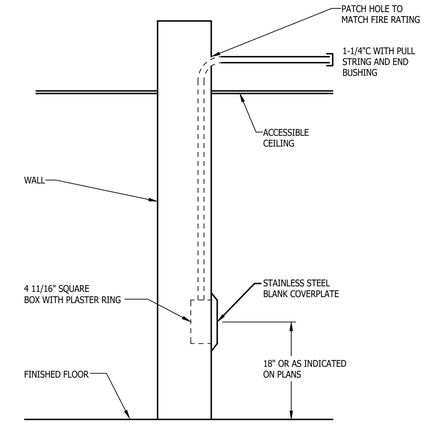


TYPICAL TV LOCATION POWER AND LOW VOLTAGE DETAIL (TV)
NO SCALE

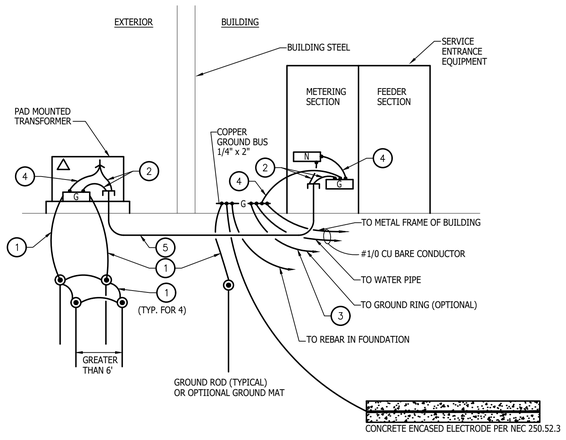


APPLY TO FIXTURE TYPE: P1.
BOTTOM OF FIXTURE SHALL BE MOUNTED AT 20FT AFF MODIFY POLE HEIGHT AS REQUIRED.

LIGHTING HIGH POLE BASE DETAIL
NO SCALE



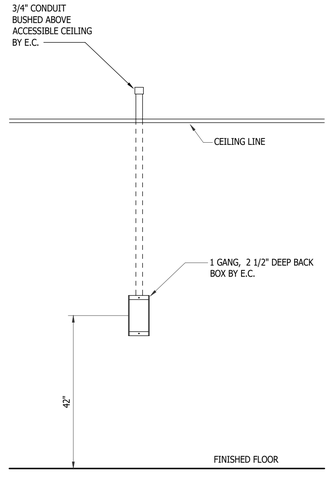
TELE/DATA/AV OUTLET DETAIL
NO SCALE



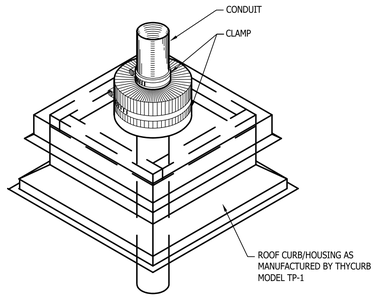
TYPICAL SERVICE ENTRANCE GROUNDING DETAIL
NO SCALE

GROUNDING DETAIL KEYED NOTES

1. #2 CU BARE CONDUCTOR. DESIGNER NOTE: (250-81(a)) (250-94) Per CE.
   DESIGNER NOTE: GROUND AND NEUTRAL CONDUCTORS BASED ON "SERVICE ENTRANCE SCHEDULE"
2. #2 CU BARE CONDUCTOR. DESIGNER NOTE: OR SAME SIZE AS RING CONDUCTOR (250-94)
3. DESIGNER NOTE: SIZED PER GROUND CONDUCTOR IN "SERVICE ENTRANCE SCHEDULE"
4. DESIGNER NOTE: CONDUITS WITH FEEDERS PER "SERVICE ENTRANCE SCHEDULE"

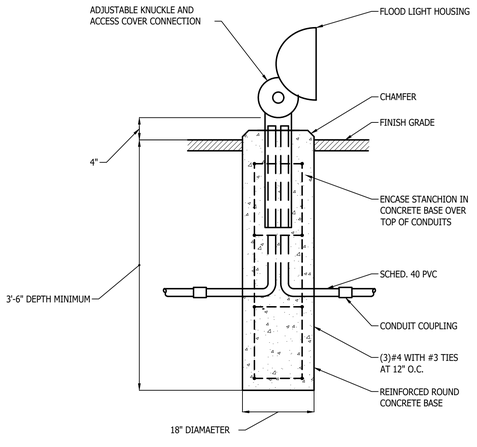


CR SINGLE CARD READER ROUGH-IN
NO SCALE



CONDUIT PENETRATION AT ROOF DETAIL
NOT TO SCALE

COORDINATE WITH MECHANICAL TRADES. ROOF FLASHING SHALL BE PER THE OWNERS SPECIFICATIONS.



FLOOD LIGHTING BASE DETAIL
NO SCALE

STATE OF MICHIGAN
MICHAEL PAUL HARRIS, II
ENGINEER
No. 6201067299
PROFESSIONAL ENGINEER

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ISSUES / REVISIONS

BIDDING/CONSTRUCTION	03/05/2026

DRAWN BY ERS
CHECKED BY TJO
APPROVED BY MPH

SHEET NAME
ELECTRICAL DETAILS

SHEET NO.
E5.01

Panel Designation: RP-A | **Main:** 200A | **P-P Voltage:** 208
Panel Location: MECHANICAL 113 | **Bussing:** 200A | **P-N Voltage:** 120
Fed From: MDP | **Ground Bus:** STANDARD | **Phase:** 3
Feeder Size: SEE ONE LINE DIAGRAM | **Mounting:** SURFACE | **Wire:** 4
NEW PANEL | **Neutral:** 100% | **Min SC Interrupting Rating:** 42K

Remarks	Light Load	Recept Load	Cont Load	nonC Load	OC Prot	CKT	Ø A	Ø B	Ø C	CKT	OC Prot	nonC Load	Cont Load	Recept Load	Light Load	Remarks
LIGHTS MEETING ROOM 102	257				20	1	X			2	20			720		RECEPT. MEETING ROOM 102
LIGHTS CORRIDOR 103	351				20	3		X		4	20			900		RECEPT, CORRIDOR 103, 111
LIGHTS LARGE MEETING ROOM 104	659				20	5			X	6	20			540		RECEPT. RESTROOMS 107,108,114
LIGHTS LARGE MEETING ROOM 105	659				20	7	X			8	20			360		RECEPT. LARGE MEETING ROOM FLOOR BOX 104
LIGHTS RESTROOMS 109,108, 114	185				20	9		X		10	20			360		RECEPT. LARGE MEETING ROOM FLOOR BOX 104
LIGHTS MEETING ROOM 106	257				20	11			X	12	20			360		PROJ. MEETING ROOM 104
LIGHTS MEETING ROOM 109	257				20	13	X			14	20			720		RECEPT. MEETING ROOM 104
LIGHTS STAFF BREAKROOM 110	117				20	15		X		16	20			900		RECEPT. STAFF BREAKROOM 110 FRIDGE
LIGHTS MECHANICAL 113, JC 112, IT CLOSET 115	162				20	17			X	18	20	1176				RECEPT. STAFF BREAKROOM 110 GARBAGE DISP.
RECEPT., CONFERENCE ROOM 109 FLOOR BOX		360			20	19	X			20	20			900		RECEPT. STAFF BREAKROOM 110 MICROWAVE
RECEPT., CONFERENCE ROOM 109 FLOOR BOX		360			20	21		X		22	20			720		RECEPT. STAFF BREAKROOM 110
RECEPT., CONFERENCE ROOM 109 TV		180			20	23			X	24	20			900		RECEPT. HALLWAY FRIDGE
RECEPT., CONFERENCE ROOM 109		720			20	25	X			26	20			720		RECEPT. IT CLOSET, JAN. CLOSET
RECEPT., CONFERENCE ROOM 106 FLOOR BOX		360			20	27		X		28	20			720		RECEPT. MECH ROOM 113
RECEPT., CONFERENCE ROOM 106 FLOOR BOX		360			20	29			X	30	20			360		RECEPT., MEETING ROOM 102 FLOORBOX
RECEPT., CONFERENCE ROOM 106 TV		180			20	31	X			32	20			360		RECEPT., MEETING ROOM 102 FLOORBOX
RECEPT., CONFERENCE ROOM 106		720			20	33		X		34	20			180		RECEPT., MEETING ROOM 102 TV
RECEPT., LARGE MEETING ROOM 105 FLOORBOX		360			20	35			X	36	20			180		RECEPT., EWC-1
RECEPT., LARGE MEETING ROOM 105 FLOORBOX		360			20	37	X			38	20		373			EF-1
RECEPT., LARGE MEETING ROOM 105 TV		180			20	39		X		40	20					SPARE
RECEPT., LARGE MEETING ROOM 105		720			20	41			X	42	20					SPARE
RECEPT., LARGE MEETING ROOM 104 CABINET RECEPT.		360			20	43	X			44	--			180		RECEPT., RTU-1
RESTROOM 108 SINK AUTOVALVE		400			20	45		X		46	30			2496		IT NEMA PLUG
RESTROOM 107 SINK AUTOVALVE		400			20	47			X	48				2496		
RESTROOM 114 SINK AUTOVALVE		200			20	49	X			50	30		1976			HP-1
RECEPT., HP-1		180			20	51		X		52			1976			
RECEPT., LARGE MEETING ROOM 105 CONV.		540			20	53			X	54	20		1508			EUH-1 MECH 113
RECEPT., LARGE MEETING ROOM 104 CONV.		540			20	55	X			56			1508			
RECEPT., RTU-2		180			20	57		X		58	20	500				EWH-1
SPARE					20	59			X	60	20	75				CP-1
SIGN LIGHTING	84				20	61	X			62	20					SPARE
PARKING LOT LIGHTING	644				20	63		X		64	20					SPARE
	644					65			X	66	--					SPACE
SPACE					--	67	X			68	--					SPACE
SPACE					--	69		X		70	--					SPACE
SPACE					--	71			X	72	--					SPACE

	Connected Load				Demand	Demand Load			
Load Description	ØA	ØB	ØC	Total	Factor	ØA	ØB	ØC	Total
Lighting or Continous Load (Volt-Amps)	1257	1297	1722	4276	1.00	1257	1297	1722	4276
180VA Receptacle Load (Volt-Amps)	6680	8656	7396	22732	1.00 (first 10kVA)	2939	3808	3254	10000
	Amount over 10kVA			12732	0.50 (> 10kVA)	1871	2424	2071	6366
Continuous Load (Volt-Amps)	3857	1976	1508	7341	1.25	4821	2470	1885	9176
Non-Continuous Load (Volt-Amps)	0	500	1251	1751	0.80	0	400	1001	1401
Total Load (kVA)	11.79	12.43	11.88	36.10	125% of Light/Cont and Recept	10.89	10.40	9.93	31.22
Total Ampacity (Amps)	98.2	103.5	98.9	100.2	(<10kVA) load plus other load	90.7	86.6	82.7	86.7
Minimum Feeder Sizing (Amps)	106.9	114.1	109.3	110.1	<---- per NEC Article 215.2 ---->	99.4	97.2	93.1	96.6

Receptacle Demand Factor per Article 220.44 of the National Electrical Code.

Panel Designation: RP-B | **Main:** 200A | **P-P Voltage:** 208
Panel Location: ARCHIVAL STORAGE 119 | **Bussing:** 200A | **P-N Voltage:** 120
Fed From: MDP | **Ground Bus:** STANDARD | **Phase:** 3
Feeder Size: SEE ONE LINE DIAGRAM | **Mounting:** SURFACE | **Wire:** 4
NEW PANEL | **Neutral:** 100% | **Min SC Interrupting Rating:** 22K

Remarks	Light Load	Recept Load	Cont Load	nonC Load	OC Prot	CKT	Ø A	Ø B	Ø C	CKT	OC Prot	nonC Load	Cont Load	Recept Load	Light Load	Remarks
LIGHTS OPEN OFFICE 116	549				20	1	X			2	20			360		RECEPT. ARCHIVAL STORAGE 119
LIGHTS OFFICE 120	79				20	3		X		4	20			720		RECEPT. FLEX SPACE 122
LIGHTS OFFICE 121	79				20	5			X	6	20			900		RECEPT. WORK ROOM 117
LIGHTS FLEX SPACE 122	39				20	7	X			8	20			900		RECEPT. RECEPTION 118
LIGHTS ARCHIVAL STORAGE 119	39				20	9		X		10	20			900		RECEPT. LOBBY 101
LIGHTS OPEN OFFICE 129	509				20	11			X	12	20			540		RECEPT., VESTIBULE 100
LIGHTS OFFICE 128	79				20	13	X			14	20			900		RECEPT., OFFICE 120
LIGHTS OFFICE 127	79				20	15		X		16	20			900		RECEPT., OFFICE 121
LIGHTS INTAKE OFFICE 126	79				20	17			X	18	20			900		RECEPT., WORK ROOM 123
LIGHTS WORK ROOM 123	79				20	19	X			20	20			900		RECEPT., OFFICE 124
LIGHTS INTAKE OFFICE 124	79				20	21		X		22	20			900		RECEPT., OFFICE 126
LIGHTS RECEPTION 118	79				20	23			X	24	20			900		RECEPT., OFFICE 127
LIGHTS VESTIBULE 100	39				20	25	X			26	20			900		RECEPT., OFFICE 128
LIGHTS LOBBY 101	157				20	27		X		28	20			900		RECEPT., OPEN OFFICE 129 NORTH
ECUH-1 VEST 100			998		20	29			X	30	20			900		RECEPT., OPEN OFFICE 129 SOUTH
			998			31	X			32	20			720		RECEPT., OPEN OFFICE 129 EAST
BUILDING EXTERIOR LIGHTING	368				20	33		X		34	20			720		RECEPT., OPEN OFFICE 129 WEST
	368					35			X	36	20			360		RECEPT., OPEN OFFICE 116 DESKS
LIGHTS ROOM 126	40				20	37	X			38	20			360		RECEPT., OPEN OFFICE 116 DESKS
WALL SCONCES OUTDOOR	720				20	39		X		40	20			360		RECEPT., OPEN OFFICE 116 DESKS
COPIER NEMA PLUG.		1000			30	41			X	42	20			360		RECEPT., OPEN OFFICE 116 DESKS
		1000				43	X			44	20			360		RECEPT., OPEN OFFICE 116 DESKS
WORK ROOM 117 RECEPT.		180			20	45		X		46	20			360		RECEPT., OPEN OFFICE 116 DESKS
OPEN OFFICE 129 DESKS		540			20	47			X	48	20			360		RECEPT., OPEN OFFICE 116 DESKS
OPEN OFFICE 129 DESKS		540			20	49	X			50	20			360		RECEPT., OPEN OFFICE 116 DESKS
OPEN OFFICE 129 DESKS		540			20	51		X		52	20					SPARE
OPEN OFFICE 129 DESKS		540			20	53			X	54	20					SPARE
SPARE					20	55	X			56	20					SPARE
SPARE					20	57		X		58	20					SPARE
SPARE					20	59			X	60	20					SPARE
SPARE					20	61	X			62	20					SPARE
SPACE					--	63		X		64	--					SPACE
SPACE					--	65			X	66	--					SPACE
SPACE					--	67	X			68	--					SPACE
SPACE					--	69		X		70	--					SPACE
SPACE					--	71			X	72	--					SPACE

	Connected Load				Demand	Demand Load			
Load Description	ØA	ØB	ØC	Total	Factor	ØA	ØB	ØC	Total
Lighting or Continous Load (Volt-Amps)	825	1521	1114	3460	1.00	825	1521	1114	3460
180VA Receptacle Load (Volt-Amps)	7300	6480	7300	21080	1.00 (first 10kVA)	3463	3074	3463	10000
	Amount over 10kVA			11080	0.50 (> 10kVA)	1919	1703	1919	5540
Continuous Load (Volt-Amps)	998	0	998	1996	1.25	1248	0	1248	2495
Non-Continuous Load (Volt-Amps)	0	0	0	0	0.80	0	0	0	0
Total Load (kVA)	9.12	8.00	9.41	26.54	125% of Light/Cont and Recept	7.45	6.30	7.74	21.49
Total Ampacity (Amps)	76.0	66.6	78.4	73.7	(<10kVA) load plus other load	62.1	52.4	64.5	59.7
Minimum Feeder Sizing (Amps)	84.9	76.2	87.9	83.0	<---- per NEC Article 215.2 ---->	71.0	62.0	74.0	69.0

Receptacle Demand Factor per Article 220.44 of the National Electrical Code.

MDP/ FEEDER CALCULATIONS

PANEL	LIGHTING (VA) (CONTINUOUS)	RECEPTACLES (VA)	CONTINUOUS (VA)	NON-CONTINUOUS (VA)
RP-A	3456.00	15826.00	7341.00	1751.00
RP-B	3459.50	13370.00	1996.00	0.00
TU-1	0.00	0.00	6000.00	0.00
TU-2	0.00	0.00	17000.00	0.00
TU-3	0.00	0.00	9500.00	0.00
TU-4	0.00	0.00	3500.00	0.00
TU-5	0.00	0.00	10000.00	0.00
TU-6	0.00	0.00	11000.00	0.00
TU-7	0.00	0.00	9500.00	0.00
TU-8	0.00	0.00	5500.00	0.00
TU-9	0.00	0.00	13000.00	0.00
RTU-1	0.00	0.00	19454.00	0.00
RTU-2	0.00	0.00	19454.00	0.00
SUB TOTAL (VA)	6915.50	29196.00	142245.00	2211.00
DEMAND	100.00%	100.00%	125.00%	80.00%
SUB TOTAL (VA) DEMAND	6915.50	29196.00	177806.25	1768.80
SUB TOTAL (VA) DEMAND				
TOTAL (VA)	6915.50	29196.00	177806.25	1768.80

VOLTAGE: 208/120

CUMULATIVE TOTAL (VA) 215686.55

CUMULATIVE TOTAL AMPS 599.40

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No. 6201067299
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CONSULTANT

UNIFIED BUILDING SYSTEMS ENGINEERING
69 S. GRATIOT AVE.
MT. CLEMENS, MI 48043
UBS PROJECT: 041-24-03

OWNER
Charter Township of Canton - Western Wayne

PROJECT NAME
Growth Works
44582 Geddes Rd, Canton, MI 48188

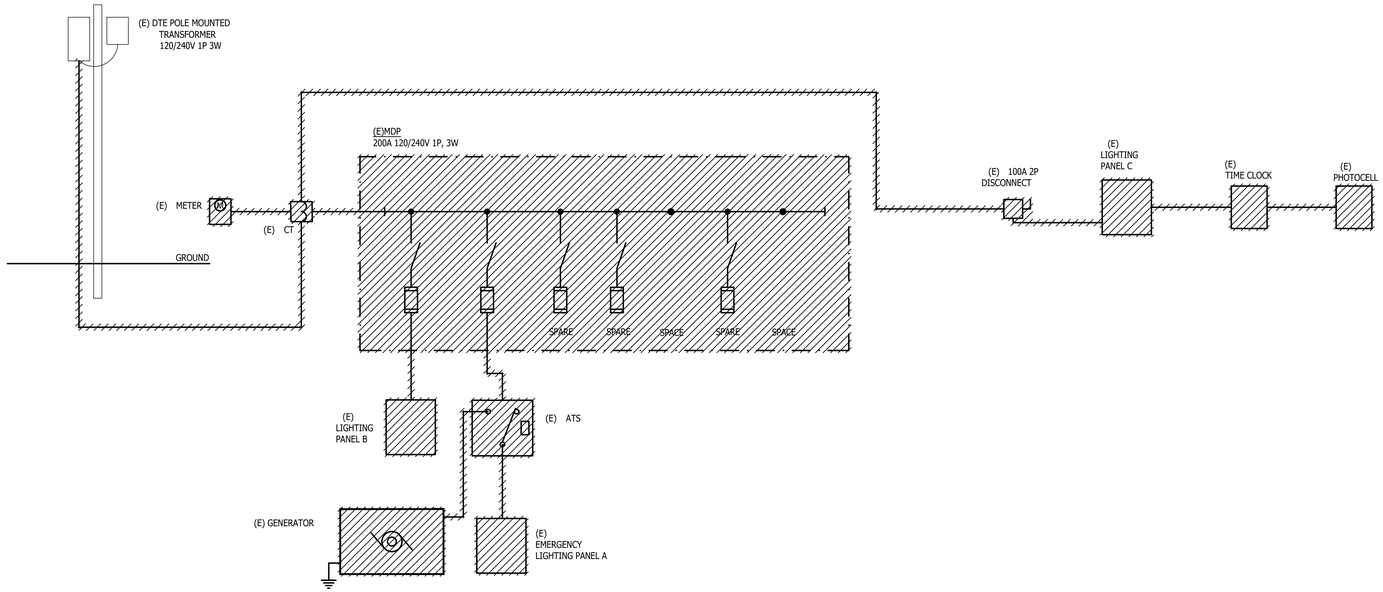
PROJECT NO.
23-175

ISSUES / REVISIONS
BIDDING/CONSTRUCTION 03/05/2026

DRAWN BY ERS
CHECKED BY TJO
APPROVED BY MPH

SHEET NAME
ELECTRICAL PANEL SCHEDULES

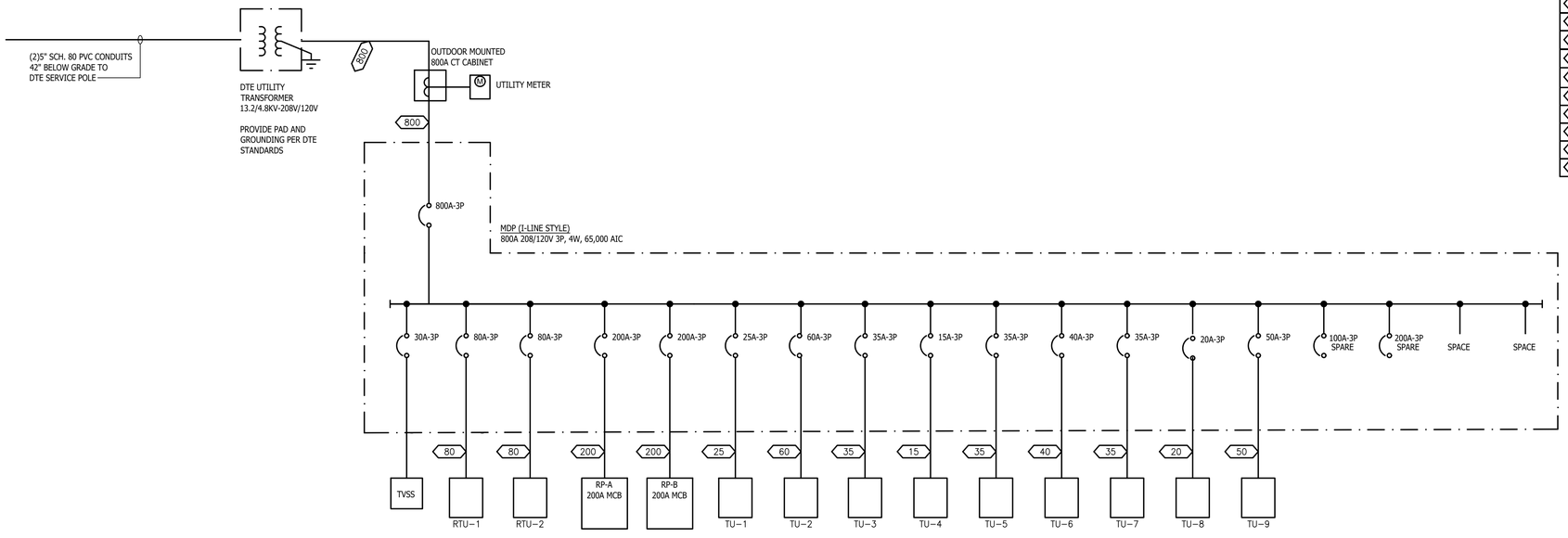
SHEET NO.
E6.00



ONE-LINE DIAGRAM - DEMOLITION

NO SCALE

FEEDER (AMPS)	COND. SIZE	COPPER FEEDER AND CONDUIT SIZES	
		3 WIRE WITH GROUND	4 WIRE WITH GROUND
15	12	3#12, 1#12 GND IN 3/4"C	4#12, 1#12 GND IN 3/4"C
20	12	3#12, 1#12 GND IN 3/4"C	4#12, 1#12 GND IN 3/4"C
25	10	3#10, 1#10 GND IN 3/4"C	4#10, 1#10 GND IN 3/4"C
35	8	3#8, 1#10 GND IN 3/4"C	4#8, 1#10 GND IN 3/4"C
40	8	3#8, 1#10 GND IN 3/4"C	4#8, 1#10 GND IN 1"C
50	6	3#6, 1#10 GND IN 3/4"C	4#6, 1#10 GND IN 1"C
60	4	3#4, 1#10 GND IN 1"C	4#4, 1#10 GND IN 1 1/4"C
80	3	3#3, 1#8 GND IN 1"C	4#3, 1#8 GND IN 1 1/4"C
200	3/0	3#3/0, 1#6 GND IN 2"C.	4#3/0, 1#6 GND IN 2"C
800	2-600	(2) 3-600 KCMIL, 1#1/0 GND IN 3 1/2"C	(2) 4-600 KCMIL, 1#1/0 GND IN 4"C



ONE-LINE DIAGRAM - NEW WORK

NO SCALE



PARTNERS

PARTNERS in Architecture, PLC

65 MARKET STREET
MOUNT CLEMENS, MI 48043
P 586.469.3600

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ISSUES / REVISIONS

BIDDING/CONSTRUCTION 03/05/2026

DRAWN BY ERS

CHECKED BY TJO

APPROVED BY MPH

SHEET NAME

ELECTRICAL ONE-LINE RISER DIAGRAMS

SHEET NO.

E7.00